

NIH-funded clinical trial links frequent anger to increased risk of heart disease

BETHESDA, MD – Recurring feelings of anger may increase a person's risk of developing heart disease by limiting the blood vessels' ability to open, according to a new study supported by the National Institutes of Health. The study, published in the *Journal of the American Heart Association* (JAHA), shows for the first time that anger is linked to this vascular impairment – a precursor to the kind of long-term damage that can lead to heart attack and stroke.

"We've long suspected, based on observational studies, that anger can negatively affect the heart. This study in healthy adults helps fill a real knowledge gap and shows how this might occur," said **LAURIE FRIEDMAN DONZE, PhD**, a psychologist and program officer in the Clinical Applications and Prevention Branch of the National Heart, Lung, and Blood Institute (NHLBI), which funded the study. "It also opens the door to promoting anger management interventions as a way to potentially help stave off heart disease, the leading cause of death in this country."

While a brief spurt of occasional anger is normal and generally has a benign impact on the heart, it is recurring or frequent anger the researchers said raises concern. "If you're a person who gets angry all the time, you're having chronic injuries to your blood vessels," said study leader **DAICHI SHIMBO, MD**, a cardiologist at Columbia University Irving Medical Center in New York City. "It's these chronic injuries over time that may eventually cause irreversible effects on vascular health and eventually increase your heart disease risk."

For the randomized, controlled study, researchers recruited 280 healthy adults aged 18 to 73 years within the New York City area. The participants were free of cardiovascular disease and without risk factors such as history of hypertension, diabetes, and lipid imbalances, according to self-reported survey data. All participants were non-smokers, medication-free, and without a history of diagnosed mood disorders.

The researchers measured blood flow changes in the blood vessels of each participant's dominant arm. They then randomly assigned each to a task to elicit either anger, anxiety, sadness, or a neutral emotional state.

Using standard methods for laboratory experiments like these, the researchers asked the participants in the anger and

anxiety groups to talk for 8 minutes about personal experiences that had evoked those emotions. Those in the sadness group read aloud for 8 minutes a series of brief statements designed to elicit sadness. The control group counted numbers out loud for 8 minutes to induce an emotionally neutral state. When each group was done, researchers measured blood vessel changes again – immediately at the end of the task, and after 3, 40, 70, and 100 minutes.

The researchers found that the ability of the blood vessels to dilate was significantly reduced among participants in the anger group compared to those in the control group. This vessel impairment was sustained up to 40 minutes after the initial recall event that triggered the anger and decreased afterward. In contrast, the blood vessels of those in the anxiety and sadness groups were not affected.

The reasons anger negatively affected blood vessel function are unclear, and the study was not designed to evaluate those mechanisms. However, Shimbo said several factors could be at play, including activation of the autonomic nervous system, changes caused by stress hormones, and increased arterial inflammation. Shimbo said the endothelium is likely involved in some way, too. The researchers plan to explore these possible mechanisms in future studies.

Because participants were generally young and healthy – with an average age of 26 – other studies will also need to explore whether the findings are generalizable to older adults with health problems who are likely taking medications. Future studies may explore, as well, whether positive emotions, such as joy or laughter, could blunt the adverse effects of anger on the heart.

Managing anger for people who are frequently angry is important, NHLBI's Donze said. Among the approaches that can help are exercise, yoga, deep breathing, and cognitive behavioral therapy (CBT). Effective CBT strategies for anger management can also be learned through self-help books.

The study was funded largely by the NHLBI under grants R01 HL116470 and K24 HL125704. Clinicaltrials.gov registration number: NCT01909895. ❖

Faster approach for starting extended-release naltrexone to treat opioid use disorder shown effective

BETHESDA, MD – Starting people with opioid use disorder on extended-release, injectable naltrexone (XR-naltrexone) within five to seven days of seeking treatment is more effective than the standard treatment method of starting within 10-15 days, but requires closer medical supervision, according to results from a clinical trial supported by the National Institutes of Health's (NIH) National Institute on Drug Abuse (NIDA). Published in JAMA Network Open, the findings suggest that this rapid treatment protocol could make XR-naltrexone more viable as a treatment option for opioid use disorder, which continues to take lives at an alarming rate.

“When someone is ready to seek treatment for opioid use disorder, it is crucial that they receive it as quickly as possible,” said **NORA VOLKOW, MD**, NIDA director. “This study paves the way for more timely care with one of the three medications for opioid use disorder we have available, better supporting people in their ability to choose the treatment option that will work best for them.”

