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RI Department of Health Director Dr. Nicole Alexander-Scott, right, joined Providence Mayor Jorge O. Elorza, U.S. Senator Jack Reed, RI Department of Human Services Director Melba De Peña-Affigne, left, and other local partners and representatives to kick off Providence’s participation in the federal Summer Food Service Program (Summer Meals) in July 2016 at Dexter Park in Providence.
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Personalized Medicine in the Resource-poor World

JOSEPH H. FRIEDMAN, MD
joseph_friedman@brown.edu

I am giving a talk this fall on the “Personalized Treatment of Parkinson’s Disease.” In preparation, I reviewed the literature on personalized medicine to be certain that I understood the concept. After all, President Obama talked about the importance of funding research to develop personalized medicine, which presumably will raise the standards of health care in the U.S. This didn’t make a lot of sense to me. As I wrote in a previous column, I view this as an unaffordable expansion of health care to meet the needs of the financially non-needy few. It turns out that I did understand the concept of personalized medicine. There are a number of descriptions of personalized medicine, including a lengthy philosophical inquiry into the meaning of the term, the different definitions that have been suggested, and how, in general, medical descriptions become definitions, and how these definitions become accepted by the medical community. But, in point of fact, the concept of personalized medicine is analogous to the famous quote about the man who was amazed to learn that he’d been talking prose his whole life (from Molière). Believe it or not, we practice personalized medicine all the time, and have been since doctors started to practice the discipline.

When people and physicians in wealthy countries think of personalized medicine, they’re thinking of gene testing for identifying the best chemotherapy for their cancer, or enzyme evaluations to choose medications which will not cause side effects, or deciding how often a colonoscopy needs to be repeated; should the patient have a carotid endarterectomy or not? And the list is endless.

Personalized medicine in the resource-poor world is a bit different. Actually it’s very, very different. It puts our philosophical discussions about the meaning of the term on a different level than the authors had probably ever thought about. I am writing this in Accra, the capital of the West African country, Ghana. I’ve been teaching neurology to house officers at a hospital. I’ve been doing similar short stints at several different teaching hospitals, all in East Africa, until now. Each place is different although all share similar limitations imposed by lack of funds, and the usual problems associated with poverty. Each has a different sort of personalized medicine.

Ghana is a bit wealthier than most of the other countries I’ve been to. Its medical system is different in the starkness in which money figures in. In the East African countries I’ve been in, there was at least a thin layer of medical health insurance. Patients there may have to pay for their bed but certain basic tests, like a chest X-ray and complete blood count, are included. Most blood and imaging tests have to be paid for out of pocket, and are not performed until paid for. In occasional cases the fees are foregone, but not for most. The medicines stocked in the pharmacy, if actually still in stock, are included in the price of the bed. Drugs not there must be purchased by the family and brought in.

In Ghana, the medical system revealed what the American system will look like in the not-too-distant future. Friends brought a 48-year-old man to the hospital when he was found unresponsive at home. When the admitting team saw him, his friends were gone and not reachable. It was very clear that this man, now comatose, had meningitis. In the U.S. he would have had a lumbar puncture (LP) to analyze the cerebrospinal fluid (CSF), followed immediately by antibiotics, chosen to cover the likely organisms, until the CSF results pointed to the likely culprit, at which time the antibiotic might be changed. If a few minutes could be spared, that is, the patient wasn’t on death’s door, a CT of the brain might be done to exclude the possibility of a mass lesion that might herniate following an LP. This is rarely an issue, and when time is of the essence, should be skipped.

However, in Ghana, no test is ordered until someone agrees to pay for it. So, the next day, the patient still had not had an LP because no one had shown up...
COMMENTARY

of the near future, some, or all, of these disorders will be treatable, but you can bet that the cost will be in the hundreds of thousands of dollars. At some point, and it is already here for many and coming soon for all, insurance won’t cover it and patients and doctors will make the same choices that our Ghanaian counterparts are making now.

Author

Joseph H. Friedman, MD, is Editor-in-chief of the Rhode Island Medical Journal, Professor and the Chief of the Division of Movement Disorders, Department of Neurology at the Alpert Medical School of Brown University, chief of Butler Hospital’s Movement Disorders Program and first recipient of the Stanley Aronson Chair in Neurodegenerative Disorders.

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Physicians at high risk for suicide in US; incidence higher in women doctors

Physician Health Programs (PHP) offer confidential treatment

HERBERT RAKATANSKY, MD

A
bout 18,000 persons yearly in the United States become part of a cohort with a high risk for disability and a mortality rate above that in the unaffected population.

We are talking about medical school graduates. There is evidence that symptoms of burnout are present in well over half of physicians. Stress and depression are common. And the mortality is high. In male doctors the suicide risk is 1.4 times that of the general population and for female doctors it is an astounding 2.27.

We know that 300–400 physicians commit suicide every year. And there likely are more, since some death certificates may not reflect the actual cause of death. Rhode Island physicians are not immune. In 1989, the chief of pediatrics at Rhode Island Hospital jumped off the roof of the hospital, leaving a suicide note (reported in the Providence Journal). Personally I know (in RI) of two psychiatrists who were department chiefs, one psychiatrist in private practice, and one orthopedist who committed suicide. If this were a mosquito-borne disease it would attract significant attention.

Although effective treatment is available, it generally is not utilized. Expense of treatment and recognition of the illness are not deterrents. Lack of access to resources is not a problem as doctors generally can “get in” to see treatment professionals promptly.

Impediments to treatment

Impediments to treatment include the perception of a lack of confidentiality. Since much treatment is delivered through large medical systems that share common electronic records, and the treatment may be provided by professionals in the “system” in which the doctor works (sometimes mandated by insurance contracts), this fear of loss of confidentiality is based on reality.

If this were a mosquito-borne disease it would attract significant attention.

