

## Study identifies new drug to weaken membranes of “superbugs” that can cause severe illnesses

*Rhode Island Hospital leads team of researchers from Brown, Emory and Northwestern Universities, Massachusetts Eye & Ear Infirmary and Massachusetts General Hospital*

PROVIDENCE – A team of researchers, led by a lab at Rhode Island Hospital, has identified a drug that can target and weaken the cell membranes of these dormant “persister” cells, making them more vulnerable to treatment with antibiotics.

The findings, just published by the *Proceedings of the National Academy of Sciences* (PNAS), are the result of ongoing research into treating MRSA (methicillin-resistant *Staphylococcus aureus*) that is being undertaken by Rhode Island Hospital in collaboration with Brown, Emory, Harvard and Northwestern universities, along with institutions in China and Brazil.

**ELEFTHERIOS MYLONAKIS, MD, PhD**, chief of infectious diseases at Rhode Island Hospital and The Miriam Hospital in Providence, and Charles C.J. Carpenter Professor of Infectious Disease at the Warren Alpert Medical School of Brown University, is leading a multidisciplinary team in search of drugs to target bacteria that have developed a resistance to conventional antibiotics and entered into a dormant state for which there is no known effective treatment.

The researchers discovered that the clinically approved compound bithionol, an anti-parasitic agent, demonstrated the ability to selectively embed into and weaken bacteria membranes while leaving mammalian cells unharmed. The research also found that bithionol, when combined with gentamicin, effectively kills persisters and reduces overall levels of MRSA bacteria in mice.

The development of new drugs is not keeping pace with the rise in drug-resistant bacteria.

“This is an emergency,” Mylonakis said, citing a World Health Organization (WHO) projection that “by 2050, superbugs will surpass cancer as the global No. 1 killer. This is a frightening situation. It affects more than individuals in the hospital or the very ill or the very old. It effects everybody.”

Mylonakis said drug-resistant staphylococci pose a major health risk because it’s commonly found on our skin and in the environment, is highly virulent, and can cause serious blood, bone and organ infections. Trying to find new drugs to combat the problem requires experts in a variety of fields, including chemistry and engineering.

“Our study demonstrated the potential for an old drug, bithionol to be repurposed to treat deadly MRSA,” said the lead author **WOOSEONG KIM, PhD**, a postdoctoral researcher at Rhode Island Hospital and the Warren Alpert Medical School of Brown University.

**GUIJIN ZOU, PhD**, and **HUAJIAN GAO, PhD**, researchers at Brown University’s School of Engineering, said, “Our computer simulations revealed the molecular mechanism of interactions between screened compounds and different cell membranes. In particular, the high degree of selectivity of bithionol has been attributed to their preferential penetration of bacterial rather than mammalian membrane. This work further demonstrated the great potential of in silico modelling in aiding the discovery and development of new antibiotics.”

**PETIA VLAHOVASKA, PhD**, associate professor of engineering science and applied mathematics at Northwestern University, said, “The research is an amazing fusion of medical research with basic science coming from numerical simulation and biomimetic systems.”

“As a chemist I was surprised by the molecular simplicity of the lead molecules and how effective they were against these hard to treat infections thereby making them attractive targets for future development,” said **WILLIAM WUEST, PhD**, member of the Emory Antibiotic Resistance Center, an associate professor of chemistry and a Georgia Research Alliance Distinguished Investigator.

The research team had previously identified two compounds, both synthetic retinoids, that also had the ability to impair bacterial membranes and, when combined with gentamicin, kill persister cells. That study was published in *Nature* in March 2018. The discoveries have resulted from the team’s development of novel ways to screen large numbers of compounds for those that could be effective antibiotics without being toxic to humans. Ultimately, 185 compounds were identified.

The research has been supported by National Institutes of Health grant P01 AI083214, National Science Foundation grant CMMI-156290 and National Institute of General Medical Sciences grant 1R35GM119426. ❖

## Statement on Care New England's withdrawal from discussions with Lifespan, Brown

From **CHARLES R. REPPUCCI**, chair, CNE Board of Directors and **JAMES E. FANALE, MD**, president and CEO, Care New England [7/16/2019]:

Yesterday, after careful deliberation, the CNE Board voted to formally withdraw from tri-party discussions with Lifespan and Brown University. CNE was an active and willing participant, meeting in good faith, as requested by Governor Raimondo. The discussions have been collaborative, mutually respectful, and held honestly and transparently. We would like to thank the Governor's Office, The Rhode Island Foundation, and The Partnership for Rhode Island for their leadership throughout this important process.

