

MESSAGES FROM LEADERSHIP

"At RWJBarnabas Health, we enter the new year with renewed strength. We've taken the challenges of the pandemic and used them to find ways to better serve our communities, patients and staff. Additionally, we are

expanding telehealth, offering advanced genomic testing for infants and pushing toward breakthroughs in pediatric cancer research, with a focus and dedication to creating a healthier 2022 for all."

BARRY H. OSTROWSKY

PRESIDENT AND CHIEF EXECUTIVE OFFICER, RWJBARNABAS HEALTH

"As we emerge from the pandemic, the resilience and strength demonstrated by the Robert Wood Johnson University Hospital family has positioned us for a bright future. We have launched new services like our Chinese Medical Program to address the healthcare needs

of our diverse communities. We are also building stateof-the-art facilities such as the Surgical Services Suite to meet a growing demand for our academic medical center's specialty services."

BILL ARNOLD

PRESIDENT AND CHIEF EXECUTIVE OFFICER. ROBERT WOOD JOHNSON UNIVERSITY HOSPITAL

Robert Wood Johnson RWJBarnabas **University Hospital**

1 Robert Wood Johnson Pl., New Brunswick, NJ 08901 888.MD.RWJUH (888.637.9584)

CONNECT WITH US ON



@RWJUH



@RWJUH



RWJBarnabas Health

Robert Wood Johnson University Hospital New Brunswick complies with applicable federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex. For more information, see link on our home page at www.rwjbh.org/newbrunswick. RWJUH New Brunswick cumple con las leyes federales de derechos civiles aplicables y no discrimina por motivos de raza, color, nacionalidad, edad, discapacidad o sexo. ATENCIÓN: Si usted habla español, servicios de asistencia lingüística, de forma gratuita, están disponibles para usted. Llame al 888.637.9584. RWJUH New Brunswick konfòm ak Iwa sou dwa sivil Federal ki aplikab yo e li pa fè diskriminasyon sou baz ras, koulè, peyi orijin, laj, enfimite oswa sèks. ATANSYON: Si w pale Kreyòl Ayisyen, gen sèvis èd pou lang ki disponib gratis pou ou. Rele 888.637.9584.

For issues regarding delivery of Healthy Together, please write to HTcirculation@wainscotmedia.com.

HEALTH NEWS



At the check presentation were (from left) Steve Loures, COO, Revenue Guard; Bill Faverzani, Senior Vice President, Children's Services, RWJBH; Ralph Anderson, Golf Committee Co-Chair; Kelly Chaknis, Vice President and Chief Administrative Officer, BMSCH; Mary Burke, Vice President, RWJUH Foundation; and Bill Arnold, President and CEO, RWJUH.

GOLF CLASSIC SUPPORTS BMSCH

With the generous support of our community, the Robert Wood Johnson University Hospital (RWJUH) 33rd Annual Golf Classic was a huge success. This year's event raised \$335,675 for The Bristol-Myers Squibb Children's Hospital (BMSCH) at RWJUH. RWJUH thanks all of its supporters, including the Gold Classic's Overall Sponsor, Revenue Guard.

RWJUH RECOGNIZED FOR FOUR YEARS OF BARIATRIC SURGERY EXCELLENCE



RWJUH is among the top 5 percent in the nation for Bariatric Surgery and a recipient of the Bariatric Surgery Excellence Award, according to a new analysis by Healthgrades, the leading resource that connects consumers, physicians and health systems.

RWJUH has earned the Bariatric Surgery Excellence Award for four consecutive years and is the only hospital in South and Central New Jersey named in the top 5 percent for Bariatric Surgery for three years in a row (2020-2022). RWJUH was also recognized as a Five-Star Recipient for Overall Bariatric Surgery for four years in a row (2019-2022).

HONORED FOR HIP FRACTURE TREATMENT



In addition to honors for Bariatric Surgery, RWJUH has achieved Healthgrades recognition as a Five-Star Recipient for Hip Fracture Treatment in 2022.

Healthgrades measures hospital performance based on patient outcomes. For its analysis, Healthgrades evaluated approximately 45 million Medicare inpatient records for nearly 4,500 short-term acute care hospitals nationwide to assess hospital performance in 31 common conditions and procedures. Healthgrades recognizes a hospital's quality achievements for cohort-specific performance, specialty area performance and overall clinical quality.















- 2. WELCOME LETTER. A community update from our CEOs.
- 4. THE COUNTY **CONNECTION.** How the partnership of RWJUH and Middlesex County benefits the community.
- 6. HEALING A YOUNG HIP. A girl looks toward a pain-free future thanks to joint-sparing surgery.
- 8. BRIDGING **GENERATIONS.** RWJUH partners with a school to bring students and seniors together.



9. FAST ANSWERS FOR **VERY SICK BABIES.** Advanced genomic testing is here.

- **10. HOW COVID-19** IS RESHAPING **HEALTHCARE.** Innovation and resilience in the face of a crisis.
- 12. CHILDHOOD CANCER: FINDING THE BEST CARE. World-class pediatric hematology/oncology services, close to home.
- 14. HEADING OFF WINTER **HEART ATTACKS.** Read this before you shovel snow.
- 16. SPECIAL NEEDS, SPECIAL TREATMENT. Children's Specialized Hospital expands access to care.

- 17. ADVANCING VALVE TREATMENTS. A clinical trial highlights expertise in minimally invasive heart therapies.
- 18. TRANSFORMING SURGICAL **SERVICES.** An expansion project enhances operating rooms and sterilization.
- 20. 'A VERY SPECIAL MOMENT.' A surrogate birth brings two couples together with help from RWJUH.
- 22. NEW TREATMENT STOPS A STROKE. A woman benefits from a new clotbusting drug being studied at RWJUH.



CONNECTION

HOW THE PARTNERSHIP OF RWIBH AND MIDDLESEX COUNTY BENEFITS THE COMMUNITY.

ospitals are the lifeblood of a community. As a result, they are seldom stand-alone ventures but instead have integral relationships with the community. RWJBarnabas Health (RWJBH), through Robert Wood Johnson University Hospital (RWJUH), has strong ties throughout the region, but perhaps none is stronger than its bond with Middlesex County.

"RWJBarnabas Health has had a close partnership with Middlesex County since Robert Wood Johnson University Hospital's earliest days," says Ronald G. Rios, Director of the Middlesex County Board of County Commissioners. "Together we've worked to raise the health status of residents from our area and beyond and improve the quality of life for the entire region."

The Jack and Sheryl Morris Cancer Center now under construction is one of the most recent examples of how this partnership benefits the community. It will be New Jersey's first and only freestanding cancer hospital and will transform cancer care through a combination of research, education and advanced patient care. Middlesex County has committed \$25 million to the project.

Working closely with Rutgers Cancer Institute of New Jersey, RWJUH and Middlesex County, Middlesex College and Middlesex County Vocational and Technical Schools also plan to offer multiple educational opportunities and internships focusing on cancer care and research for students.

"Middlesex County's partnership with RWJBH will benefit all county residents, including students," says Rios. "In particular, the county's relationship with Rutgers Cancer Institute of New Jersey and RWJUH will provide Middlesex College students and students in our county vo-tech programs exclusive access to educational curricula and content from a premier oncology center. This will give our students a distinct advantage both academically and professionally."