XR-naltrexone is one of three Food and Drug Administration-approved medications for the treatment of opioid use disorder. However, starting treatment with XR-naltrexone has traditionally required patients to go through a seven to 10-day opioid-free period, to avoid experiencing painful withdrawal symptoms caused when naltrexone abruptly stops the effects of opioids in the brain. During this waiting period, patients are at high risk of returning to opioid use or discontinuing treatment. This has been a significant barrier to implementation of XR-naltrexone.

To address this challenge, researchers tested the effectiveness of a more rapid procedure to start people with opioid use disorder on XR-naltrexone. Between March 2021 and September 2022, the study enrolled and followed 415 patients

with opioid use disorder who were admitted at six community-based inpatient addiction facilities across the U.S. and who chose treatment with XR-naltrexone. Every 14 weeks, the sites were randomized to either provide the standard XR-naltrexone procedure, or the more rapid procedure.

In the study, standard XR-naltrexone prescribing included a three- to five-day treatment period with buprenorphine to ease withdrawal symptoms, followed by a seven- to 10-day opioid-free period. The rapid procedure consisted of one day of buprenorphine (up to 10 mg), a 24-hour opioid-free period, and a gradual increase in low-dose oral naltrexone for three to four days prior to getting an injection of XR-naltrexone. Doctors also used medications such as clonidine and clonazepam throughout the process to manage withdrawal symptoms.

The study found that patients on the rapid five to seven-day treatment procedure were significantly more likely to receive a first injection of XR-naltrexone compared to those on the standard seven to 15-day treatment procedure (62.7% vs. 35.8%). Withdrawal severity was generally low and comparable across the two groups. Targeted safety events and serious adverse events (such as a fall or overdose) were infrequent overall but occurred more on rapid procedure (5.3% and 6.7%) than on standard procedure (2.1% and 1.6%), and the rapid procedure required more staff attention. This indicates that closer monitoring and greater clinical expertise may be needed if patients start treatment with the rapid procedure.

Though the shorter wait-time improved the proportion of people who started on XR-naltrexone overall, these findings underscore that challenges remain in starting patients on XR-naltrexone and also keeping them in treatment long term. Across both the standard and rapid procedures, the most commonly

reported reason that participants did not receive a first dose of XR-naltrexone was that they chose to leave the treatment unit early. The authors also note that only about 10% of all patients entering treatment chose XR-naltrexone. These findings reaffirm that a small but sizable proportion of people with opioid use disorder do opt for treatment with XR-naltrexone when presented with all three medication choices, and that it is important to support research into making this evidence-based treatment option more viable for those who choose it.

“Time has been an important barrier that we’ve seen hinder the use of extended-release naltrexone for opioid use disorder in the past, both among individuals and treatment providers,” said **MA-TISYAHU SHULMAN, MD**, a clinician researcher at New York State Psychiatric Institute and Columbia University Irving Medical Center, New York City, and lead author on the study. “We hope that these findings can help encourage more treatment settings to offer extended-release naltrexone as a safe and effective option for patients, to help prevent overdose and support recovery.”

The authors note that future studies should explore sustainability, feasibility, and health economic aspects of this more rapid treatment protocol for XR-naltrexone. Despite cost savings from fewer days on the rapid procedure, the resources needed for intensive monitoring should also be considered.

The study, known as the Surmounting Withdrawal to Initiate Fast Treatment with Naltrexone (SWIFT) study, was conducted at six sites within the NIDA Clinical Trials Network and funded through NIH’s Helping to End Addiction Long-Term Initiative (or NIH HEAL initiative). The study was led by researchers at New York State Psychiatric Institute and Columbia University Irving Medical Center. ❖

Rhode Island Foundation awards more than \$360,000 in seed funding for medical research

PROVIDENCE – The Rhode Island Foundation announced that it is awarding more than \$360,000 in seed funding to 15 promising medical research projects. The grants are designed to help early-career researchers advance projects to the point where they are competitive for national funding. With this round of grants, the Foundation has awarded more than \$5.7 million since 1997.

“Together with our visionary donors, we are providing the crucial source of early funding that enables local researchers to pursue promising medical advances,” said **DAVID N. CICILLINE**, the Foundation’s president and CEO. “Our hope is that their successes will lead to substantial new investments in the state’s research sector that will grow our economy and improve the health of Rhode Islanders.”