As those responsible for the fiduciary oversight of CNE, the Board has concluded that it is in the best interest of CNE and the community it serves to end the tri-party discussions. In making this decision, the Board took into account many considerations, including but not limited to, capital requirements and financial stability of the combined system, community need, anti-trust considerations, organizational stability, and implementation risks.

CNE has implemented a remarkable turnaround with significant improvements. With this in mind, it is the respectful position of CNE to step back and continue on the dedicated path of improving quality, service, and access to health care for our patients.

The Board, leadership, and dedicated staff of CNE are fully prepared for and look forward to the opportunities ahead for our system. We have exciting growth plans, clinical development opportunities, and plans for capital improvements. We also look forward to expanding our collaboration with Lifespan and Brown University on new clinical and academic opportunities. We are confident and optimistic about the future and our place as a leading health care institution in Rhode Island. As we move forward in our mission, we will continue to serve our patients with honesty, integrity, and clinical excellence. ❖

## Care New England announces Q3 financial report

*System achieved \$7.4 million in income from operations*

Care New England Health System announced on July 29th that for Fiscal Year 2019, third quarter (April–June), the System achieved income from operations of \$7.4 million, a \$13.2 million improvement from the second quarter.

"The third quarter results are a tremendous success for CNE," said **JAMES E. FANALE, MD**, president and CEO. "It represents incredibly hard work by our dedicated staff, focused management, detail to action planning, and strong operational execution. While this is a significant accomplishment, it must be emphasized that in order to continue this positive momentum, our perseverance and dedication must be sustained. CNE is moving forward for a stronger, healthier future for our staff, community, and our patients. Today's announcement is further proof of that effort."

To date, CNE, inclusive of Memorial Hospital, has recorded income from operations of \$2.3 million, \$1.6 million better than budget. Without Memorial, the System recorded income from operations for the past nine months of \$4.9 million, \$147,134 better than budget and in comparison to \$1.8 million income from operations through the third quarter in FY 2018.

The greatest financial challenges facing the system this year include patient volumes, specifically, NICU, medical/surgical, obstetrics, and deliveries. However, action plans are stabilizing these patient trends, as well as the careful management of appropriate staffing to the patient volume levels. Additionally, action plans across the system are all addressing the critical components of quality, service, and access. ❖

## URI researchers embark on autism study with Yale, UConn-affiliated Haskins Labs

KINGSTON – JULY 16, 2019 – **ALISA BARON, PhD**, and **VANESSA HARWOOD, PhD**, Assistant Professors of Communicative Disorders at the University of Rhode Island, who are researchers with clinical certifications as speech language pathologists, working at URI's new Collaborative Cognitive Neuroscience Lab, are partnering with research scientists, **JULIA IRWIN, PhD**, and **NICOLE LANDI, PhD**, at Haskins Laboratories to better understand how children with autism spectrum disorder (ASD) learn language.

Haskins is a private, non-profit research institute located in New Haven affiliated with Yale University and the University of Connecticut. Specifically, researchers will study how children with autism integrate visual information with what they hear compared to their typically developing peers and how that affects their ability to learn language.

The University of Rhode Island's portion of the study, led by Drs. Baron and Harwood, will focus on children, ages 10 through 18, with autism spectrum disorder. The study will incorporate electroencephalogram (EEG) sensors that monitor brain activity with eye-tracking technology to determine the level of audio-visual integration occurring as children observe human and computer-animated faces speaking.

"One way we learn language is by looking at people's faces and expressions and watching how their mouths move in addition to listening to what they are saying," said Baron. "In children with autism, we find that they have difficulty making eye contact or looking at people's faces as they speak. So they are missing out on critical information regarding language and communication."

URI will work through its Speech and Hearing Center as well as through the Rhode Island Consortium on Autism Research and Treatment to recruit participants. Recruitment is expected to begin late summer. Researchers will



From left, undergraduate student Marland Chang, Assistant Professor Alisa Baron, graduate student Jillian Caduto, and Assistant Professor Vanessa Harwood, at the University of Rhode Island, are collaborating with scientists at Haskins Laboratories on a research study to determine how children with autism spectrum disorders learn language.

work with participants to acclimate them to the research process. Study participants will be required to participate in several sessions, which will include behavioral testing and an experimental portion.