The training we receive prepares us to care for others but teaches us little about letting others care for us, especially when care is for emotional rather than physical distress. Doctors may avoid treatment for anxiety, depression, etc. even when severe and/or disabling.

A major obstacle to treatment is the fear that if the diagnosis and or treatment are known, particularly to the state licensing board, the ability to practice medicine will be affected.

Recently some disturbing data have been published.1 A survey of 2109 female physicians (representing 50 states and DC) examined the effect of licensure board involvement on treatment.

Eight-six percent of state licensure boards ask about mental health on their applications (in 2009). Questions varied from asking about all past diagnoses and treatments to asking about work impairment. Only 8 states do not ask about mental health. The RI board asks: “During any Post Graduate Training, were you ever dismissed, suspended, restricted, put on probation, or otherwise acted against or did you take a leave of absence for medical reasons?”

Impediments to treatment include the perception of a lack of confidentiality. Since much treatment is delivered through large medical systems that share common electronic records, and the treatment may be provided by professionals in the “system” in which the doctor works (sometimes mandated by insurance contracts), this fear of loss of confidentiality is based on reality.

This question is directed at the work consequences of disease rather than the mere presence of it (a proper question, in my opinion).

One thousand sixty-nine survey participants [51%] had been given a mental health diagnosis since medical school and/or had been treated for one. The frequency increased with age. The participants were recruited from a closed Facebook site restricted to female doctors with children so these numbers may represent a degree of self-selection.

More importantly, however, only 62 (6%) of the 1,069 reported their diagnosis or treatment to the licensure board when asked. Of those who reported, 21 were required to submit medical reports from the treating physician and 10 needed multiple reports. Ten were required to appear personally or be
evaluated by a board appointed physician. Eleven were required to participate in a physician health program (PHP).

Most of the 1,001 doctors with a history of a diagnosis or treatment who did not report, judged themselves to be safe to practice and/or were afraid of licensure and employment restrictions.

We might conclude that the fear of licensure and employment consequences deters physicians with mental health issues from seeking help. And we would be right. Among the participants, 1,040 felt they had or likely had criteria for a mental health disorder and did not seek treatment. The deterrents included “stigma,” fear of reporting to the licensure board, confidence in their ability “to get through it without help,” ignorance of treatment resources, fear that “colleagues would find out” and lack of time.

Of these doctors, 274 either prescribed for themselves or asked friends to prescribe for them informally (actions that, themselves, are unwise, unprofessional and threaten their licenses). We should use this data to fashion effective interventions and treatments to counter this epidemic of disease and death. Access to treatment in a manner that is perceived by physicians to be non-threatening to their professional status must be combined with the protection of patient safety. Such a system must assure that troubled physicians, whose illness impairs their ability to practice, do not care for patients, but must also reassure physicians that recovery from the illness will enable them to return to work. Another lesson, reinforced by this data, is that treatment of mental disease in doctors is best done by physicians outside the doctor’s “home system.” Finally, the state licensure board should be involved only when absolutely necessary.

RI is fortunate to have such a system (though underutilized) in place. The RI PHP (http://www.rimedicalsociety.org/physician-health-program.html) has no financial or legal relationship to the RI board of licensure and has no obligation to report to it. Doctors who consult the PHP can obtain confidential treatment from a wide pool of respected professionals outside their “home system.” Doctors whose work is impaired by their disease are advised to take a medical leave. Only if a doctor refuses and patient safety is at risk, is a report made to the licensure board.

Our profession should encourage the use of our RI resources that provide confidential treatment outside the “home system” and the assurance that, absent an otherwise unsolvable threat to patient safety, the state will not be involved. Without this approach doctors who need help will not seek it and may suffer negative, possibly deadly, consequences.

Reference

Author
Herbert Rakatansky, MD, FACP, FACG, is Clinical Professor of Medicine Emeritus, The Warren Alpert Medical School of Brown University.

Student Health Council (SHC) at Brown

The Student Health Council (SHC) is comprised of a few students selected from each medical school class as well as licensed professionals in the mental health field. The SHC aims to address behavioral health concerns, substance use, and mental or physical illness that may impair students’ well-being during medical school and practice of safe medicine. We facilitate these aims through peer counseling and support, resource connections, wellness advocacy and education. Participation in peer support relationships with the SHC is voluntary and strictly confidential. For additional information, please email studenthealthcouncil@brown.edu

Link to Brown University health services
https://www.brown.edu/campus-life/health/services/

More about the background and mission of the SHC can be found in this RIMJ article:
A Student Collaboration to Address Mental Health Wellness in Medical School
A VALUABLE NEW BENEFIT TO THE RHODE ISLAND MEDICAL SOCIETY MEMBERS!

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As education continues to evolve to correspond with technological advances, medical simulation has been rapidly adapted as a bridging educational platform between classic lecture style teaching and real-life clinical experiences. Through a combination of role-play, simple and sophisticated technologies, and creative case design, medical simulation allows learners to be exposed to rare but challenging clinical and social situations in a targeted, simulated learning environment that are often difficult or dangerous to obtain in real life. A well-crafted simulated environment enables learners to complete a variety of learning objectives, whether it involves mastering bedside procedures or learning how to handle complex or difficult patient encounters such as “end-of-life” discussions or “delivering bad news.” Each simulation learning experience is unique, fully customizable and provides an invaluable insight on the consequences of the learners’ actions without subjecting the learners and the actors to real-life risks such as infected needles, malfunctioning equipment, unpredictable personalities or unintentional patient harm.