Laboratory, clinical and population-based research was eligible for funding. In addition to general medical research, grants were available to study infectious diseases, cardiac research, coronary artery disease, cerebral accidents, cancer, heart disease, multiple sclerosis, arthritis, diabetes, allergies, and performance enhancing substances.

The University of Rhode Island received \$25,000 to study the impact of physical activity on children with ADHD, which negatively impacts many common childhood milestones such as decision-making, language development and goal-setting. The study will recruit children and adolescents ages 6 to 17 with and without ADHD.

“We will look at the association between levels of physical activity and neurocognitive functioning in all children, particularly those with ADHD who struggle with daily executive functioning skills,” said **NICOLE LOGAN**, assistant professor of kinesiology, who will lead the study.

“We expect the results will support alternative methods of managing childhood ADHD symptoms and provide insight on alternative methods of ADHD diagnosis. Because physical activity and related outcomes like fitness, muscular strength and body composition are closely associated with neurocognitive function throughout childhood, we expect that children with ADHD will show improvement.”

The University of Rhode Island also received \$24,766 to look at whether healthy romantic relationships can help reduce the risk of stroke. The study will be led by **JESSICA CLESS**, assistant professor of human development and family science.

“Factors such as stress, coping strategies, and a person’s experiences in romantic relationships have been shown to affect positive health behaviors such as maintaining a healthy diet and exercise routine,” said Cless.

“In order to understand the more nuanced effects that stress and relationship factors have on positive health behaviors, we



will collect data from adult romantic partners to understand how stress and relational experiences in romantic relationships can predict positive health behaviors,” she said.

The results from this study are expected to provide preliminary practical recommendations for both mental and public health professionals as communities seek to develop prevention programming to bolster healthy behaviors, thereby reducing the risk for heart attacks, strokes and other stress-related illnesses.

The other grants and projects are:

1. Brown University received \$25,000 for “The impact of small intestinal microbiome in sepsis during aging” led by **KARTHIKEYANI CHELLAPPA**, assistant professor of molecular microbiology and immunology.
2. The Ocean State Research Institute received \$25,000 for “Impaired inflammatory arteriogenesis is the result of IL-1beta resistance and macrophage IL-1 receptor complex protein defects in the context of chronic Diabetes mellitus” led by **CHRIS MANTSOUNGA**, assistant professor of medicine at Brown University and a research biologist at the Institute.
3. Providence College received \$23,769 for “Medial prefrontal cortical circuits in motivation and depression” led by **RYAN POST**, assistant professor of psychology and neuroscience.
4. Providence College received \$25,000 for “Piloting a Mobile Adherence Game with Economic Incentives for Young People with HIV in Ghana” led by **NICHOLAS TARANTINO**, assistant professor of psychology.
5. Providence College received \$25,000 for “Investigating

signaling networks linking cell size and growth to the cell cycle" led by **KRISTI MILLER**, assistant professor of biology.

6. Rhode Island Hospital received \$25,000 for "Healthcare transition of adolescents living with HIV in Rwanda" led by **TANYA ROGO**, associate professor of pediatrics at The Warren Alpert Medical School of Brown University.

7. Rhode Island Hospital received \$25,000 for "Implementation and Evaluation of Pre- Hospital Trauma Program for CHW's in far-west Nepal" led by **RAMU KHAREL**, an assistant professor of emergency medicine with an appointment in the Division of Global Emergency Medicine at the Alpert Medical School of Brown University.

8. Roger Williams University received \$25,000 for "Cognitive Impairments in a Mouse Model of Bipolar Disorder" led by **VICTORIA HEIMER- MCGINN**, assistant professor of psychology.

9. The University of Rhode Island received \$20,000 for "Access and Safety of Opioid Agonist Therapy in Pregnant Women" led by **XUERONG WEN**, associate professor of pharmacy practice.

10. The University of Rhode Island received \$20,635 for "Serotonin neuron modulation after spinal cord injury" led by **MARIN MANUEL**, assistant professor of biomedical and pharmaceutical sciences.

11. The University of Rhode Island received \$25,000 for "Upscaling participation in WIC: A Pilot Study" led by **ISSAC AGBEMAFLE**, an assistant professor in the Department of Nutrition.

12. The University of Rhode Island received \$25,000 for "Development of Liquid Biopsy Assays for the Prediction of TKI Exposure in Cancer Patients" led by **BRAHIM ACHOUR**, an assistant professor in the Department of Biomedical and Pharmaceutical Sciences.