"This is a very special population and we appreciate their willingness to be a part of this study. We want to make certain that we are doing everything we can to ensure their comfort and successful participation," said Harwood. "Our goal for the end result of this study is to develop effective interventions that will support and reinforce those types of looking behaviors that may help improve language processing."

In addition to recruiting children with ASD, researchers also invite parents of children with autism to participate in the study to learn more about how they process language.

The Collaborative Cognitive Neuroscience Lab at the University of Rhode Island's College of Health Sciences is a multidisciplinary team of researchers dedicated to translational research that bridges innovative neuroscience with clinical practice. The lab draws from multiple disciplines including communicative disorders, psychology, neuroscience, education, kinesiology and foreign language.

In addition to its formal affiliations with the University of Connecticut and Yale University, Haskins Laboratories maintains collaborations and partnerships with institutions around the world. This is the first collaboration between Haskins and URI.

Added Baron and Harwood, "We are grateful for this partnership and the opportunity to contribute in a meaningful way to moving autism research and interventions forward. We look forward to a long and successful relationship." ❖



Marland Chang testing EEG sensors and eye-tracking technology as part of a dry run for research on how children with autism integrate visual information with what they hear. [URI PHOTOS BY NORA LEWIS]





Dr. Noah S. Philip, director of Psychiatric Neuromodulation at the Providence VA Medical Center, and Associate Professor of Psychiatry and Human Behavior at the Alpert Medical School of Brown University, demonstrates theta burst transcranial magnetic stimulation with Emily Aiken, a research assistant at the Providence VAMC, Oct. 2, 2017. [PROVIDENCE VA MEDICAL CENTER PHOTO BY TORI LARSON]

## Providence VA researchers publish Theta-Burst Stimulation study for treatment of PTSD

PROVIDENCE – Researchers at the Providence VA Medical Center published a study Monday, June 24, finding that theta-burst stimulation may be a promising new treatment for posttraumatic stress disorder, commonly known as PTSD.

The article, “Theta-Burst Transcranial Magnetic Stimulation for Post-traumatic Stress Disorder,” was published in the *American Journal of Psychiatry*, summarizing a controlled study of 50 Veterans with PTSD. Transcranial magnetic stimulation has previously shown promise as a treatment for PTSD, and intermittent theta-burst stimulation, or iTBS, is a new, more rapid process that has been shown to be effective in treating depression.

Outcomes measured in the study included comparing changes in PTSD symptoms, depression, and social and occupational function in participants, compared with a control group who only received simulated treatment. The team was also able to identify participants most likely to improve with iTBS using functional magnetic resonance imaging, also known as MRI.

“Our results indicate that iTBS appears to be a promising new treatment for PTSD, a condition more common among Veterans than in the general population,” said lead researcher **DR. NOAH S. PHILIP**, director of Psychiatric Neuromodulation at the Providence VA Medical Center, and Associate Professor of Psychiatry and Human Behavior at the Alpert Medical School of Brown University. “Further investigation is needed, to develop the optimal treatment course and duration.”

The study was supported by U.S. Department of Veterans Affairs grants, and the VA Rehabilitation Research and Development Service’s Center for Neurorestoration and Neurotechnology at the Providence VA Medical Center. The article can be found online at <https://ajp.psychiatryonline.org/doi/full/10.1176/appi.ajp.2019.18101160>. ❖

## University Orthopedics use AI to support spinal implant procedure

PROVIDENCE – Physicians from University Orthopedics (UOI) are the first doctors in Rhode Island to use a patient-specific spinal implant designed by artificial intelligence. **DR. ALAN DANIELS** and **DR. DOMINIC KLEINHENZ** partnered with Medica® to deliver the advanced medical procedure that could improve spine surgery outcomes throughout the state.

Medica, a medical manufacturing company that uses data science, analytics, and artificial intelligence to lead device development in the spine industry, assisted UOI physicians with the use of its proprietary software called UNiD ASI™. The systems-based technology platform, UNiD ASI, is designed to help surgeons improve their patients’ outcomes by embedding artificial intelligence within the platform – giving surgeons updated visual surgical plans based on the specific needs of patients.