An engaging simulation case challenges the participants clinically, creates moments of unavoidable decision-making, and offers a pathway to resolution yet accommodates the range of possible participant responses. While high-fidelity simulation, such as computerized mannequins and hyper-realistic settings may augment a simulation case, the use of human actors/standardized patients as a confederate (a team member during a simulation activity that help provide the professional realism that challenges and teaches the learner) can add significant constructive tension and realism to a case, and permits exploration of complex patient-provider dynamics. Standardized patients often require hours of training and rehearsal to perfect their new identity, simulate their physical symptoms, and provide realistic, but pre-scripted character responses to
challenging case situations. By providing a consistent and pre-defined account of their case-specific conditions, standardized patients-exams allow higher character-immersion and more reliable performance-based assessment of bedside clinical skills.

The construction of a “great” case also requires the collaboration of the case creator and confederates to clarify the learning objectives and plan for anticipated participant actions. Strong improvisational actors respond well to defined endpoints by giving actors extra room to apply their acting skills toward the learning objective (e.g. “continue to ask questions, appearing anxious and confused until the doctor explains the risks of thrombolytic in lay terms”). At times, however, junior educators and residents may be asked to play a confederate. Although well trained clinically, resident confederates can feel unprepared, vulnerable, and insecure about stepping into this role. These feelings may be amplified when their peers are the scenario participants.

To understand the requirements of the acting roles, I interviewed DL-the Resident Simulation Curriculum Coordinator, SP-the Chair of the EMRA (Emergency Medicine Residents’ Association) Simulation Division, and MB-a professional actor and expert standardized patient for their “Top 5 Do’s and Don’ts of a Successful Simulation Actor” and “Top 5 Suggestions for a Successful Simulation Case-Writer.”

As a resident who has written medical simulation cases and acted out my own case scenarios, I have personally encountered numerous unforeseeable obstacles that would have made my learning objectives impossible to be completed without the guidance and support of the simulation faculties and actors who provided these engaging and helpful tips. I hope these 15 tips have sparked an interest in and quelled a few fears about providing a memorable teaching experience for your learners, your peers, and yourself.

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### Top 5 “Do’s” for a Successful Simulation Actor

<table>
<thead>
<tr>
<th>“Do” Tips</th>
<th>Actor’s Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be professional</td>
<td>It is important for you to stay in character throughout the entire case to promote believability and encourage your learners to take you seriously. Be professional. Acting is harder than it looks and staying in character while your body is being examined can be very challenging. Take the case seriously and remember that a real patient doesn’t think the details of their symptoms are funny, so avoid giggling.</td>
</tr>
<tr>
<td>Pull from real-life experiences</td>
<td>While you may never have suffered from appendicitis, myocardial infarction, or inebriation, chances are, you have provided care for patients with these complaints. By drawing from your personal clinical experiences, you are able to reproduce a much more believable character performance throughout the simulation.</td>
</tr>
</tbody>
</table>
| Be empathetic to your character | In order to convince the learners of your confederate role, it is helpful to appreciate and understand the character that you are portraying by placing yourself in their situation. 

*Example #1:* If you are instructed to play a patient with a “crushing chest pain” due to a heart attack, then imagine how you would feel if you had suddenly developed a crushing chest discomfort, with unexplained sweating and uncharacteristic shortness-of-breath after climbing a flight of stairs. Channel that sensation and allow it to fuel your performance. |
| Allow for pauses           | Not every awkward silence needs to be filled up with dialogue. Allow the learners to process the barrage of information needed for them to assess the clinical situation; you can take this time to readjust and focus on your role and prepare to guide your learners to the next objective. Sometimes 8-10 seconds of silence is needed for processing, don’t feel the need to fill that time with noise. |
| Practice…a lot            | As obvious as this may sound, practicing your role before the actual simulation case with real-time feedback is incredibly helpful and highly recommended. |

---

### Authors

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Melissa Bowler [MB] is the Executive Director of the Providence Improv Guild and has been performing professionally since 2005. She is a simulation specialist at Women and Infants Hospital and a Standardized Patient at Alpert Warren Medical School at Brown University.

David Lindquist, MD, FACEP, [DL] is a clinical assistant professor of Emergency Medicine and also the Resident Simulation Curriculum Coordinator at Alpert Medical School of Brown University, Department of Emergency Medicine, with an academic focus on medical simulation, patient safety, and quality assurance.
### Top 5 “Don’t” for a Successful Simulation Actor

<table>
<thead>
<tr>
<th>“Don’t” Tips</th>
<th>Actor’s Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold back</td>
<td>When you are the confederate, do not be afraid to express your emotions when you suddenly find an unexpected connection to your character. These moments will create a much more memorable experience for your learners.</td>
</tr>
<tr>
<td>Steal focus</td>
<td>Portray your character based on the case description. Any supplemental gestures or comments outside the script may shift the focus away from the learning objectives and confuse the learners. This isn’t your chance to win an Oscar; it’s an educational simulation.</td>
</tr>
<tr>
<td>Lose sight of the learning objectives</td>
<td>Your primary goal as a simulation actor is to facilitate the teaching process to allow the learners to complete the learning objectives. You can help guide the learners back to the tasks at hand when they lose track of the main goals.</td>
</tr>
<tr>
<td>Be self-conscious</td>
<td>The acting-spotlight can both be a blessing and a curse to actors of all level of training. Just stay focused on your role, remember the learning objectives and follow the scripts.</td>
</tr>
<tr>
<td>Giggle</td>
<td>This may sound silly, but giggling during your speech can spell instant disaster by shattering the veil of the simulated environment and diminishes your credibility as a believable character.</td>
</tr>
</tbody>
</table>