13. The University of Rhode Island received \$25,000 for "Removal of catheter- associated biofilms using magnetic nanoparticles" led by **IRENE ANDREU**, assistant professor of chemical engineering.

A panel made up of scientists and physicians helped the Foundation evaluate the proposals. ❖

Adverse social determinants of health linked to treatment-resistant hypertension in Black Americans

BETHESDA, MD – People were more likely to develop a type of treatment-resistant hypertension when they experienced adverse effects of economic and social conditions that influence individual and group differences in health status, known as social determinants of health. Additionally, this risk was higher among Black American adults than White American adults, according to a study funded by the National Institute of Neurological Disorders and Stroke (NINDS), part of the National Institutes of Health.

Factors linked to this increased risk included having less than a high school education; a household income less than \$35,000; not seeing a friend or relative in the past month; not having someone to care for them if ill or disabled; lack of health insurance; living in a disadvantaged neighborhood; and living in a state with low public health infrastructure. Apparent treatment-resistant hypertension is defined as the need to take three or more types of anti-high blood pressure

medication daily and is associated with an increased risk for stroke, coronary heart disease, heart failure, and all-cause mortality.

Over a period of 9.5 years 24% of Black adults developed the condition compared with 15.9% of white adults. Exposure to adverse social determinants of health increased the risk in both Black and white adults, however, Black adults are more likely to face adverse social determinants of health. According to the researchers, addressing social determinants of health could reduce the racial disparities seen in apparent treatment-resistant hypertension and reduce the increased risk of stroke and heart attack in the Black American population.

For this study, scientists examined data on 2,257 Black and 2,774 white adults, who are part of a larger study (link is external) that includes more than 30,000 Americans, of whom approximately half live in the "Stroke Belt" in the southeastern United States where the rate of stroke

mortality is higher compared to the rest of the country.

The NINDS Office of Global Health and Health Disparities is developing strategies to advance health equity at the institute. In August 2023, a supplement of 10 manuscripts were published, including recommendations for addressing SDOH (link is external). Launched in 2016, the NINDS's Mind Your Risks® campaign highlights the link between high blood pressure and dementia, particularly among Black men ages 28–45 and provides strategies for preventing and mitigating the effect of high blood pressure on brain and cardiovascular health.

Article link: Akinyelure OP, et al. "Social determinants of health and incident apparent treatment resistant hypertension among white and Black US adults: the REGARDS study."

JAHA. May 16, 2024. DOI: 10.1161/JAHA.123.031695 (link is external)

RI Medical Reserve Corps' Training, Innovation, & Leadership Institute open new training facility



The RI Medical Reserve Corps' (RI MRC), Training, Innovation, & Leadership Institute (TILI), held the inaugural ceremony and ribbon-cutting of their groundbreaking facility, on May 17th. The 10,000-square-foot facility will house three floors of integrated and technology-driven training and workspaces with each classroom capable of hosting in-person volunteer-led training for MRC members, community partners, and the public. [HHS PHOTOS]

WEST WARWICK – The RI Medical Reserve Corps' (RI MRC), Training, Innovation, & Leadership Institute (TILI), held the inaugural ceremony and ribbon cutting of their groundbreaking facility, dedicated to fostering growth, innovation, and leadership development in Rhode Island on May 17th. The event featured remarks from key stakeholders, VIPs, interactive demonstrations of the facility's features, and opportunities for networking and collaboration.

Rooted in their shared vision and mission, RI MRC and TILI are poised to become beacons of transformative learning and excellence in the community. This initiative has been partially supported by an MRC-STTRONG grant from the Department of Health & Human Services' Administration for Strategic Preparedness and Response (ASPR), totaling \$2.2 million. Of this, \$1.4 million has been dedicated to the development of the TILI and programs.

ASPR's MRC-STTRONG program awarded \$50 million to 33 states and jurisdictions to expand, sustain, and improve the MRC network, focusing on health emergency preparedness, response, and health equity needs.

Situated at 297 Cowesett Ave., West Warwick, the collaborative facility boasts a range of features designed to provide immersive, hands-on learning experiences. Highlights include:

- 270-Degree 4K 4D Laser Projection Theater Classroom/Lab: Experience the future of learning in this state-of-the-art 4D theater, where high-definition visuals and dynamic sensory effects create an immersive educational environment with light effects, wind, touch interactive and scent.
- Wet Lab: Dive into hands-on experimentation and discovery in the fully equipped wet lab, providing learners with the opportunity to get hands on skills in a safe purpose-built space.