Alan Daniels, MD



Dominic Kleinhenz, MD

“Spine surgery is one of the most complex procedures because of the high number of variables to take into consideration. Being able to predict how different parameters will affect a patient’s outcomes is critical in both large deformities as well as in smaller degenerative settings,” said Dr. Daniels, a board-certified spine surgeon at University Orthopedics and an Associate Professor of Orthopaedic surgery at the Warren Alpert

Medical School of Brown University.

Dr. Kleinhenz emphasized the importance of technology in delivering better results for patients going forward. “Medica is the first spine company to make custom rods industrially manufactured to precisely match the pre-operative plan of the surgeon. This process preserves the rod’s structural integrity, and limits stress points that could lead to rod fracture,” Dr. Kleinhenz said. ❖

## Sen. Sheldon Whitehouse tours CODAC's newest facility and discusses treatment provider's impact within the community

*CODAC Pawtucket sees 30 percent increase in its patient base*



PAWTUCKET – CODAC Behavioral Healthcare has welcomed more than 60 new patients in need of recovery services since it opened its doors at 600 Pawtucket Ave., Pawtucket. This is one of several updates that **LINDA HURLEY**, President/CEO of CODAC, shared with **SEN. SHELDON WHITEHOUSE** during a tour of the facility on July 1st.

"Ease of access and space has allowed us to offer special programming as well as opioid dependence services to a wider community," Hurley said. "With the continued support of Senator Whitehouse and other state leaders, I am confident that we can expand treatment capacity across the state."

Sen. Whitehouse, who co-authored the legislation guiding the national response to the opioid epidemic, praised CODAC's recent success and highlighted the need to continue to innovate amid the ongoing crisis.

"As the opioid crisis sweeps the country, we can take pride in what is happening in Rhode Island," Sen. Whitehouse said. "Rhode Island has been a leader in treatment and recovery, and the result is that we are starting to reduce the level of opioid overdoses."

Hurley agreed with Sen. Whitehouse

about the need to keep the momentum going with regards to the development of programs and initiatives across the state. "As the senator said, 'we aren't where we need to be,' but we are certainly bending the curve on overdoses," Hurley added.

Among the services offered at CODAC Pawtucket, Hurley explained that patients have access to tobacco cessation services, infectious disease specialists, a successful HCV program, assistance for housing, and other important resources that are especially essential for individuals in recovery.

**CARLOS LOPEZ ESTRADA**, Chief of Staff for Pawtucket Mayor **DONALD R. GREBIEN**, also expressed support for CODAC and explained that the City of Pawtucket is soon launching its Safe Stations initiative, where individuals can meet with public safety officials and immediately get connected with treatment providers.

With experience in helping maximize Newport's Safe Stations initiative, Hurley immediately offered to help Pawtucket launch their program – one of many projects on the horizon for the outpatient treatment provider in the months ahead. Most recently,

Senator Sheldon Whitehouse and Linda Hurley, President/CEO of CODAC Behavioral Healthcare, discuss Rhode Island's progress in reducing overdoses and how the new facility in Pawtucket is improving access to care. Carlos Lopez Estrada, Chief of Staff for Pawtucket Mayor Donald R. Grebien, joined the tour of the facility and expressed gratitude for the state's leadership in addressing the opioid crisis.

[PHOTO: CODAC]

CODAC has been supporting Rhode Island State Police's Hope Initiative and in collaboration with the University of Rhode Island, CODAC is offering integrated medical services for substance use disorder on the "Rhode to Health" mobile medical unit. Individuals are able to receive or be connected to services ranging from blood pressure checks or health education to mental health assessments and treatment for opioid use disorder.

"Substance use disorder is a disease that impacts not only the individual, but also the families and our communities. We are proud of what we've accomplished in the last two months and look forward to helping even more Rhode Islanders receive the services they need," Hurley said. ❖



## URI, CODAC launches statewide initiative with mobile health unit



From left to right: Mary Walton, Rebecca Boss, Linda Hurley, Adam Nitenson, Linda Mahoney, and Dustin Alvanas.

CRANSTON – CODAC Behavioral Healthcare is set to launch a statewide initiative with the assistance of the URI Rhode to Health mobile unit that will offer integrated medical and behavioral healthcare services. The mobile unit will offer yet another opportunity to remove barriers to care for people living in rural communities, where cases of opioid overdoses are higher.