### Top 5 Suggestions for a Successful Simulation Case-Writer (From an actor’s perspective)

<table>
<thead>
<tr>
<th>Suggestions</th>
<th>Actor’s Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a detailed case information</td>
<td>Providing detailed descriptions of the scenario, patient background (both social and medical) and specific emotional responses can be incredibly helpful for the actor as it provides a transparent snapshot into the mind of the case writer on what is expected from the actor and obviates the need for anxiety provoking improvisation.</td>
</tr>
<tr>
<td>Keep the case simple</td>
<td>A simple case with clear and concise learning objectives, along with easy-to-follow acting queues allows the actor and learners to focus on the key case elements and leaves little room for unexpected behaviors or complicated and divergent decision pathways.</td>
</tr>
<tr>
<td>Expected the unexpected</td>
<td>Sometimes learners may not choose the clinical decision pathway that you had envisioned. It is helpful to anticipate all potential deviation from the intended pathway and provide your confederates with a scripted response to guide the learners back on track.</td>
</tr>
<tr>
<td>Allow for active feedback</td>
<td>Direct feedback after a simulation session is mutually beneficial for both the learners and the actors. You should allow enough time to review the learning goals, gauge the overall reaction to your case, as well as allowing the students and confederates to provide constructive criticisms on both the case design and actor performance to make it even better during future iterations.</td>
</tr>
<tr>
<td>Be transparent</td>
<td>Your case, along with the learning objectives and character bios should be discussed with the entire team, including the programmers, actors and introductory. Adding a secret plot twist at the last minute can ruin an entire case.</td>
</tr>
</tbody>
</table>
MT. ETNA, SICILY

Michael Migliori, MD, while circling the rim of a recently active crater on Mt. Etna, was surprised to find cell signal and paused to download the *Rhode Island Medical Journal*.

Mt. Etna, with an elevation of 10,991 feet, is the highest peak in Sicily and an active volcano with multiple craters. The crater in the foreground above, still smoking, erupted in May 2016 completely blanketing the surfaces visible in these photos with ash. Hikers walking the perimeter of this crater and silhouetted against the sky provide a sense of scale to its diameter and depth. Mt Etna’s summit, visible in the background (above), vents continuously and owes its yellow coloration to its sulfur content.

Marianne Migliori is standing near the highest point of the crater rim, behind her are westward vistas of central Sicily.

Wherever your travels take you, be sure to check the latest edition of RIMJ on your mobile device and send us a photo: mkorr@rimed.org.
TOKYO, JAPAN

Barrington resident Dr. Charles Shana, a gastroenterologist in Fall River, MA, reads the latest issue of the Rhode Island Medical Journal while waiting for the bullet train (Shinkansen) in Tokyo, one of the largest metropolis’ in the world, to travel to the traditional Japanese city of Kyoto, a distance of approximately 320 miles. At 170 mph, the train reached its destination in about two hours.

The Kabuki Theater, offering the traditional and highly stylized Japanese form of theater arts, in Tokyo, is another popular destination for visitors to Japan.

Wherever your travels take you, be sure to check the latest edition of RIMJ on your mobile device and send us a photo: mkorr@rimed.org.
All Rhode Islanders, all people, deserve an equal opportunity to harness their talents, share their gifts, and achieve their dreams, no matter their race, ethnicity, sexuality, gender, gender orientation, or level of education or income. One of the most effective ways to ensure this movement towards equity is to address the inequity of social and environmental factors that contribute to health disparities. We have made some gains in this area in our state and across the country, but our work is ongoing.

In Rhode Island, for example, men are at significantly greater risk of dying of drug overdose; non-high school graduates have a life expectancy seven years shorter than graduates; African Americans experience double the infant mortality of Caucasians; and more than half of Native American children (54%) live in poverty. We should not accept these kinds of disparities, because together they represent a profound form of social injustice. And we should not accept these kinds of disparities because we don’t have to accept them. Once we understand the importance to health of social and environmental factors, health disparities are preventable, if we work smarter, if we better organize our social capital, and if we seek new opportunities to promote health equity for all communities.

We can work smarter by incorporating continuous quality improvement into everything we do, and by engaging academia in major public health initiatives. To this end, the Rhode Island Department of Health (RIDOH) was an early adopter of the Lean Government Initiative, a continuous quality improvement program introduced by Gov. Gina M. Raimondo to eliminate waste and backlogs and to increase agency efficiency. We have also developed the RIDOH Academic Center and are entering into dynamic academic partnerships with colleges and universities throughout the state to enhance information sharing, teaching, public health research, and evaluation.

We can better organize our social capital by encouraging communities to define the health issues they experience, and then to assist these communities as they enact the responses they have designed. What does this look like? One example is RIDOH’s Health Equity Zone (HEZ) Initiative, which provides communities with frameworks to achieve health equity by eliminating health disparities through place-based strategies. Currently, RIDOH is supporting 10 statewide HEZs in their work to prevent chronic diseases, improve birth outcomes, and improve the social and environmental conditions of their neighborhoods. Each HEZ is led by a backbone organization that is coordinating with residents, municipal leaders, educators, law enforcement officials, business people, healthcare providers, people in public health, and many more.

We can seek new opportunities to promote health equity by stretching outside the limitations of federal or categorical funding so that we can diversify our capacity to address public health issues in all their complexity. This is happening through the HEZ Initiative, as RIDOH has taken this “braided” approach of funding from several categorical sources to increase the collective impact of our public health work, such as increasing access to healthy food as a means to address diabetes risk, and improving the safety of neighborhood environments to increase the physical activity of residents.

Contributions
This special health equity section of the Rhode Island Medical Journal includes a number of articles that describe health disparities in Rhode Island, as well as approaches to mitigate those disparities.

Bertrand, Chan, Howe, et al. explore issues of disparate exposure to HIV, as well as access to HIV-related healthcare, in “Health Equity, Social Justice, and HIV in Rhode Island: A Contemporary Challenge.” Their paper focuses on the significantly higher risk of HIV burden among African Americans, Hispanics, and gay, bisexual, and other men who have sex with men.