SHARED INITIATIVES

"The new cancer pavilion is just one of many initiatives in which RWJBH and Middlesex County have partnered to advance the well-being of the many

communities and constituencies we serve," says Rios. "The sheer scope of our joint initiatives is a testament to our shared ongoing commitment to each other and our region."

"Strong partnerships like the one that we have with Middlesex County give us additional resources and expertise that help us identify specific healthcare needs within our diverse communities and develop innovative ways to raise the health status of all populations that we serve," adds Barry Ostrowsky, President and CEO of RWJBH.

A sampling of the many programs and services RWIBH and Middlesex County have offered together includes:

 New Jersey Innovation and Technology Hub: Building on a commitment to make the county a center of innovation and research in the state and region, Middlesex County is a key partner in the New Jersey Innovation and Technology Hub, which recently broke ground in downtown New Brunswick. The hub is a 550,000-squarefoot center for innovation, research and medical education. RWJBH, Rutgers





Robert Wood Johnson Medical School, Hackensack Meridian Health, Princeton University and Choose NJ will share space at the site.

• COVID-19 response: Since the beginning of the pandemic, the hospital and county have offered COVID-19 prevention education through multiple platforms, including culturally sensitive bilingual materials; distributed thousands of kits containing personal protective equipment and cleaning supplies to residents; provided fresh produce to residents affected by the disease; helped quarantined people with medications; and facilitated vaccinations, including among people with no access to technology.

RWJUH and Middlesex County were among the first in the nation to offer rapid COVID-19 saliva testing during the early stages of the pandemic. Additionally, the county, RWJUH, RWJBH and the U.S. National Guard established the COVID-19 Vaccination Mega-site in Edison when the vaccine received approval and was made available to the public.



RWJBarnabas Health, through Robert Wood Johnson University Hospital, has partnered with Middlesex County on a wide range of programs and projects that benefit local communities in a variety of ways, engaging numerous community partners. Examples have included major building projects such as (far left) the New Jersey Innovation and Technology Hub and (above) the Jack and Sheryl Morris Cancer Center, where (center, top) Ronald G. Rios, Director of the Middlesex County Board of Commissioners, spoke at a groundbreaking ceremony, as well as initiatives such as (center, bottom) COVID-19 vaccination programs.

"With the county's support, we were able to vaccinate more individuals and provide additional resources to help educate and keep our communities safe from COVID-19," says Bill Arnold, President and CEO of RWJUH.

 Managing Middlesex County long-term care facilities: RWJBH has partnered with Middlesex County to manage the Roosevelt Care Centers, the county's long-term care facilities. The partnership expands upon the quality of care residents have been receiving at the Roosevelt Care Centers, with an emphasis on therapeutic activity and a greater focus on improving care for residents and their families, including residents who do not have families.

• Middlesex County telehealth: Middlesex County, in partnership with RWJBH and other local healthcare providers, has launched a telehealth pilot program to focus on increasing the utilization of telehealth services within, in particular, the Latino community and to expand healthcare access to uninsured and underinsured communities. In addition to healthcare benefits, the program will offer free internet, tech assistance, and bilingual staff and translators at physical locations, or hubs, to maximize assistance.

- Blanquita B. Valenti School: The \$55 million, 125,000-square-foot school will replace New Brunswick's Lincoln Annex School, which stood at the site where the new Cancer Center is rising. Expected to be completed in 2023, the state-of-the-art school is named after longtime community leader Blanquita Valenti, who served on the Middlesex County Board of Freeholders (now County Commissioners), as well as the New Brunswick Board of Education and City Council.
- Assessing and planning community health: Every three years, RWJUH and Middlesex County, with 62 community partners, implement a community health needs assessment and community health improvement plan in conjunction with Saint Peter's University Hospital and the Healthier Middlesex Consortium.
- Improving living conditions: **RWJBH Social Impact and Community** Investment programs work with the New Brunswick Rent Control Office, the RWJUH Legal Medical Partnership and a variety of community partners, including the Middlesex County Health Department, to address tenant rights issues and recommend best practice policies to improve living conditions for New Brunswick residents.

To learn more about RWJBarnabas Health social impact initiatives, visit www.rwjbh.org/socialimpact.





A GIRL LOOKS TOWARD A PAIN-FREE FUTURE THANKS TO JOINT-SPARING SURGERY.

year ago, Cheyanne Eppley of Hamilton Township could barely move without excruciating pain. The 13-year-old had trouble just walking around a grocery store and often woke so stiff and sore that she needed help getting out of bed.

Today Cheyanne is living her best life. The eighth grader alternates between defense and goalie on her soccer team and has rejoined the jazz and hip-hop dance classes that once gave her so much joy.

Cheyanne's mobility problems stemmed from a form of hip dysplasia—a condition in which the thighbone (femur) doesn't properly fit with the pelvis. In Cheyanne's case, the hip socket was too shallow, allowing the ball at the top of the femur to slip out, or dislocate. The dysplasia damaged the joint, leading to pain and loss of function.

Athletic children like Cheyanne particularly if they participate in activities that place a load on their

hips such as dance, hockey, soccer and football—can develop challenging symptoms of hip dysplasia early in life.

"We went to several different doctors and hospitals to try and figure out where the pain was coming from and what to do about it," says Cheyanne's mother, Samantha, an interventional radiology scheduling coordinator at Robert Wood Johnson University Hospital (RWJUH) Hamilton. "They said they couldn't fix it until she was done growing, which



Far left: Cheyanne Eppley throws a first pitch with RWJUH pediatric orthopedic surgeon Thomas McPartland, MD, whose expertise with complex joint deformities has allowed Cheyanne to return to the active life she's known through childhood.

hip locked up and needed a few hours of manipulation and massage. It was difficult seeing her in that much pain."

TURNING TO EXPERTS

Samantha finally reached out to the pediatric orthopedic team at The Bristol-Myers Squibb Children's Hospital at Robert Wood Johnson University Hospital. She was referred to Thomas McPartland, MD, Assistant Clinical Professor of Pediatric Orthopedic Surgery at Rutgers Robert Wood Johnson Medical School and a member of RWJBarnabas Health Medical Group, who specializes in treating complex orthopedic deformities, including those of the hips.

Based on Chevanne's imaging tests, symptoms and history, Dr. McPartland proposed a treatment the Eppleys didn't expect: a procedure that would correct Cheyanne's problem but preserve her natural hip joints.

"You want to avoid doing a hip replacement in a young person, because the likelihood is very high that the artificial joint will eventually wear out," Dr. McPartland says. "She's going to be much better off with her native hip. A living part of your body can remodel itself, where a hip replacement will not."

Dr. McPartland would perform a procedure called periacetabular osteotomy, which reshapes the hip joint in people with hip dysplasia. It involves cutting the pelvis around the hip joint, reorienting it and allowing it to heal in a more favorable position. "There is good data that this will change the course of the hip's natural life, and therefore change its function," Dr. McPartland says. "Cheyanne could have pain-free function for the rest of her life."

A FRESH START

Cheyanne fared well during the ninehour operation in November 2020 and was off her post-op medications after two weeks. "Suddenly I felt no more pain," she says. "It was amazing!"

After a stint on crutches and a regimen of physical therapy, Cheyanne was cleared for normal activity in May 2021. "Over the summer, she would randomly just get up and start running around outside," Samantha says. "She kept saying, 'I want to go back to soccer, and I'm going to dance again.' So now we're starting all of that over."