On an early July morning, CODAC Behavioral Healthcare stationed the mobile unit near the Hazard Building on the Pastore Center Campus to introduce the staff that will be bringing medical and behavioral healthcare services to Rhode Island's underserved community.

**MARY WALTON**, Assistant Medical Director at CODAC, was on site to discuss the range of services available to representatives from the Substance Abuse and Mental Health Services Administration (SAMHSA), a federal agency that advances national behavioral healthcare efforts, and staff from the R.I. Department of Behavioral Healthcare (BHDDH), Developmental Disabilities and Hospitals.

"The people we serve always have something going on that prevents them from seeking care. This mobile unit is giving us a chance to go to their neighborhood and help them receive immediate access to care in their time of need," Walton said.

**REBECCA BOSS**, director of BHDDH and a co-chair of Governor Gina Raimondo's Task Force on Overdose Prevention and Intervention, praised CODAC's response to a growing issue in Rhode Island. "We applaud CODAC Behavioral Healthcare for their commitment to integrate medical

and behavioral healthcare services and to ensure that these services are brought to individuals wherever they live, particularly those in Rhode Island's rural communities," Boss said. "Once again, Rhode Island is leading the country in this new, innovative practice thanks to CODAC and URI's Rhode to Health mobile unit."

The 37-foot mobile unit, Walton says, is unique because of the holistic approach to care that will be available. Besides providing medication assisted treatment, the medical team on the mobile unit will be able to provide HIV and Hep C testing, crisis stabilization, medical care and help individuals acquire health insurance.

Additionally, patients will have access to telehealth services, which helps improve the response time for new cases of opioid use disorder within the community.

"Lack of transportation and resources as well as stigma remain significant barriers to care, and our work will help address those challenges directly," said **LINDA HURLEY**, President/CEO of CODAC Behavioral Healthcare. "We look forward to working more closely with Rhode Island towns and cities in the coming months to help even more people receive much needed access to treatment."

The \$400,000 mobile unit – which includes two sound-proof exam rooms and equipment typically found in a medical office – was funded by the state of Rhode Island through the Ryan White Foundation. It was first unveiled in late 2018, but it is making its debut to the recovery community now.

**LINDA MAHONEY**, who serves as a State Opioid Treatment Authority for SAMHSA and is an administrator at BHDDH, praised CODAC's ongoing efforts to curb opioid overdoses. "We can't wait for people to come to us, we have to go to them," Mahoney said. She says the services will provide an opportunity to help individuals bring the "mind and body together."

CODAC will begin offering services on the mobile unit on Monday, July 29. Services will be provided five days a week, and patients will have access to a medical provider, a nurse, and an addiction counselor. CODAC is also working with community partners such as Thundermist Health Center and the Community Care Alliance to make sure that all patients' medical needs are being met. ❖

## CODAC, Thundermist using Telehealth to expand MAT treatment access

CRANSTON – Amidst the ongoing opioid crisis, CODAC Behavioral Healthcare and Thundermist Health Center will use telehealth services to improve access to medication assisted treatment (MAT) for substance use disorder. Beginning on Monday, June 17, Thundermist nurse case managers can teleconference with CODAC treatment prescribers so patients can be prescribed suboxone when they first seek treatment.

“Lack of transportation, medication shortages, and stigma continue to be a barrier to care for Rhode Island’s recovery community, and we now have an opportunity to reach more people before it is too late,” said **LINDA HURLEY**, President/CEO of CODAC Behavioral Healthcare.

“We need to respond as soon as a patient says they want treatment,” said **JEANNE LACHANCE**, president/CEO of Thundermist Health Center. “This program ensures we’re providing patients with treatment when they tell us they’re ready.”

“Many patients might seek illicit drugs to prevent the agonizing symptoms of withdrawal when they are unable to obtain immediate treatment. As treatment providers, it is disheartening to learn when patients felt they had to resort to using fentanyl or other dangerous opioids to avoid feeling sick,” said **MARY WALTON**, the first physician assistant at CODAC that will be using telehealth.

CODAC Behavioral Healthcare collaborated with Thundermist Health Center and the Rhode Island Department of Health to develop a grant proposal that was submitted to the Centers for Disease Control and Prevention. The grant funds were applied towards the video conferencing equipment, and the administrative infrastructure needed to realize the project.