Barkley, Julian, Viveiros, et al. explore the special vulnerabilities of young children, older adults, people with chronic conditions, and pregnant women to foodborne illnesses such as Listeriosis and Salmonellosis in “Preventing Foodborne and Enteric Illnesses Among At-Risk Populations in the United States and Rhode Island.” They also describe disparities in the risk of illnesses related to health characteristics and cultural preferences, such as higher-than-average consumption of fresh, Mexican-style soft cheese in Rhode Island’s Hispanic communities.
In “Statewide Assessment of Cost-Related Healthcare Access Barriers in Rhode Island,” Moore, Long, Dexter, et al. explore health disparities related to insurance and access to healthcare. Their analysis reveals a correlation between the magnitude of co-payments and deductibles defined by one’s health insurance and the use of essential healthcare services.

An unfortunate paradox is illustrated in “Diabetes and BMI: Health Equity through Early Intervention on Dysglycemia, and How Providers Can Help,” by Dumont, Baker, George, and Sutton: the reduction of a serious health disparity as the health of all groups worsens.

Finally, King, Vanner, Leibovitz, and Smith describe the manifold ways in which Rhode Island’s State Health Laboratory supports the cause of health equity (“The Role of the State Health Laboratories in Advancing Health Equity”), and Patriarca and Ausura (“Introducing Rhode Island’s Health Equity Zones”) introduce RIDOH’s HEZ initiative and provide background on this multi-year program to reduce health disparities and achieve health equity in Rhode Island.

At RIDOH, we look forward to continuing to partner with all communities in the state to address the disparities highlighted in these articles. Working together, we can achieve health equity and give everyone the chance to make it in Rhode Island.

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Health Equity, Social Justice, and HIV in Rhode Island: A Contemporary Challenge

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ABSTRACT
From its beginning, HIV has primarily affected marginalized populations, such as injection drug users, gay, bisexual and other men who have sex with men (GBMSM), and minority racial and ethnic groups. HIV is a disease that, from the start, has been strongly influenced by issues related to social justice and health equity due to its intersection with behaviors among at-risk populations. While some of the risks associated with HIV have been successfully mitigated through social justice initiatives related to needle exchange programs and routine HIV testing of pregnant women, Rhode Island remains confronted with the health equity challenges of preventing HIV transmission and ensuring access to HIV care/treatment, especially for Black/African Americans, Hispanics, and GBMSM.

KEYWORDS: HIV, Social Justice, Health Equity, Rhode Island

HIV IN A SOCIAL CONTEXT
In 1981, human immunodeficiency virus (HIV) was first identified in the United States among non-immunosuppressed injection drug users and gay men who were diagnosed with a rare form of pneumonia caused by Pneumocystis jirovecii. Prior to this time, Pneumocystis infections were only known to occur in people with compromised immune systems. Untreated, HIV leads to acquired immune deficiency syndrome (AIDS) and death. Since its emergence in 1981, the HIV/AIDS pandemic has had a major impact on morbidity and mortality across the world.

Even though HIV/AIDS is an infectious disease, it has had a remarkable impact on politics, education, the media, social movements, the entertainment industry, and professional sports in a manner unlike any other disease in modern history. Its societal impact has evolved in response to its shifting epidemiology, as well as advances in medicine and technology that have made HIV testing more accessible and new medications that are highly effective in managing – and most recently preventing – the disease [pre-exposure prophylaxis or PrEP].

What makes HIV/AIDS historically stand apart from other diseases is its impact on a diverse subset of specific populations, including persons who inject drugs, gay, bisexual, and other men who have sex with men (GBMSM), minority racial and ethnic populations, children born to HIV-positive mothers, incarcerated populations, hemophiliacs, and foreign-born individuals from endemic countries. These groups have historically experienced societal marginalization, discrimination, and isolation that directly contributes to their disproportionate burden of HIV. [See Figure 1.]

Commenting on the HIV epidemic among African Americans, Dr. Jonathan Mermin, director of the CDC’s Division on HIV/AIDS Prevention, stated that “there is nothing biological that has caused African Americans to have such a disproportionate rate of HIV infection. It’s the social, it’s the economic, and it’s the epidemiological environment in which people live.”

As an outgrowth of the HIV epidemic, both nationally and internationally, many groups have mobilized social movements to advocate not only for affordable access to HIV treatment and care, but also for housing, employment, and education to help stem the incidence of HIV within their communities. Such groups include AIDS Coalition to Unleash Power (ACT UP), National Association for the Advancement of Colored People (NAACP), Black Church and HIV, and the Joint United Nations Programme on HIV/AIDS (UNAIDS). Often framing their advocacy through a social justice lens, these groups frequently include a focus on improving conditions related to social determinants of health for the communities they represent.

Figure 1. Newly-Diagnosed Cases of HIV by Exposure Mode, Rhode Island, 2005–2014
HIV AND SOCIAL DETERMINANTS OF HEALTH

Social determinants of health are typically defined as a person’s social environment, physical environment, and their access to health services. These factors cannot be changed with differences in behavior, but can greatly affect the individual’s environment, and their health outcomes. Some of the most salient social determinants of health include poverty, homelessness, unequal access to healthcare, incarceration, lack of education, stigma, homophobia, sexism and racism.

Socioeconomic status and HIV are closely linked. Socioeconomic status can affect HIV status, and vice versa. Individuals who have low socioeconomic resources are more likely to practice riskier behaviors, which may make them more susceptible to HIV. Some of these riskier behaviors may include earlier sexual debut and inconsistent condom use. It has been observed that the most substantial social determinants of health in relation to HIV/AIDS are education, employment, housing, income and insurance status. While all of these factors are significant predictors of HIV status, research indicates that education and housing status are the strongest predictors. It has been demonstrated that those who experience unstable housing are more likely to have condomless sex, use drugs, and share syringes.

An HIV diagnosis may negatively impact someone’s socioeconomic status by diminishing their capacity to work and earn income. The percentage of HIV-positive individuals who are unemployed is high compared to their seronegative counterparts. This is partially due to work responsibilities competing with healthcare needs, as well as difficulty in maintaining typical work hours due to fatigue.