In September, Cheyanne's family, Dr. McPartland and a stadium full of well-wishers celebrated her triumph at a special Somerset Patriots baseball game honoring the 20th anniversary of the children's hospital. The reward for her trials: the chance to throw out the first pitch.

"Her dad was on the field with her while I was videoing the whole thing, crying in the stands," says Samantha. "My greatest hope is that we won't have to face any type of corrective surgery again."

Cheyanne has more immediate dreams. "Once I get my strength back, I am getting into competitive dance," she says. "I feel like a new person."

wouldn't be until she was about 16. At that point, she would need a double hip replacement."

Chevanne tried to find relief through a chiropractor. She had her shoes fitted with orthotic inserts to correct her gait so forces that the feet absorb from walking or running were less likely to send tightness and pain up her legs and exacerbate her hip pain.

"I wanted to play soccer a lot more than I did, but really didn't get to because I had so much pain," Cheyanne says. "It was unbearable." She also was sidelined during family activities like bicycling and hiking.

The breaking point came when Cheyanne began waking every morning in agony, unable to get out of bed. "We'd have to give her medicine to reduce her pain and calm her down," Samantha says. "There were a couple of times when the

To learn more about comprehensive care provided at The Bristol-Myers Squibb Children's Hospital at RWJUH, visit www.rwjbh.org/bmsch.



BRIDGING GENERATIONS

RWJUH PARTNERS WITH A SCHOOL TO BRING STUDENTS AND SENIORS TOGETHER.

obert Wood Johnson University Hospital (RWJUH) provides advanced medical services to community members young and old. Last summer, it also brought these two populations together through a new outreach program. Called Youth Engaging Seniors (YES), it gave local young people insight into the lives of older adults-and treated senior housing residents to fresh food and stimulating conversation.

YES was conceived in January 2021 when Jessica Guzman, Outreach Coordinator, and her director, Mariam Merced, brainstormed new initiatives. Merced hit upon an inspired idea: Have students create herb gardens, compile bags of produce and deliver them to seniors. "Students would also make wellness calls to seniors and learn more about senior health," Guzman says.

Merced's team turned to nearby New Brunswick Health Sciences Technology High School. The school has a longstanding relationship with RWJUH and partners with the hospital to empower

and inspire minority students to enter healthcare careers. "For example, our 11th- and 12th-grade students go to RWJUH one day a week and job-shadow professionals there," says principal Jeremiah Clifford. With Clifford's help, 27 incoming ninth graders joined the four-week, three-day-a-week YES program beginning in July.

'GREAT OPPORTUNITY'

Each Monday morning, 13 or 14 students worked outside Guzman's building (Rutgers Institute for Health, Healthcare Policy and Aging Research) to plant herbs in pots they had filled with dirt, while an equal number of students worked inside the office. In the afternoon, the process repeated with other participants.

The following day, the entire morning group convened in the community room of a local seniors-only building to pack RWJUH tote bags with about 10 pounds each of produce from a local farmers' market. Students delivered the bags together with herb gardens created the

previous day to 50 residents. The afternoon group went through the same process at a different site. All told, students made deliveries to seven senior-living residences.

Students spent Wednesdays online. "We went over senior health topics such as nutrition and mental health." Guzman says. Students then called and chatted with residents who had received deliveries the previous day. One student connected with a senior over their mutual love of soccer.

"Students liked both working with classmates and meeting seniors," Clifford says. "Hopefully, the experience will help some realize that careers in geriatrics are important and rewarding."

"It was such a great opportunity to lift seniors' day," one student wrote Guzman, "especially during discouraging times like these." Guzman is thrilled with the program, which was funded by the Rutgers Community Health Foundation. "Our goal is to expand on this and make it a community service throughout the year," she says.

To learn more about Social Impact and Community Investment at RWJUH, visit www.rwjbh.org/why-rwjbarnabas-health-/social-impact.





ADVANCED GENOMIC TESTING RESULTS ALLOW DOCTORS TO BEGIN TARGETED TREATMENT WITHIN DAYS.

aby girl Frankie was born early at 35 weeks—but all seemed well, except for some minor health complications that kept her in the Neonatal Intensive Care Unit (NICU) at Cooperman Barnabas Medical Center (CBMC).

However, within a few days of birth, Frankie had developed severe blisters on her feet and was losing skin.



KAMTORN VANGVANICHYAKORN. MD

Even routine screenings now posed a risk, and the baby was vulnerable to life-threatening bacteria entering her body. Her family was afraid to

hold her. A diagnosis was needed, right

Not long ago, genetic testing for infants could test just a few genes at a time, and results took weeks or months to come back. But thanks to a collaboration between Rady Children's Institute for Genomic Medicine and RWIBarnabas Health (RWIBH). Level III and Level IV NICUs in the RWJBH system can offer rapid Whole Genome Sequencing (rWGS). For medically urgent cases, preliminary diagnoses are available in three to five days.

Using a blood sample, rWGS can scan a child's entire genetic makeup for thousands of anomalies. The test results provide vital information that leads to individualized care and fewer costly, invasive procedures.

"Rapid genome sequencing is a game changer," says Kamtorn Vangvanichyakorn, MD, Director of Neonatology at CBMC. "It allows us to provide critical answers and targeted treatment at a time when the therapeutic window is often narrow."

"A SENSE OF RELIEF"

The testing revealed that Frankie has a type of epidermolysis bullosa (EB), a rare group of diseases that are most often caused by a genetic mutation. Frankie's mother, Jeri Berinato, knew that her own mother lived with a severe form of EB, leading to constant blistering and pain, difficulty swallowing, loss of her fingernails and dental problems.

"As soon as we received the results, I felt a huge sense of relief," Jeri says. "Not knowing what was wrong with my beautiful newborn baby was the worst feeling I've ever had. Now I know that, with proper care from the beginning, Frankie will have a much better quality of life than my mom has."

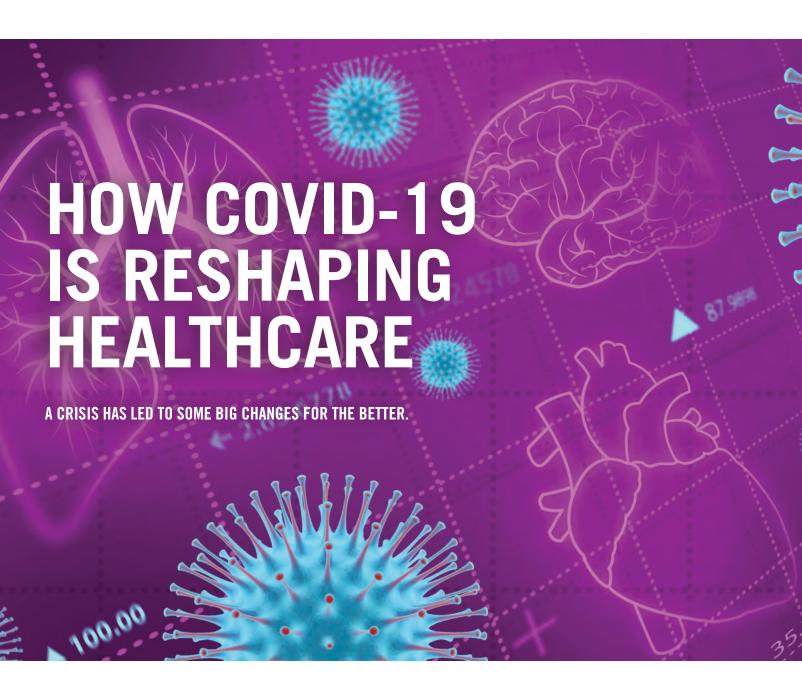
In addition to CBMC, rWGS is available to critically ill infants at Bristol-Myers Squibb Children's Hospital at Robert Wood Johnson University Hospital; the Unterberg Children's Hospital at Monmouth Medical Center; Children's Hospital of New Jersey at Newark Beth Israel Medical Center; and Jersey City Medical Center.