After patients meet with a nurse care manager at Thundermist and receive an initial assessment, patients will be able to teleconference with a CODAC provider to start a treatment plan. Thereafter, the nurse care manager gives patients an introduction about the proper use of medication. Patients are able to begin receiving medication that same day.



**Mary Walton**, the first physician assistant at CODAC that will be using telehealth.

Providers are also optimistic about the possibility of reaching more underserved members of the community through telehealth, Hurley says. “Time and time again, we have heard that patients won’t seek services from an opioid treatment program such as CODAC because of the stigma associated with attending OTP facilities. Through telehealth, more patients in need can receive medication assisted treatment while seeing their primary care physician at Thundermist, essentially removing a major barrier to care.”

CODAC Behavioral Healthcare is currently in discussions with other healthcare providers to bring similar telehealth services to Wakefield and Block Island, a move counselors say can expand access to care. ❖

## New initiative improved care for sepsis patients, but black patients saw smaller benefits

*Hospitals with more black patients saw much smaller increases in compliance with new sepsis protocols than hospitals that treat mainly white patients*

PROVIDENCE [BROWN UNIVERSITY] – The New York Sepsis Initiative was launched in 2014 with the goal of improving the prompt identification and treatment of sepsis. A new study has found that while the program has improved care over all, there were racial and ethnic disparities in the implementation of the best-practice protocols.

Sepsis is a life-threatening condition that occurs when the body's extreme response to an infection triggers a chain reaction, said **DR. MITCHELL LEVY**, a professor of medicine and chief of the division of Pulmonary, Critical Care and Sleep Medicine at Brown University's Warren Alpert Medical School. "Even with the best care, the mortality rate is between 15 and 25 percent."

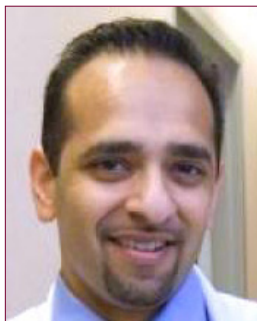
Early identification and treatment of sepsis is essential for saving lives, and the multi-stage best practices for sepsis identification and treatment were codified in the New York Sepsis Initiative's protocols. The new research, published July 1 in the July issue of the journal *Health Affairs*, found that during the first 27 months of the initiative, the percent of patients who received the complete 3-hour-long, best-practice protocol increased from 60.7 percent to 72.1 percent. At the same time, the in-hospital mortality rates for sepsis patients decreased from 25.4 percent to 21.3 percent, which aligned with prior research by Levy, who is also the medical director of the Medical Intensive Care Unit at Rhode Island Hospital.

However, the paper highlights a disparity in sepsis care between black and white patients.

Specifically, during the first 27 months of the initiative, black patients only experienced an increase of 5.3 percentage points in the completion of the best-practice protocol, while white patients experienced an increase of 14 percentage points. Hispanic and Asian patients experienced an increase of 6.7 and 8.4 percentage points respectively.

Being aware of these disparities is critical because the Centers for Medicare and Medicaid Services is considering trying sepsis protocol completion rates to hospital reimbursement, said **DR. AMAL TRIVEDI**, senior author on the paper and a professor at Brown's School of Public Health and medical school. "If our study findings extend beyond New York, it raises concerns about the possibility of these quality improvement initiatives for sepsis exacerbating racial disparities in care."

The researchers found that hospitals that serve higher proportions of black patients had smaller improvements in protocol completion. Within the same hospital, white and



Dr. Amal Trivedi

[PHOTO: BROWN UNIVERSITY]

black patients received similar care, in terms of protocol completion rates, Trivedi said.

Prior research found that minority-serving hospitals tend to have more financial stress, fewer resources and less infrastructure to devote toward quality improvement measures, which is likely the reason why minority-serving hospitals had smaller improvements in sepsis protocol completion, Trivedi said. These hospitals also tend to treat more uninsured patients and those on Medicaid.

After adjusting for risks, such as type of infection, age and other chronic health conditions, the team did not find a statistically significant change in hospital mortality rates between racial and ethnic groups, despite the disparities in care delivery. During the first three months of the initiative, 25.8 percent of white sepsis patients and 25.4 percent of black sepsis patients died while in the hospital. Two years into the initiative, 21.3 percent of white sepsis patients and 23.1 percent of black sepsis patients died while in the hospital.