HIV SUCCESSES IN RHODE ISLAND: HIV TESTING OF PREGNANT WOMEN AND NEEDLE EXCHANGE PROGRAMS

While many social determinants of health represent significant barriers toward reducing HIV risk, two public health interventions have proven successful as HIV prevention strategies in Rhode Island and in other jurisdictions across the nation: routine HIV testing of pregnant women and syringe exchange programs for injecting drug users.

In 1994 it was discovered that the administration of zidovudine (AZT) during pregnancy and childbirth reduced the chance of a child being born HIV-positive to an infected mother by two-thirds. In 1999, the Institute of Medicine recommended “adoption of a national policy of universal HIV testing, with patient notification, as a routine component of prenatal care.”

In accordance with Rhode Island General Laws 23-6.3-3, enacted in 2009, HIV opt-out screening is incorporated into prenatal testing for all pregnant women as early and often as appropriate during each pregnancy. Newborns are tested as soon as possible after delivery if the mother’s HIV status is not documented (the mother’s consent is not needed).

In Rhode Island, there has been only one case of mother-to-child transmission of HIV in the last five years.

Needle exchange programs, also known as “syringe services” programs, generally provide a full spectrum of services to individuals who inject drugs, including exchange of used syringes for clean ones, naloxone distribution, counseling, condoms, rapid HIV and hepatitis C testing, and referrals to mental health and social services. Since the inception of the needle exchange program in Rhode Island in 1994, there has been a precipitous drop in new cases of HIV identified among injecting drug users, with fewer than six cases reported annually from 2009–2014.

AIDS Care Ocean State (ACOS) operates Rhode Island’s needle exchange program, which started as one fixed site in Providence in 1994. In 2002, ACOS expanded their services to include mobile sites in Woonsocket and Newport, then expanded their services to street outreach in 2008, and home delivery in 2012. In total, ACOS provides services through three fixed sites, a mobile/street-based exchange unit, and home delivery in five cities: Providence, Woonsocket, Newport, Pawtucket, and Central Falls. Clean syringes can also be bought without prescription at retail pharmacies in Rhode Island.

HIV EPIDEMIOLOGY AND RACE/ETHNICITY

In a state with a population that is between 75% and 80% White, the rates of Black/African American males living with an HIV diagnosis is five times that of white males. Further, Black/African American females have rates that are 17 times that of their white counterparts. Black Americans represent only 12% of the United States population, but they account for 44% of individuals living with HIV. In Rhode Island, the rate of HIV in the Black/African American population is roughly 10 times that of White, non-Hispanic individuals. The rate for Hispanic or Latino individuals is five times that of non-Hispanic Whites.

HIV EPIDEMIOLOGY AND SEXUAL ORIENTATION

According to the Centers for Disease Control and Prevention, GBMSM comprised 83% of new HIV diagnoses among
males age 13 and older in 2014. Furthermore, it is estimated in the United States that 15% of all GBMSM are HIV-infected. A major barrier to testing and screening globally is that one-third of countries around the world criminalize same-sex conduct, thus restricting the rights of GBMSM and the lesbian/gay/transgender community. In these countries, GBMSM are less likely to access services, fearing prosecution.

The South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia) is home to 37% of the United States population, but more than 50% of newly-diagnosed HIV cases. There are many contributing factors to this disproportionate epidemic in the South, including poverty, stigma, racism, and homophobia. Further contributing to these factors is “abstinence-only” education in schools, as well as limited Medicaid expansion by these Southern states. Social stigma related to the GBMSM population is further exacerbated by race, as African American GBMSM are stigmatized not only because of sexual preference, but also due to race.

The rate of new HIV infections in 2014 in Rhode Island was 89 times higher in GBMSM than heterosexual men. While most of the cases of HIV among GBMSM in years past have been concentrated in men in ages 30–49, there has been a recent shift toward younger men (in their 20s). The majority of GBMSM diagnosed with HIV reside in Providence County. [See Figure 3.]

A recent advancement in addressing HIV prevention among GBMSM is PrEP. Taken once a day by HIV-negative individuals, PrEP can effectively prevent HIV infection. Studies suggest that PrEP is >90% effective in preventing HIV. Currently, The Miriam Hospital STD Clinic has prescribed PrEP to more than 200 patients and is taking referrals.

ACHIEVING HEALTH EQUITY IN RHODE ISLAND

With the goal of scaling up HIV testing and treatment efforts and achieving health equity for individuals at-risk for – and impacted by – HIV, Rhode Island officially adopted the UNAIDS “90-90-90” initiative at the Rhode Island Statehouse World AIDS Day event in December 2015. The goals of this global initiative for the year 2020 include: 1) 90% of people living with HIV know their HIV status; 2) 90% of people who know their HIV-positive status access treatment; and 3) 90% of people in treatment have suppressed viral loads. Figure 4 illustrates Rhode Island’s progress towards these targets.

The cornerstone of Rhode Island’s 90-90-90 initiative is a commitment not only to address the medical needs of individuals at-risk for and living with HIV, but also their social and economic needs, including issues related to discrimination, housing, education, and employment. Accordingly, partnerships and planning groups have been formed that include social service agencies, AIDS service organizations, municipal governments, community-based organizations, and other state agencies.