- Classrooms with Broadcast and 136" UHD Touch Displays: Engage with cutting-edge technology in the classrooms, featuring broadcast capabilities and interactive UHD touch displays that facilitate dynamic learning experiences and collaboration among students and instructors.

As part of the National Medical Reserve Corps Network, a Health and Human Services, ASPR program, RI MRC plays a vital role in enhancing emergency preparedness and response training initiatives. Through this partnership with TILI, specialized programs and resources will be offered to equip individuals with the skills and knowledge needed to support public health efforts during emergencies and disasters.

RI MRC's Training, Innovation, & Leadership Institute, our goal is to empower individuals and organizations to realize their full potential and drive positive change in our communities," said **BROOKE A. LAWRENCE**, Executive Director of RI Medical Reserve Corps.

"With our innovative facility and transformative programs, we are excited to embark on this journey of learning, growth, and leadership development, throughout Rhode Island."

"I've seen first-hand the positive impact that MRC units across the country have on the health and safety of their communities," said Deputy Assistant Secretary and ASPR Center for Preparedness Director **DEB KRAMER**. "MRC volunteers demonstrate exceptional dedication, selflessness, and expertise that shape the network into an extraordinary force for good. Today we are seeing the results of the millions of dollars invested in the Medical Reserve Corps to strengthen the public health infrastructure in the state of Rhode Island and across New England for public health threats." ❖



W&I Receives Infant CPR Anytime Training Kits from American Heart Association

PROVIDENCE – On May 21, the American Heart Association donated Infant CPR Anytime Training Kits to Women & Infants Hospital’s Neonatal Intensive Care Unit (NICU) allowing new parents and families to learn basic lifesaving skills in approximately 20 minutes. The kit is ideal for NICU hospitals, community groups, new parents, grandparents, caregivers, and others.

The kits will be distributed to parents trained in CPR when they leave the hospital.

“Women & Infants Hospital is grateful to the American Heart Association for thinking of our most vulnerable patients and their families and supplying them with lifesaving kits. This is an invaluable gift to our hospital and to NICU families,” said **JACK TANNER**, Nurse Director of the NICU and Respiratory Care.

The Infant CPR Anytime Kit is co-branded with the American Academy of Pediatrics. In addition, the Infant CPR Anytime Kit includes the Infant Anytime Interactive app, which provides a comprehensive, self-facilitated training solution in one web-based app that allows users to elevate their CPR and AED training experience through gamification. This includes calling 9-1-1 and performing CPR on an infant.

The kit includes:

- 1 reusable bag for convenient storage
- 1 Mini Baby® CPR personal manikin
- 1 Mini Baby replacement lung
- Instruction insert with QR code and URL to access the Infant CPR Anytime Community

Resource webpage, which includes:

- Infant CPR Anytime bilingual (English and Spanish) streaming videos in full animation



Photo from left to right: **Anne Jeffrey**, Instructor, Health Education, Women & Infants Hospital; **Michelle C. Clark**, Executive Director, American Heart Association; **Jack Tanner**, Nurse Director for the NICU and Respiratory Care, Women & Infants Hospital; **Christine Santerre, RN**, NICU, Women & Infants Hospital; **Michelle Amaral, RN**, Nurse, NICU, Women & Infants Hospital; **Kellis Blanchet, RN**, NICU, Women & Infants Hospital; **Kathie Gouin, RN**, Assistant Nurse Manager, NICU, Women & Infants Hospital; **Albert Whitaker, MA, MPH**, Community Impact Director, American Heart Association; **Lisa Harrington**, Program Coordinator, Health Education, Women & Infants Hospital; **Meaghan Napolitano, RN**, NICU, Women & Infants Hospital; **Ailyn Bohan, RN**, Assistant Nurse Manager, NICU, Women & Infants Hospital.