The use of rWGS at RWJBH came about through a long-standing partnership between Rady Children's Hospital in San Diego, the parent organization of Rady Children's Institute for Genomic Medicine, and Children's Specialized Hospital, an RWJBH facility.

"We're proud to be the only health system in New Jersey to partner with Rady Children's to offer rapid genetic testing," says William Faverzani, Senior Vice President of Children's Services at RWJBH. "With this test, our physicians have access to cutting-edge technology, enabling them to intervene quickly to improve the lives of our tiniest patients and their loved ones."

To learn more about rapid Whole Genome Sequencing at RWJBarnabas Health, visit www.rwjbh.org/pediatricgenetictesting.





OVID-19 created challenges that healthcare providers had never experienced in their careers. But the pandemic, while taking a toll on providers and patients alike, has also



ANDY ANDERSON, MD



JOHN BONAMO, MD

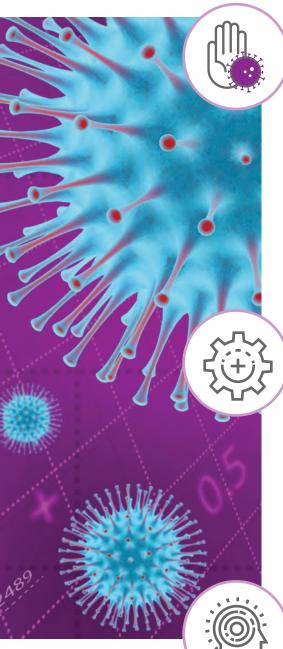
enabled the discovery of deep reserves of resilience and innovation. "Many of the changes we're seeing in healthcare," says John Bonamo, MD, Chief Medical and Quality Officer at RWJBarnabas Health, "are good things that came out of a terrible situation." Here are six examples:

The rise of telehealth. The technology for video healthcare visits has existed for decades, but providers as well as patients resisted virtual care—until the onset of COVID-19 and social distancing.

"Before the pandemic, we were doing some virtual urgent care visits, but not routinely doing scheduled visits," says Andy Anderson, MD, President and CEO, Combined Medical Group

of RWJBarnabas Health and

Rutgers Health. "However, at the peak of the pandemic we were doing 10,000 scheduled visits weekly, and even today we continue to do thousands each week." The increased



demand led to technology

upgrades, he says, such as

interpreter if needed.

making it easier to have visits that

include multiple attendees—patient,

for patients, who can stay in a home

need, whether it's acute, chronic or

environment to get the healthcare they

preventive, and that will continue," Dr. Anderson says. "We're moving toward a

good balance of in-person and remote appointments so patients can receive

care more efficiently and effectively."

family members, other providers or an

"Telemedicine has opened up access

Increased awareness of preventing the spread of **disease.** In response to the pandemic, healthcare providers have redoubled their efforts to sanitize spaces and even filter the air, and the use of hand

sanitizer and disinfectant wipes has become commonplace.

"We've always been committed to infection control through our systemwide journey to become a high reliability organization," says Dr. Bonamo. "We amplified those principles to keep our facilities even safer, such as using new ventilation techniques, employing UV-C lights to clean rooms, paying continued attention to visitation policies and more."

Enhanced teamwork. "At the peak of the pandemic, the needs were so great that our people began working together much more collaboratively," says Dr. Bonamo. "Instead of staying in their own lane and handing off a patient or a procedure to a specialist, providers worked together respiratory therapists teamed with nurses, primary care doctors worked in intensive care units at the elbow of intensivists, and so on. We learned how professionals can be 'skilled up' and trained to help in a crisis, and that has broken down levels of hierarchy and increased esprit

An emphasis on mental well-being. "Mental health has become a bigger issue due to the pandemic. People are afraid of becoming ill, they may have greater financial burdens and they're missing social interaction," says Dr. Anderson. "Our behavioral health providers have been very busy."

de corps."

All kinds of healthcare providers are tuning in to their patients' state of mind. "As doctors, we realize the importance of reaching out to people and asking them how they've been doing during the

pandemic," he says. "Everybody has a story, and it's important for us to take the time to listen and, if necessary, become an advocate or a resource for the patient."

That kind of outreach is equally important for people who work in healthcare, Dr. Anderson says: "In the RWJBarnabas Health Medical Group, we set aside time each week to text or call people we work with to see if they're doing OK, and provide help or a note of encouragement as needed."

> **5** A brighter spotlight on healthcare disparities. "At RWJBarnabas Health, we've had an ongoing and important system-wide effort in regard to social justice and anti-racism," says Dr. Bonamo. "However, the

disparity in the rates of COVID-19 sickness and death among people of color was so blatant that it brought many things to the surface and made us, as well as the healthcare industry as a whole, take a closer look. We've realized that saying 'we treat everybody the same' isn't enough because some populations have many more resources than others." To learn more about RWIBarnabas Health's Ending Racism Together initiative, visit www.rwjbh.org/endingracism.

> A new flexibility. "Healthcare is intensely regulated, and because of that we have a tendency to be very prescriptive about what we can do and how we do it," says Dr.

Bonamo. "The COVID-19 need was so intense that we had to learn to be more flexible. For example, medical-surgical floors were turned into ICUs and we learned, OK, it may not be the ICU we would have built, but we can make this work. A lot of the old regulations were lifted during COVID-19, which enabled us to be flexible, but some of what we had been doing was just a result of old habits. Now we've expanded our horizons and have become much more nimble."

For resources and information about COVID-19, visit www.rwjbh.org/covid19.







RWJBarnabas Health and Rutgers Cancer Institute of New Jersey, the state's only NCI-Designated **Comprehensive Cancer Center.** provide close-to-home access to the latest treatment options. For more information, call 844.CANCERNJ or visit www.rwjbh.org/beatcancer.

ancer doesn't travel well especially cancer in children," says Peter Cole, MD, Chief of the Division of Pediatric Hematology/

PETER COLE, MD

Oncology at Rutgers Cancer Institute, the state's only National Cancer Institute-Designated Comprehensive Cancer Center. "New Jersey families dealing with a

diagnosis as significant as cancer shouldn't have to leave their neighborhood and support systems to travel to another state for treatment."

The Pediatric Cancer Center at Rutgers Cancer Institute partners with RWJBarnabas Health (RWJBH) facilities throughout the state to provide the most advanced treatments for children with cancer and blood disorders.

"I tell my friends and family and anyone who asks that whenever you get an unexpected diagnosis, it's always good to get a second opinion," Dr. Cole says.

■ The \$10 million in state funding was championed by Grace Eline, a 12-year-old survivor of brain cancer and a childhood cancer awareness advocate, and her mother, Aubrey Eline, in collaboration with the American Childhood Cancer Organization. Grace was treated at Rutgers Cancer Institute and Children's Hospital of New Jersey at Newark Beth Israel Medical Center.