While medical advances have led to tremendous successes in HIV prevention and care, Rhode Island’s current challenge is to combine these advancements with improvements in local environments and communities in which at-risk groups and people living with HIV live, grow, work, and learn. This comprehensive approach is intended to be a foundation on which Rhode Island hopes to be the first state in the nation to “get to zero.”
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Preventing Foodborne and Enteric Illnesses Among At-Risk Populations in the United States and Rhode Island

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ABSTRACT

One out of every six people in the United States is estimated to become sick each year from pathogens that can cause foodborne illness. The groups at greatest risk for serious illness, hospitalization, or death include young children, older adults, people with chronic conditions, and pregnant women. Such health disparities must be considered along with those disparities that may exist among racial and ethnic groups and among groups of varying socioeconomic status. We analyzed risk profiles for enteric disease using data from Rhode Island and the nation as a whole, exploring disparities among groups defined by demographic and health characteristics. As expected, disparities in the burden of enteric illnesses are not limited to racial or ethnic differences in disease burden, or in differences otherwise attributable to socioeconomic status. Age is an especially important determinant of risk, as is residential status. Other groups found to be especially vulnerable to foodborne and enteric illnesses in Rhode Island include pregnant women and those with certain health conditions (e.g., cancer, liver disease or immunosuppression). By understanding what groups are at increased risk, providers can more effectively counsel their patients to mitigate risk and effectively treat these conditions.

KEYWORDS: foodborne diseases, disparities, Rhode Island

INTRODUCTION

The Centers for Disease Control and Prevention (CDC) estimates that each year in the U.S. one in six people become sick from a foodborne pathogen, which equates to approximately 48 million illnesses, 128,000 hospitalizations, and 3,000 deaths annually. Although everyone is susceptible to foodborne and other enteric illness, certain groups are more susceptible and are also likely to suffer more serious illnesses, hospitalizations, and death. These highest risk individuals include young children, older adults, people with weakened immune systems, and pregnant women. When considering health disparities with regard to foodborne and enteric illnesses, these at-risk groups are important to consider along with disparities that may exist due to differences in race, ethnicity, and socioeconomic status. This paper will discuss these at-risk groups using national and Rhode Island data and provide recommendations aimed at preventing and diagnosing enteric illness among these and other groups.

DISPARITIES DUE TO AGE AND WEAKENED IMMUNE SYSTEMS

Research suggests that the most important disparities in foodborne illness burden relate to differences in age and immune health. Young children are at risk for foodborne and enteric illnesses because of developing immune systems. Similarly, older individuals are at risk because of weakening immune systems, chronic conditions, and because bacteria remain in their gastrointestinal tracts for longer periods of time. Many older individuals are on protein pump inhibitors that reduce stomach acid, allowing organisms to escape destruction from gastric acid, leading to bacterial overload in the lower gut. Conversely, increased antibiotic pressure both in hospital and community environments leads to elimination of healthy enteric flora and overgrowth of deadly enteric pathogens such as Clostridium Difficile. Disparities in foodborne illness burden related to differences in age and immune health are revealed in both national and Rhode Island data.

The Foodborne Diseases Active Surveillance Network (FoodNet) monitors national trends in foodborne illness over time and attributes illnesses to specific foods and settings. The surveillance area covers 15% of the U.S. population (48 million people) and monitors trends in Campylobacter, Cryptosporidium, Cyclospora, Listeria, Salmonella, Shiga toxin-producing Escherichia coli (STEC), Shigella, Vibrio, and Yersinia. Data from the most recently published FoodNet annual report states that the incidence of foodborne disease is highest among children under 5 years of age for all pathogens except for Listeria, Vibrio, and Cyclospora, where the highest incidence rates are seen among people older than 65 years of age.

In Rhode Island, the average rate of listeriosis between 2010 and 2014 was 0.4 cases per 100,000 people, but the rate was higher among children less than 5 years of age (1.7/100,000) and highest among people who were 80 years of age or older (3.1/100,000). See Figure 1.

Analysis of the 22 listeria cases reported in Rhode Island from 2010–2014 further illustrates these disparities. Of the 22 cases reported over this five-year time period, 5 (23%...
cases were newborns or pregnant females, 9
(41%) were cases with existing health condi-
tions (cancer, liver disease or immunosuppres-
sion—conditions that increase the severity of
listeria infection), and the remaining 8 (36%)
cases were older adults ranging in age from 72
to 90 years.

Age-specific rate disparities are also observ-
able in 2014 Rhode Island Salmonella data.
Although the overall Salmonellosis incidence
rate was 13.3 cases per 100,000 people, the
rate was higher among older adults and high-
est among children less than 5 years of age
[34.8/100,000]. [See Figure 2.] These disparities
are consistent with disparities observable in
national data. In addition to being at increased
risk from foodborne infectious disease expo-
sures because of developing immune systems,
young children are especially vulnerable to
salmonella infections from livestock or rep-
tile exposure. The reasons for this phenom-
enon are multifactorial, including immature
immune systems, household contamination
events, overcrowded dwellings, and inadequate
hygienic practices. In 2014, 27% of Rhode
Island salmonellosis cases under 5 years of age
were reported to have had an exposure to live-
stock prior to their illness onset.

The burden of norovirus on the very young,
the elderly, and immunocompromised people
is also higher than among other people in the
general population. Norovirus is the leading
cause of acute gastroenteritis and foodborne
illness in the U.S., with over 14,000 estimated
annual hospitalizations nationally, mostly
among young children and elders. In the U.S.
from 2009 through 2012, noroviruses accounted
for over 48% of foodborne outbreaks. In Rhode
Island from 2010 through 2014, 39% of food-
borne outbreaks were suspected or confirmed
to have been caused by norovirus.

Norovirus can spread explosively from person
to person in long-term care facilities, thus
disproportionately affecting frail elders. In Rhode Island in 2014 for example, 45 of approx-
imately 90 long-term care facilities reported a norovirus-
like outbreak. Of these, 29 were confirmed to be caused
by norovirus. The average attack rate of residents during these
outbreaks was 25%.

Pregnant women and people with compromised immune
systems (from conditions such as HIV, cancer, and liver dis-
ease) are also at increased risk of becoming seriously ill from
foodborne pathogens. (For example, pregnant women are ten
times more likely than the general population to become
ill with listeriosis.) Because of this, the Rhode Island Food
Code includes special requirements for those establishments
serving highly susceptible populations, including hospitals,
nursing homes, elder-care homes, schools, and day-care cen-
ters. Establishments serving these populations must exclude
ill food employees with norovirus from working until the
employees are symptom free for at least 48 hours. Also,
high risk food items that are served raw or partially cooked,
such as raw shellfish and undercooked hamburgers, are not
allowed to be served in these food establishments, and only
fully cooked or pasteurized egg products may be used.