- Bonus topics: Bonus topics: Infant safety and injury prevention tips with a downloadable checklist (English and Spanish)
- Infant CPR Anytime Interactive app to enhance the training experience; includes a participation badge to share via social media (English and Spanish)
- Online educational reference materials: How to use the kit, skills reminder card, injury prevention checklist (English and Spanish)
- Official Infant CPR Anytime Certificate of Participation (English and Spanish) ❖



RI Delegation Delivers \$21M NIH Grant for RI-INBRE

WASHINGTON, DC – U.S. Senators **JACK REED** and **SHELDON WHITEHOUSE** and Congressmen **SETH MAGAZINER** and **GABE AMO** recently announced that Rhode Island researchers and scientists will receive a \$21 million federal grant to strengthen the biomedical workforce pipeline and boost the state's ability to carry out and expand innovation in the field of biomedical research.

The Rhode Island IDeA Network of Biomedical Research Excellence (RI-INBRE), which has been funded by the National Institutes of Health (NIH) since 2001 with over \$81 million in previous grants, was established to expand statewide research capacity in the biomedical sciences, including research in cancer, neuroscience, and environmental health sciences.

This \$21,004,945 federal grant will be deployed at several Ocean State colleges and universities over the next five years to boost research capacity, acquire new equipment, expand workforce development training programs, and assist in recruiting the next generation of biomedical researchers and scientists.

"Renewing this grant for another five years is great news for Rhode Island and great news for our researchers and scientists,

who are advancing medical breakthroughs and developing new treatment options that help prevent and treat diseases like diabetes and rare forms of cancers," said Senator Reed, a senior member of the Appropriations Committee, who has been a longtime champion of RI-INBRE. "This federal funding will help usher in new, innovative medical research projects while providing the tools needed to train the next generation of biomedical professionals right here in the Ocean State."

"Rhode Island's public and private institutions of higher education are on the leading edge of biomedical research and innovation," said Senator Whitehouse. "This federal funding will help keep the Ocean State at the forefront and help prepare the next generation of talent for well-paying jobs in the life sciences industry."

The University of Rhode Island partners with Brown University, Rhode Island College, Providence College, Bryant University, Roger Williams University, Salve Regina University and the Community College of Rhode Island in the RI-INBRE program. **DR. BONGSUP CHO**, professor at the URI College of Pharmacy, serves as the program director of RI-INBRE. ❖

Pharmacy workers in Wakefield, Westerly file to unionize with The Pharmacy Guild

WOONSOCKET – The movement to unionize corporate pharmacies continues to gain momentum, as two more groups of pharmacy professionals filed to unionize in Rhode Island, the national headquarters for CVS.

Pharmacy technicians and pharmacy interns at a 24/7 CVS store in Wakefield, RI, have filed to unionize with The Pharmacy Guild (TPG) three and a half weeks after pharmacists at their store filed to join. Pharmacists at another CVS store in Westerly, RI, also filed to unionize with TPG just weeks after pharmacists at a neighboring store in Westerly filed to join the union. The rapid speed of organizing reflects the urgency within the industry – and the solidarity between pharmacists, pharmacy technicians, and pharmacy interns to protect their patients.

"We are proud to join our colleagues in standing up for the improved conditions our patients deserve," said **CHRIS DESROCHERS**, a pharmacy technician at CVS Wakefield active in the recent organizing. "By forming a wall-to-wall pharmacy union, where all pharmacy workers will be covered, we are building a union with the power to bring true change."

The new filings are the fourth and fifth TPG filings in just two months, after the first-in-the-nation victory in March. Pharmacy professionals cite the challenges of securing safe staffing levels at both stores as a major safety issue for patients. With collective bargaining units, workers will be entitled to negotiate with CVS over issues including staffing levels, patient care standards, and other issues critical for patient safety and the future of the profession. ❖

Help your Patients Keep their Medicaid Coverage

Medicaid members will need to renew their eligibility with the State of Rhode Island to keep their health insurance.

You can help now by reminding your Medicaid patients to update their account information with their current address and phone number. Medicaid members can update their information by:

- Logging into their HealthSource RI account: <https://healthyrhode.ri.gov/>
- Calling HealthSource RI at 1-855-840-4774 (TTY 711)

Thank you from all of us at Neighborhood for your commitment and partnership in ensuring Rhode Island families keep their health care coverage!

Neighborhood members can scan the QR code to update their address through our new e-form or visit www.nhpri.org



Neighborhood Health Plan
OF RHODE ISLAND™

www.nhpri.org 1-800-459-6019 (TTY 711)

Leapfrog Group releases 2024 hospital safety grades

WASHINGTON, DC – The Leapfrog Group, an independent national nonprofit driving a movement for patient safety, on May 1st released its spring 2024 Hospital Safety Grades, assigning an “A,” “B,” “C,” “D” or “F” to nearly 3,000 general hospitals on how well they prevent medical errors, accidents and infections.