"But when you have the option to get cutting-edge care close to home, where you have access to your support system, you should do it. At Rutgers Cancer Institute and RWJBarnabas Health, your child will get the highest level of expertise and treatment, right here in New Jersey."

The pediatric hematology/oncology team takes a multidisciplinary approach to providing the most advanced treatments for pediatric cancer and blood disorders, such as complex surgical techniques, precision medicine, immunotherapy and innovative radiation therapy procedures, including the state's only hospital-based proton therapy center. In addition, as New Jersey's only NCI-Designated Comprehensive Cancer Center, Rutgers Cancer Institute offers access to cutting-edge clinical trials and cellular therapies that may not be available at other programs.

A HOLISTIC APPROACH

The specialists at Rutgers Cancer Institute and RWJBH know that, in addition to treating the body, it's important to pay close attention to the emotional and social challenges of the patient and family. "A diagnosis of cancer turns a family's life upside down, so we have a robust psychosocial support team to address the needs not just of the patient, but of parents and siblings as well," says Dr. Cole. That team includes psychiatrists, psychologists, counselors, social workers, nutritionists and educators.

"We're committed to keeping kids on top of their studies," says Dr. Cole. "At Rutgers Cancer Institute, we have a full-time teacher on staff in the building on school days. I'll often sit with our patients and do math problems with them, though I suspect I may enjoy that much more than they do," he says with a laugh.

He recalls a teenage patient who had acute lymphoblastic leukemia, the most common cancer in children but also one of the most curable. "He had to spend the first month of treatment in the hospital, away from his support network of friends and coaches," says Dr. Cole. "Some of the side effects of his treatment, such as vomiting, were



CENTERS FOR EXCEPTIONAL CARE

RWJBarnabas Health and Rutgers Cancer Institute of New Jersey partner to provide world-class care to New Jersey cancer patients. Specialists from the Pediatric Cancer Center at Rutgers Cancer Institute work with experts to provide care at the following RWJBarnabas Health facilities:

- Bristol-Myers Squibb Children's Hospital at Robert Wood Johnson University Hospital, New Brunswick, under the direction of Peter Cole, MD, Chief, Division of Pediatric Hematology/Oncology
- The Valerie Fund Children's Center for Cancer and Blood Disorders at Children's Hospital of New Jersey at Newark Beth Israel Medical Center, under the direction of Teena Bhatla, MD, Director, Pediatric Hematology/ Oncology
- The Valerie Fund Children's Center for Cancer and Blood Disorders at the Unterberg Children's Hospital at Monmouth Medical Center, Long Branch, under the direction of Richard Drachtman, MD, Section Chief, Clinical Pediatric Hematology/ Oncology

Children with cancer or blood disorders are also seen for consultations at Cooperman Barnabas Medical Center in Livingston.

AN INFUSION OF FUNDS FOR RESEARCH

Survival rates for children with cancer have improved significantly in the past 50 years, but pediatric cancer remains the leading cause of death from disease among children. It is among the least funded areas of cancer research.

Advocates cheered when a \$10 million appropriation to support pediatric cancer research at Rutgers Cancer Institute was included in the New Jersey 2022 state budget.

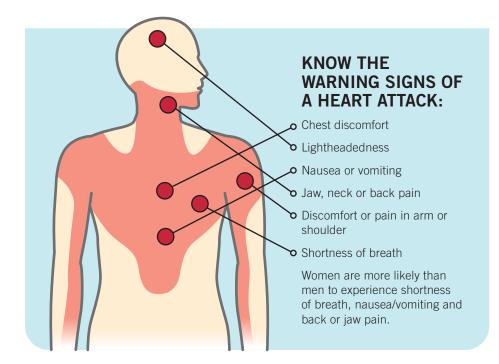
"The funding allows us to expand our ongoing efforts. One of our areas of focus is research in children that will help reduce acute side effects of treatment and the risk of it resulting in long-term organ damage," explains Peter Cole, MD, Chief of the Division of Pediatric Hematology/Oncology and Embrace Kids Foundation Endowed Chair at Rutgers Cancer Institute, who is also Director, Pediatric Hematology, Oncology and Cellular Therapies at Bristol-Myers Squibb Children's Hospital and Professor of Pediatrics at Rutgers Robert Wood Johnson Medical School. Dr. Cole's laboratory is also supported by the Hugs for Brady Foundation.

"Another area of focus is bringing innovative treatment modalities to children with cancer and blood disorders," Dr. Cole says, "including cellular therapies like CAR T-cell therapy, blood and marrow transplants and immunotherapies, which use the patient's own immune cells to fight cancer."

miserable, and he was embarrassed to lose his hair. He was depressed, but he received the support he needed from our psychosocial team.

"I'm happy to report that he's doing much better now. He's back in school on a modified schedule and if he needs any continued support from our team as he fully reenters his routine, we'll be there for him."





shoveling snow, puts stress on coronary arteries. If those arteries have plaque, it may crack or rupture, which can lead to a whole cascade of platelet aggregation and other inflammatory mediators that eventually lead to a heart attack."

In winter, middle-aged patients people in their 40s, 50s, 60s—may be more prone to heart attacks than seniors. "They feel that they're healthy enough for shoveling snow and other types of outdoor exertion, so they don't warm up first and may not wear warm enough clothing," Dr. Tawfik says.

Unlike older patients, they may be unaware of their limitations, he notes, and may not understand the possible consequences of existing conditions, such as hypertension, uncontrolled diabetes or tobacco use. The risk of a heart attack increases with every additional risk factor a person has.

"All of this is not to say that shoveling snow is automatically going to give you a heart attack," says Dr. Tawfik. "What we are saying is that if you have known heart disease, or one or more risk factors for heart disease, you should think carefully before going out to shovel snow."

SAFEGUARD YOUR HEART

How can people protect themselves against heart attacks in cold weather? "Number one, make sure you speak to your doctor so that any risk factors you have are addressed—if you have hypertension, that your blood pressure is well controlled, if you are diabetic, that your blood sugar is under control, if you are a smoker, that you are working on a cessation plan," says Dr. Tawfik.

Stay warm when you're outside and take frequent breaks to go inside and assess how you feel. "If you're breathing in cold air, it cools your chest a little bit. You don't necessarily have the burning in the chest that can be a symptom until you go inside," he says. "Do the work in short intervals so you're not outside for hours at a time."

Be aware of anything different in the way you feel. "A heart attack symptom doesn't have to be chest pain, because not everybody gets that. If you're nauseous, or if you're more fatigued or breathless than you expected to be, those can be red flags," he says.

Dr. Tawfik shows his patients images that illustrate their cardiovascular condition—an X-ray, an ultrasound, a



HOW COLD WEATHER AFFECTS THE HEART

- Low temperatures cause blood vessels and arteries to narrow.
- · Blood flow is restricted and the delivery of oxygen to the heart is reduced.
- The heart must pump harder to circulate blood through the constricted blood vessels.
- As a result, blood pressure and heart rate increase.
- A sudden spike in blood pressure, especially when combined with exertion such as shoveling, can lead to heart attack or stroke.
- Narrowing of or stress on coronary arteries may lead to plaque rupture and blood clots that block blood flow to the heart.
- Hypothermia—when body temperature drops below 95 degrees Fahrenheit—affects the workings of the heart, nervous system and other organs.