"Our work highlights the need for state and federal policy makers to anticipate and monitor the effects that quality improvement projects, such as the New York State Sepsis Initiative, have on racial and ethnic minority groups," said **DR. KEITH CORL**, first author on the paper and an assistant professor of medicine in the division of Pulmonary, Critical Care and Sleep Medicine at Warren Alpert Medical School. "Racial and ethnic minority groups can get left behind. Knowing this, it is our job to better design and monitor these programs to ensure racial and ethnic minority patients realize the same benefits as white patients."

Trivedi added that in order to improve health equity, policymakers may need to devote additional funding to under-resourced hospitals that experience challenges in improving sepsis care so that their performances can match that of other hospitals.

Other authors on the paper include Gary Phillips, a statistical consultant who is retired from Ohio State University; Kathleen Terry, a senior director at IPRO, a non-profit health care improvement organization; and Dr. Marcus Friedrich, the chief medical officer of the Office of Quality and Patient Safety at the New York State Department of Health. The research was approved by the New York State Department of Health's Institutional Review Board.

The research was supported by a fellowship from the Department of Veterans Affairs as well as internal Warren Alpert Medical School funding. ♦





## Southcoast Health launches mobile app for 24/7 care

NEW BEDFORD – Southcoast Health has launched a new virtual service that gives patients immediate access 24/7/365 to

board-certified doctors through the convenience of phone, video or mobile app visits.

When patients cannot get an appointment with their primary care provider, or when urgent care is closed, they can now use Southcoast Health On Call. Southcoast Health On Call connects patients to virtual appointments with a licensed medical provider through the convenience of a mobile app. Typically, within minutes, a provider will contact the patient, ready to listen and diagnose the medical issue. If appropriate and medically necessary, a prescription will be sent to the patient's choice of pharmacy.

Through Southcoast Health On Call, patients can receive diagnoses, recommended treatments and prescription medication, if appropriate and medically necessary, from licensed providers for many medical issues, including:

- Sore throat and stuffy nose
- Allergies
- Cold and flu symptoms
- Bronchitis
- Poison ivy
- Pink eye
- Urinary tract infection
- Respiratory infection
- Sinus problems
- Ear infection
- And more...

### How does it work?

A patient can download and open the Southcoast Health On Call App and request a consult from a provider. The patient must provide medical history and pay the co-pay. Patients can also access these providers through Southcoast Health On Call online at <https://www.southcoast.org/on-call> or toll-free at 855-754-6904.

Within minutes, a provider reviews the patient's medical history and contacts them through their preferred method, a phone call or video chat. A third party like a friend or relative can also be invited to attend the appointment virtually.

The provider then discusses the medical issue with the patient, answers questions and recommends next steps. If appropriate and medically necessary, a prescription can be submitted to a local pharmacy of the patient's choice.

If the patient has a Southcoast Health primary care physician, their doctor will receive a summary of the visit and will be included in the patient's personal health record, ensuring a seamless continuity of care. ❖

## Kent Hospital selects Spaulding Rehabilitation Network to provide inpatient and outpatient rehabilitation services

Kent Hospital announced on July 23rd that effective October 1, 2019, it will contract with the Spaulding Rehabilitation Network to provide all of its inpatient and outpatient rehabilitation services. Previously, Kent Hospital contracted the same services from Kindred Rehabilitation Services.

Specifically, this relationship is inclusive of services located in Kent Hospital, including the Acute Rehab Unit, the outpatient rehab facilities in East Greenwich and Pawtucket. Nearly 17,000 patients received care and services last year through Kent's rehabilitation programs. Kindred and Spaulding have agreed that current rehabilitation staff are expected to be hired as a result of this new provider agreement.

Spaulding Rehabilitation Network is a national leader in rehabilitation care and is currently ranked as the number two rehabilitation hospital in the country by U.S. News & World Report. It is one of only two academic institutions to be awarded the prestigious Model Systems designation in all three areas of care and rehabilitation research at the same time – Spinal Cord Injury, Traumatic Brain Injury, and Burn, selected by the National Institute on Disability, Independent Living, and Rehabilitation Research. With three inpatient facilities, a skilled nursing facility, and 25 outpatient centers throughout eastern Massachusetts, Spaulding, a member of Partners HealthCare, is at the forefront of innovative treatment for a wide variety of conditions including stroke, spinal cord injury, traumatic brain injury and sports injuries among others.