Nationally, patient experience – a set of measures using patient-reported perspectives on hospital care – indicates significant signs of improvement since the fall 2023 Safety Grades, and preventable health care-associated infections show a sustained drop after unprecedented rates during the height of the pandemic.

State and Metro Area Rankings:
The top 10 states with the highest percentage of “A” hospitals

Spring 2024		
Rank	State	“A” Hospitals
1	Utah	57.7%
2	Virginia	56.3%
3	New Jersey	44.8%
4	Colorado	44.4%
4	Rhode Island	44.4%
6	Alaska	42.9%
7	Pennsylvania	42.7%
8	North Carolina	42.2%
9	South Carolina	42.0%
10	Maine	41.2%

In addition to assigning letter grades to individual hospitals, The Leapfrog Group also reports best patient safety performance by state (See Table 1) and, for the first time, by metro area based on highest percentage of “A” hospitals.

In spring 2024, Utah ranks number one among states for the second cycle in a row. The top three metro areas are Allentown (Pennsylvania), Winston-Salem (North Carolina), and New Orleans (Louisiana).

Patient experience is measured through the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, which the Centers for Medicare and Medicaid Services (CMS) uses to publicly report patients’ perspectives of hospital care. Of the over 30 measures used to generate Hospital Safety Grades, The Leapfrog Group reports on five patient experience measures that have a direct impact on patient safety outcomes:

- Nurse communication
- Doctor communication
- Hospital staff responsiveness
- Communication about medicines
- Discharge information

Since the start of the pandemic, patient experience has worsened. This spring has shown the first sign of improvement with all measures significantly improving since fall 2023, but the measures are still far from pre-pandemic levels.

Since Leapfrog reported Hospital Safety Grades in fall 2022, when HAI rates were at their highest peak since 2016, 92% of hospitals have improved performance on at least one of three dangerous preventable infections. Average HAI scores have declined dramatically:

- Central line-associated bloodstream infections (CLABSI) decreased by 34%
- Catheter-associated urinary tract infections (CAUTI) decreased by 30%
- Methicillin-resistant Staphylococcus aureus (MRSA) decreased by 30%

To look up hospital’s Safety Grade: HospitalSafetyGrade.org.

Study finds smartphone app can diagnose severe anemia in real-time

PROVIDENCE – **GREGORY JAY, MD, PhD**, an emergency medicine physician at Rhode Island Hospital and The Miriam Hospital, authored a study that published this month in PLOS ONE, in which doctors were able to successfully diagnose severe anemia simply using photos of patients’ inner eyelids uploaded to an iPhone app. **SELIM SUNER, MD**, and **JAMES RAYNER, MD**, also emergency medicine physicians at Lifespan, were co-authors of the study.

Dr. Jay’s study focuses on the performance of a smartphone application that captures images of the mucous membrane that lines the eyelids in RAW format. RAW format is the file type of an uncompressed image from a camera.

By relying on the computation of the tissue surface high hue ratio, the app

estimates Hb concentration. The study involved obtaining images of bilateral conjunctivae from a convenience sample of 435 Emergency Department patients using a dedicated smartphone. The app was able to sufficiently detect severe anemia accurately and holds promise as a population-sourced screening platform or a non-invasive point-of-care anemia classifier.

The Complete Blood Count (CBC) has been the standard test for diagnosing anemia. But this method requires venipuncture, trained phlebotomists, laboratory technicians, chemical reagents, and dedicated lab equipment. In resource-rich hospitals, obtaining CBC results can take 1–4 hours. Consequently, anemia diagnosis is often limited to regions with adequate healthcare infrastructure. This

poses a challenge as anemia is disproportionately prevalent in rural areas lacking these resources.

To address this unmet need, smartphone imaging of the inner eyelids has enabled non-invasive measurement of Hb. While previous studies have shown imprecise results using smartphone apps, the accessibility of smartphones to the general population outweighs this limitation. The ubiquity of cell phones presents a near-term opportunity for universal screening for anemia through telehealth apps.

By harnessing the power of smartphone cameras, healthcare professionals can diagnose anemia in real-time, particularly in underserved areas. This breakthrough has the potential to revolutionize anemia diagnosis and improve healthcare outcomes worldwide. ❖