CT scan—as a means of helping them grasp their risks. "If I have a patient who's 60 years old and I can tell him his risk for heart disease in the next 10 years is X versus someone who didn't have those risk factors, they tend to be more compliant," he says.

Dr. Tawfik advises his patients to consult their primary care physician or cardiologist before undertaking any high-effort physical activity in cold weather. "It's like driving your car and putting a seat belt on," he says. "It's always best to err on the side of safety."

Whoever your heart beats for, our hearts beat for you. To connect with a top cardiovascular specialist at RW[Barnabas Health, call 888.724.7123 or visit www.rwjbh.org/heart.











Children with a wide range of needs receive individualized care at CSH locations throughout New Jersey.

SPECIAL NEEDS, **SPECIAL TREATM**

NEW LOCATIONS PROVIDE MORE WAYS TO HELP CHILDREN FULFILL THEIR POTENTIAL.

or more than a century, children or adolescents who face special health challenges—from chronic illnesses to complex physical disabilities to developmental or behavioral issues-have been able to turn to Children's Specialized Hospital (CSH) for inpatient and outpatient care.

Since its 1892 origin as a "summer haven" in Westfield for city children, CSH continued to grow until it became the largest provider of pediatric rehabilitation services in the United States, with locations throughout New Jersey.

Now, in response to an increasing number of outpatient visits and the rising rates of emotional, developmental and behavioral disorders in children and adolescents, CSH is expanding access to the highest level of care. Four new CSH locations, each with state-of-the-art facilities and located close to major highways and bus

Children's Specialized Hospital

An RWJBarnabas Health facility

routes, have opened or soon will open:

WEST ORANGE: CSH is now managing the Pediatric Rehabilitation Services of its affiliate hospital, Cooperman Barnabas Medical Center, at 375 Mt. Pleasant Avenue.

UNION: All outpatient services offered at CSH's Mountainside and Warren locations have transitioned to this new, advanced facility at 2840 Morris Avenue.

EATONTOWN: In the spring, Monmouth Medical Center and CSH will open RWJBarnabas Health Family Care & Wellness, located at the Monmouth Mall.

TOMS RIVER: Next year, a brand-new, 80,000-square-foot facility on Route 37 will replace the current CSH Toms River locations. The clinical space will be shared with RWIBarnabas Health Children's Services and Community Medical Center, which will provide an ambulatory surgery

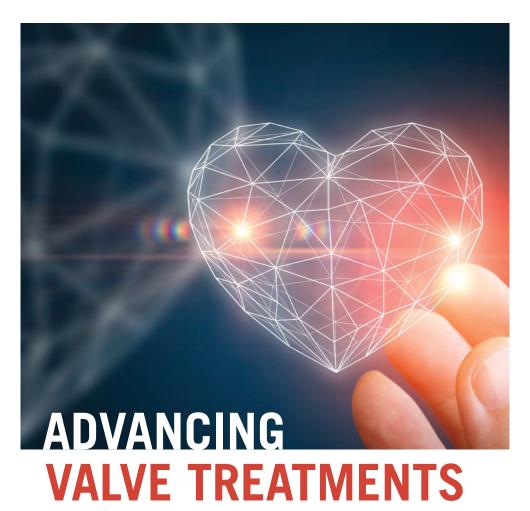
center, imaging, preadmission testing, primary care and orthopedics.

All CSH facilities offer the most advanced technology and a full suite of therapy and physician services, including developmental and behavioral pediatrics, neurology, special needs primary care, physiatry, psychiatry, audiology, neuropsychology, neurorehabilitation, nutrition, occupational therapy, physical therapy, psychology, and speech and language therapy.

"Our vision is a world where all children can reach their full potential," says Matthew B. McDonald III, MD, President and CEO, CSH. "In order to make that vision a reality, we must continually enhance access to our innovative and individualized therapies and medical treatments. These new sites not only serve as additional access points for our current patients and families, but as an introduction to new communities of patients and families who may need our services."

For more information about Children's Specialized Hospital, call 888.244.5373 or visit www.rwjbh.org/childrensspecialized.

At Children's Specialized Hospital, we provide world-class care for children and young adults who face special health challenges across the state of New Jersey and beyond. We treat everything from chronic illnesses and complex physical disabilities, like brain and spinal cord injuries, to a full scope of developmental, behavioral and mental health concerns. We have convenient locations throughout the state: Bayonne, Clifton, East Brunswick, Eatontown, Egg Harbor Township, Hamilton, Jersey City, New Brunswick, Newark, Somerset, Toms River, Union and West Orange.



A CLINICAL TRIAL HIGHLIGHTS EXPERTISE IN MINIMALLY INVASIVE HEART THERAPIES.

clinical trial at Robert Wood Johnson University (RWJUH) and Rutgers Robert Wood Johnson Medical School (RWJMS) is evaluating a minimally invasive treatment of a severe heart valve disorder. This alternative treatment may offer hope to patients when traditional

MARK J. RUSSO, MD, MS

surgery is not an option.

The new, advanced procedure treats tricuspid regurgitation (TR), a condition in which the tricuspid valve between the

two right heart chambers does not close tightly, allowing blood to flow backward in the heart as it pumps. TR increases the heart's workload and can lead to heart failure, liver disease and lung damage.

"The tricuspid valve has been called the 'forgotten valve' because there has been no good way to treat it," says Mark J. Russo, MD, MS, Professor of Surgery and Chief of Cardiac Surgery at RWJMS, who is principal investigator for the clinical trial. TR can be treated with open heart surgery, but patients are often too sick to endure it, and medications that treat symptoms don't resolve the underlying problem.

The clinical trial is studying a

procedure that doesn't involve open heart surgery. Instead, a minimally invasive investigational device called the EVOQUE system uses a thin tube called a catheter to implant a replacement tricuspid valve through a blood vessel. The trial is comparing the safety and effectiveness of the EVOQUE system plus optimal medical therapy (OMT) with OMT alone in treatment of people with severe or greater TR.

"There's little trauma or pain associated with the procedure, and recovery is much faster than with open heart surgery," Dr. Russo says. "This could completely transform TR treatment."

HEART VALVE EXPERTISE

RWJUH and RWJMS have long been at the forefront of catheter-based heart valve therapies. "That's evident from our large surgical valve program, our transcatheter valve program and our large number of clinical trials," Dr. Russo says. "Predecessors to EVOQUE in the transcatheter space have included minimally invasive therapies such as MitraClip and TAVR."

MitraClip is a system for repairing the heart's mitral valve, which lies between the heart's two left chambers. The system uses a catheter to attach a small clip to the valve to help it close more completely and restore normal blood flow.

TAVR (transcatheter aortic valve replacement) is used to treat aortic stenosis, a condition in which the aortic valve—the largest heart valve—becomes thick and stiff, hindering blood flow and potentially leading to heart failure.

"We have at least a dozen clinical trials of valvular therapies, giving patients access to treatments they can't get elsewhere," Dr. Russo says. "A number of therapies promise to completely transform treatment, and these impactful trials represent some of the most meaningful work being done right now in the cardiovascular field."

Whoever your heart beats for, our hearts beat for you. To connect with a top cardiovascular specialist at Robert Wood Johnson University Hospital, call 888.724.7123 or visit www.rwjbh.org/heart.