"Spaulding Rehabilitation represents the highest level of quality care and patient outcomes across the spectrum of rehabilitation care," said **ROBERT J. HAFEEY, MBA, MSN, RN**, president and chief operating officer at Kent Hospital. "This announcement represents a strategic initiative that further strengthens our clinical offerings for the community and our patients. We look forward to collaborating on these critical services for the ultimate benefit of those needing this specialty care."

Kent Hospital's rehabilitation programs are accredited by both The Joint Commission and the Commission on Accreditation of Rehabilitation Facilities (CARF), the premier agency for rehabilitation and stroke specialty certification. ❖

## NIH establishes network to improve opioid addiction treatment in criminal justice settings

*Ten clinical research centers, including Brown, will address gaps in accessing high-quality care.*

The National Institutes of Health awarded 12 grants to form the Justice Community Opioid Innovation Network (JCOIN) to support research on quality addiction treatment for opioid use disorder (OUD) in criminal justice settings nationwide. The awards, totaling an estimated \$155 million from the National Institute on Drug Abuse, part of NIH, will support the multi-year innovation network, including 10 research institutions and two centers that will provide supportive infrastructure.

JCOIN will establish a national network of investigators collaborating with justice and behavioral health stakeholders to research promising interventions and other approaches to improve the capacity of the justice system to respond to the opioid crisis. JCOIN is part of the NIH HEAL (Helping to End Addiction Long-term) Initiative, an aggressive, trans-agency effort to speed scientific solutions to stem the national opioid public health crisis. Launched in April 2018, the NIH HEAL Initiative is focused on improving prevention and treatment strategies for opioid misuse and addiction and enhancing pain management.

“Within the broader opioid epidemic, justice-involved populations are disproportionately affected by opioid use disorder. JCOIN will help develop effective intervention and treatment strategies for this crucial setting,” said NIDA Director **NORA D. VOLKOW, MD**. “It is vitally important to provide evidence-based approaches for people leaving criminal justice facilities in order to prevent relapse and opioid overdose which often occurs as they transition back into their communities.”

Awarded research centers will study evidence-based medications, behavioral interventions, digital therapeutics and comprehensive patient-centered treatments in 15 states and Puerto Rico.

Specific research examples include

- Conducting research on the effectiveness and adoption of new medications for OUD
- Evaluating new state mandates around medication services and drug courts
- Assessing effectiveness and implementation of processes to engage and retain individuals in OUD treatment (e.g., telehealth, patient navigation, and peer recovery support services)
- Determining how to implement opioid-related services at the community, state, and national levels

Each grantee will work with five or more communities, where they will engage with organizations in justice settings and service providers in the community. JCOIN will address gaps in OUD treatment and related services in a wide range of criminal justice settings, including jails, drug courts, problem-solving courts, policing and diversion, re-entry, and probation and parole.

The funded institutions and respective site locations include

- New York State Psychiatric Institute – New York
- Baystate Medical Center – Massachusetts
- Friends Research Institute, Inc. – Maryland
- Texas Christian University – Illinois, New Mexico, Texas
- New York University School of Medicine – Connecticut, Delaware, New Hampshire, New York, Oregon
- Brown University – North Carolina, Pennsylvania, Rhode Island
- University of Chicago – Illinois
- Chestnut Health Systems, Inc. – Illinois
- University of Kentucky – Kentucky
- Yale University – Connecticut, Minnesota, New York, North Carolina, Puerto Rico

George Mason University, Fairfax, Virginia, will serve as the JCOIN coordination and translation center and will be responsible for the management of logistics, engagement with practitioners and other key stakeholders in the justice and behavioral health fields, and dissemination of products and key research findings. It will also conduct research to identify effective dissemination strategies for reaching criminal justice stakeholders and provide funding for rapid turnaround innovative pilot studies. An educational component will provide outreach and mentorship to researchers and practitioners working in justice settings.

The University of Chicago will serve as the methodology and advanced analytic resource center and will provide data infrastructure and statistical and analytic expertise to support individual JCOIN studies and cross-site data synchronization. In addition, the center will conduct novel empirical research to understand the changes in state policies and practices within the criminal justice system as they relate to the opioid crisis. ♦