TRANSFORMING SURGICAL

EXPANSION PROJECT ENHANCES OPERATING ROOMS AND STERILIZATION.

major capital project that expands surgery capabilities at Robert Wood Johnson University Hospital (RWJUH) is enhancing both the hospital's surgical suites and critical support services that patients rarely see.

With help from grants totaling \$2.5 million from the Robert Wood Johnson Foundation (RWJF), the ambitious surgical services expansion adds three new state-of-the-art hybrid operating rooms (ORs), reconstructs every existing OR and provides a new Central Sterile Processing (CSP) unit. Sometimes described as the heart of the hospital, CSP is responsible for cleaning and sterilizing all devices used in medical procedures across every unit at RWJUH.

The transformation will help meet growing demands for complex care and more fully embrace forward-looking technologies that can enhance quality and improve outcomes—important as RWJUH has advanced as the academic medical hub for the state's most comprehensive health system and integrated more closely with Rutgers Robert Wood Johnson Medical School.

"Every year, hundreds of patients are transferred to RWJUH from other hospitals because of our expertise and ability to save lives," says Keith P. Lewis, RPh, MD, Chief of Anesthesia and Director of Perioperative Quality and Safety at RWJUH, as well as Professor and Chair of Anesthesiology and Perioperative Medicine, and Interim Executive Vice Dean at Rutgers Robert Wood Johnson Medical School. "Our medical professionals need the top tools to do their best work and deliver the best outcomes, including facilities with adequate space, logical flow and cutting-edge technologies."

The project broke ground in July 2020, and its first phase—construction of a new three-story building adjacent to existing surgical facilities—has just been completed. Five new operating rooms, including a hybrid OR with intraoperative MRI capability and CSP, are housed in the new addition. Existing operating rooms will be reconstructed in phases as the entire project advances toward completion in 2025 so there is no disruption in surgical capacity at RWJUH.

ALL-IN-ONE CAPABILITIES

The new, larger operating rooms provide more space and take surgical care to the next level. Every operating room will boast an integration system that consolidates and organizes all patient data during a procedure. This technology minimizes OR congestion, streamlines information across multiple platforms and allows surgical staff to better focus on patient care. ORs will also be designed to support easier use of mobile technologies, robotics and team collaborations.

Hybrid operating rooms combine traditional devices, instruments and equipment with medical imaging, robotics and other technologies for minimally invasive procedures. Among key technologies is bi-plane imaging, in which two rotating cameras provide surgeons with detailed, high quality 3D images. "A bi-plane hybrid room has many benefits to patients and clinicians alike and will allow neurosurgeons, cardiothoracic surgeons, radiologists and other interdisciplinary teams to work closely together, making surgery seamless for patients," says Dr. Lewis.

Hybrid ORs allow doctors to do both open and laparoscopic surgeries or even





SERVICES

The new CSP unit at Robert Wood Johnson University Hospital features enhanced processes and space design, and mitigates the risk of error through integrated automation. Key features include a centralized layout near operating rooms, enhanced sterilization and decontamination, advanced water treatment, a dedicated elevator and a state-of-the-art automated conveyance system.



CELEBRATING 50 YEARS

Since its inception in 1972, the Robert Wood Johnson Foundation (RWJF) has been instrumental in developing the legacy of Robert Wood Johnson University Hospital (RWJUH)—New Jersey's premier academic medical center. With contributions nearing \$37 million, RWJF supported the growth of the hospital's academic medical campus and invested in innovative equipment, technology and programs throughout clinical areas. Our patients, their families and the community we serve are grateful for the foundation's ongoing commitment.

switch from one to another during the same operation. Such flexibility allows surgeons in a variety of specialties to handle more complex procedures, more nimbly pivot in the face of complications and sometimes perform diagnostic imaging and surgical treatment during the same procedure. Hybrid operating rooms will be used by every service line at the hospital in a wide variety of surgeries. Benefits to patients may include more efficient procedures, shorter hospital stays and faster recovery.

Funded in part by a \$1.5 million grant from RWJF, the hybrid OR opening in the new RWJUH surgical building also includes intraoperative magnetic resonance imaging (iMRI) to give neurosurgeons real-time views of the brain during surgery. Combining diagnosis and treatment into one procedure saves valuable time and can make a difference in recovery for patients with stroke or other severe neurovascular complications.

A CLEAN START

Yet no surgery would be possible if CSP didn't sanitize instruments from scalpels to scopes. With up to 30 instrument trays needed per surgery,

CSP processes 14,000 to 15,000 trays each month, or more than 3 million instruments per year. As surgical case numbers and complexity have increased, the need for expanded sterilization and decontamination has grown significantly.

With assistance from a \$1 million award from RWJF, the surgical expansion project almost doubles RWJUH's CSP space to 16,000 square feet and substantially expands staff. Just as important, it places the CSP unit near operating rooms. This shortens movement of instruments, improves efficiency, reduces risk of damage and improves patient safety.

RWJUH worked with a leading manufacturer of equipment and systems for sterilizing medical instruments to create an innovative CSP design. It incorporates automation and advanced technologies that maximize productivity of both machines and staff, with quality control and reliability at the forefront.

"New Jersey has one of the strictest CSP requirements in the country, and our unit will set the standard not just for the state but for every hospital across the nation," Dr. Lewis says.

"We're committed to creating a healthier community and a healthier New Jersey," says Bill Arnold, President and Chief Executive Officer at RWJUH. "Our new surgical services platform will transform our ability to deliver on these goals today and integrate new technologies as they become available in the future."

"The Robert Wood Johnson Foundation is pleased to support these transformational advances, expanding RWJUH's ability to provide the finest surgical care possible," says Marco Navarro, RWJF Senior Program Officer. "These advances in RWJUH surgery facilities help ensure that the people of New Jersey will be able to get outstanding, cutting-edge care without leaving our state."

To support the Robert Wood Johnson University Hospital Foundation, visit www.rwjuhgiving.org.





'A VERY SPECIAL MOMENT FOR ALL OF US'

A SURROGATE BIRTH BRINGS TWO COUPLES TOGETHER WITH HELP FROM RWJUH.

hen Jessica* decided to become a gestational carrier—sometimes called a surrogate—for another couple, the moment she most looked forward to was seeing the new parents' faces in the delivery room as they witnessed their beautiful baby coming into the world.

But there was a snag: The hospital Jessica had planned to use for the birth wouldn't allow everyone she wanted in the delivery room. That list included the new parents-two gay men-and Jessica's wife, whom she wanted there for emotional support.

Late in her pregnancy, at 32 weeks, Jessica decided against having the birth at the hospital where she had delivered her own two children, now ages 17 and 12, and started searching for one that would accommodate all her wishes. Her choice: Robert Wood Johnson University Hospital (RWJUH), where she delivered a healthy baby girl on July 29 with all three of her VIPs on hand to share the iovous occasion.

"I became a surrogate for that moment—to see the baby being given to the parents—and it far exceeded all my expectations," says Jessica, 37, of East Brunswick. "It was an amazing feeling for me to witness them holding their baby, and for my wife to share in it. This was a very special moment for all of us. I'm so grateful to RWJUH that they allowed it to happen."

EMBRACING PARENTS

As a gay couple having a child via a lesbian surrogate couple, the new parents also were happy with the delivery. "RWJUH swiftly responded to our unique situation with care," says one of the dads, who wishes to remain anonymous. "The hospital hosted a video call to talk through every aspect of our birth plan, overcame COVID hurdles to have both couples in attendance at the delivery and arranged for adjoining rooms after. Every RWJUH team member showed deep interest, empathy and professional skill, exceeding our high expectations. A culture of diversity and acceptance was on constant display."

Jessica and the baby's parents were so grateful for the experience that they wrote separate letters to the hospital, thanking the staff for being accommodating and providing exceptional care to everyone involved. "We were all just blown away with the professionalism and courtesies that RWJUH extended," Jessica says.

With most births, having both parents present in the delivery room means the mother and the mother's partner. But the circumstances of this delivery were extraordinary, says Carla Boyle, RN, then Director of Perinatal Services and now Trauma Registry Nurse at RWJUH. "Both intended parents needed to be present in addition to the mother," Boyle says. Having the mother's partner in the room added a fourth person.

Boyle convened the videoconference call with Jessica, the intended parents and hospital staff to discuss how to include everyone. When delivery day came, all went according to plan. The

dads got to witness their daughter's birth, and Jessica's wife was there for support and to cut the umbilical cord. Boyle says the hospital staff was happy to be involved in the special day and appreciated the letters of thanks. "It brought a lot of joy to us," she says.

LASTING CONNECTION

Jessica didn't know the baby's parents before she became their gestational carrier. They connected through a surrogacy agency, and the baby was conceived via in vitro fertilization using a donor egg. Sperm from both dads was used in the fertilization process, but only later did it become clear which man was the biological father.

Although Jessica didn't set out specifically to be a surrogate for an LGBTQ family, she's glad it worked out that way. "I really just thought it would be so incredible to help another family," she says. "But I'm in a samesex relationship, and I also thought it would be nice to do it for two dads who wouldn't have this opportunity otherwise. It was important to me to be able to do that, and to give back to the LGBTQ community."

Jessica and her wife have become good friends with the dads, and they all enjoy spending time together. Jessica is even considering the possibility of being a surrogate for them again. "I feel very lucky that the dads are giving me and my family the opportunity to be a part of their family," says Jessica. "And we do feel like family."

*Jessica chose to use only her first name in this article.

To learn more about maternity services at Robert Wood Johnson University Hospital, visit www.rwjbh.org/bristol-myers-squibb-childrens-hospital-at-rwjuh/treatment-care/maternity.





NEW TREATMENT STOPS A STROKE

Thanks to prompt treatment with a new clot-busting medication, Joyce Lockwood (second from right) can join family for the holidays like she did before her stroke, with (from left) son Brian Lockwood, daughter Loriann Rybicki and sons Glenn Lockwood and Timothy Lockwood.

A WOMAN BENEFITS FROM A NEW CLOT-BUSTING DRUG BEING STUDIED AT RWJUH.

ovce Lockwood still can't believe she had a stroke. In fact, she didn't feel she was having one as it was happening the night of July 27, 2021. "One minute I'm home watching a movie and the next I'm waking up in the hospital," says the 81-year-old East Brunswick retiree.

Joyce had called a nearby son in Livingston to ask a question as she watched TV late that evening. When his wife ended the call after saying hello, she turned to her husband. "You'd better call your mother back," she told him. "I don't like the way she sounded." Joyce hadn't realized she was slurring words as a clot formed in an artery leading to her brain, blocking blood flow and triggering an acute, ischemic stroke.

Joyce recalls first responders pounding on her door and window, but she didn't answer. She doesn't remember what happened next until becoming aware she was at Robert Wood Johnson University Hospital (RWJUH) with a nurse holding a syringe. "I asked the nurse, 'What's that for?'" Joyce says. "She said, 'We're trying to reverse it."

IMPROVING OUTCOMES

The RWJUH Comprehensive Stroke Center team had established Joyce was having a stroke and quickly injected an innovative, powerful medication that can open blocked arteries, preserve brain function and often save lives. Called tenecteplase, or TNK, the drug is the subject of a study in progress at the hospital.

When given shortly after a stroke's onset, TNK activates an enzyme that cuts through protein. "Once that happens, the drug starts breaking up the clot," says RWJUH vascular neurologist Raymond Mirasol, MD, Assistant Professor, Division of Stroke and Neurocritical Care, Department of Neurology, Rutgers Robert Wood Johnson Medical School and RWJUH.

TNK is similar to an older clot-busting medication called recombinant tissue plasminogen activator,



RAYMOND MIRASOL, MD

or rtPA. That drug had been a breakthrough to doctors who were once virtually powerless against stroke.

"Before the 1990s, the prognosis for even surviving acute strokes in large blood vessels was not good," says Dr. Mirasol. "The stroke world was relegated pretty much to monitoring patients'

progress. Many patients died or became permanently disabled." Treatment with rtPA meant strokes caught quickly enough could be treated, giving patients who met criteria for the drug's use much greater odds of a favorable outcome.

TNK offers additional advantages over rtPA's potentially lifesaving benefits. The body breaks TNK down more slowly, so an injection does not need to be followed by an hour-long infusion to make sure patients get enough, as is done with rtPA. Being able to administer just a single injection makes TNK already commercially available as a treatment for heart attacks—much easier to use in acute stroke patients like Joyce. TNK may also have fewer side effects than rtPA.

"Given the very strong scientific evidence for using TNK over rtPA, we made TNK the standard of care at RWJUH in June 2021 and are doing our own ongoing analysis of its efficacy and safety," Dr. Mirasol says. "My experience is that in many patients, TNK seems to be dissolving clots more effectively than rtPA."

SHORT STAY

It didn't take Joyce long to conclude something good had happened after she received her injection. "The nurses were celebrating," she says. "They put their arms around me and wished me luck. They were very happy."

She spent the next day in the hospital getting tests and learning about the stroke she'd survived. With tests done and Joyce able to walk on her own, she was discharged the following day. "For a then-80-year-old woman to have a stroke and be in the hospital only one full day is like a miracle to me," Joyce says. "I had an angel on my shoulder."

She left with a prescription for a cholesterol-lowering statin, but her primary care doctor soon said she could cut it back to manage side effects. The only drugs Joyce takes now are a blood pressure medication she's been on since her 60s and low-dose aspirin. "I feel great," she says.

Results like Joyce's will become part of RWJUH's ongoing study. "What we're doing could benefit patients in other parts of the country as hospitals come to us for insights that will inform not only other academic medical centers but community medical centers as well," Dr. Mirasol says.

"I got this miracle shot, and I hope it helps other people like it helped me," Joyce says. "I'm blessed, lucky and grateful."

To learn more about neurologic and stroke treatments at Robert Wood Johnson University Hospital, visit www.rwjbh.org/rwjuhstroke.



1 Robert Wood Johnson Pl., New Brunswick, NJ 08901

NON PROFIT U.S. POSTAGE PAID Harrisburg, PA

Permit #324

We have top cardiovascular specialists, researchers and innovative treatments.

And the passion to match.

National recognition for innovative cardiac therapies.

As New Jersey's largest academic medical center, Robert Wood Johnson University Hospital is at the forefront of cardiac innovation and teaching with a designated Center of Excellence for heart transplant, minimally invasive transcatheter aortic valve replacement procedures and mechanical circulatory support. In partnership with Rutgers Health, we're a national leader in minimally invasive cardiac therapies and the treatment of heart valve diseases. It's all part of our dedication to every heart in our community. Learn more at rwjbh.org/heart

Robert Wood Johnson University Hospital

WJBarnabas

Let's be healthy together.