Individuals at greatest risk of foodborne illness can miti-
gate risk by avoiding certain foods and practicing food safety
behaviors. High-risk groups should avoid unpasteurized
dairy products, soft cheeses, sprouts, undercooked meats,
raw shellfish, and deli meat that is not thoroughly reheated.
prior to consumption. Proper handwashing, sanitation, and avoidance of bare hand contact with ready-to-eat foods is especially important to prevent norovirus transmission, because individuals can shed viral particles after the termination of symptoms, and the viral particles themselves can survive on typical indoor surfaces for up to 2 weeks.4

**DISPARITIES ASSOCIATED WITH DIFFERENCES IN RACE AND ETHNICITY**

Race and ethnicity data have not been collected consistently in FoodNet and evidence suggests that Hispanics and low-income individuals are under-represented in the FoodNet population relative to their proportions in the U.S. as a whole.7 Despite these limitations, FoodNet has constructed rates by race and ethnicity, revealing that Campylobacter and Listeria incidence rates are highest among Hispanics, that STEC rates are highest among non-Hispanics, and that Salmonella rates are similar for Hispanics and Non-Hispanics.2

A recent review of the public health literature suggests that minority and low-income people are at highest risk of foodborne illness.8 Higher than average consumption of fresh, Mexican-style soft cheese may help explain the increased incidence of Listeriosis among Hispanics,5 especially pregnant Hispanic women (whose risk of listeriosis is 24 times higher than non-pregnant, non-Hispanic women).5 Several factors may explain this ethnic disparity, including unsafe food-handling practices, crowding in homes, number of young children in homes, and a lack of understanding of specific health risks. As well, access to fresh, healthy food is limited among minorities and persons of low income in the U.S. Studies have consistently demonstrated income, race, and ethnic disparities in access to fresh, healthy food at the retail level, leading to the concept of the “food deserts,” areas typified by a lack of supermarkets and an abundance of smaller ethnic markets, convenience stores, and fast food retailers. Researchers are beginning to look at specific food safety risks associated with “food deserts,” e.g., inadequate food-handling knowledge and improper food-handling practices in small independent retailers.8

In Rhode Island, activities are underway to improve our understanding of racial and ethnic disparities in the burden of foodborne illnesses. For example, an initiative begun in October 2015 aimed at improving the reporting of race and ethnicity information in foodborne case-reports received by the Rhode Island Department of Health [RIDOH] has led to more complete information. “Known” race and ethnicity in case reports of campylobacteriosis increased from 31% to 61% in the first eleven months of the initiative, and among case reports of STEC [Shiga-Toxin producing E. coli] from 50% to 83%. Such improvements will enable RIDOH to perform detailed analyses of racial and ethnic disparities, enabling the improved targeting of prevention measures. As well, the Rhode Island Center for Food Protection focuses attention on high-risk food establishments, including those smaller independent food stores located in “food deserts,” to improve compliance with safe food-handling and storage practices.

**RECOMMENDATIONS**

Understanding foodborne illness disparities can help providers diagnose, treat, and report infections from foodborne pathogens. Although elimination of these disparities will undoubtedly require societal change, patient-by-patient guidance and education is also of great value to individuals and their families. Individuals at especially high risk of severe foodborne infections should be counseled to avoid certain foods, e.g., undercooked animal products, raw shellfish, sprouts, deli meat that is not thoroughly re-heated, soft cheeses, and unpasteurized milk and juice products. Non-food related factors, such as contact with pets, reptiles, livestock, exotic animals, and unsanitary environments are also important to address, particularly where young children are involved. Immediate and thorough handwashing after contact is recommended. As well, no reptiles should be allowed in a home with an infant. Children should receive rotavirus and hepatitis A vaccines according to the prescribed schedule. At-risk persons can also protect themselves from disease carriers [known and unknown] by several means:

- Regular and thorough hand-washing
- Regular and thorough sanitizing of residential and work environments
- Use of “cyst filtration devices” for the extreme immunosuppressed
- Caution around domestic and wild animals
- Avoidance of untreated drinking water
- Proper food-handling and storage methods [Hot foods should be kept hot and cold foods cold.]

Many useful resources are available online to help educate those at increased risk.9,10

Testing for foodborne and enteric illnesses and the reporting of confirmed cases are critical elements in disease prevention, including the prevention of widespread food-borne illness outbreaks. It is important to recognize the symptoms of foodborne and enteric illnesses and to obtain a stool culture when bloody diarrhea or severe gastrointestinal symptoms are observed. Guidance on managing these conditions are available.11 Data reported in the literature suggest that culture-independent diagnostic tests (CIDTs)—rapid tests that do not require the isolation of living organisms—are now commonly used to test for bacteria, aiding timely clinical management.2 However, the isolation of organisms is still required for genetic testing. The latter permits public health officials to work with state partners and federal agencies to identify and to eliminate ongoing sources of food contamination. Therefore, sending specimens to the State Public Health Laboratory is critical following a positive CIDT. RIDOH has worked closely with hospital laboratories to
facilitate this process. Collecting and reporting information on race and ethnicity is also helpful in identifying the sources of foodborne illnesses and to reduce disparities in the burden of foodborne illnesses.

In conclusion, illnesses caused by enteric pathogens are preventable and can impact certain groups more severely than others. Continued research and outreach is needed at the national and state level to understanding what groups are at increased risk and why. Patient education, laboratory culture testing, and the collection and reporting of race and ethnicity to public health will facilitate the assessment of risk factors and the targeting of scarce public health resources.

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ABSTRACT
Although co-payments and deductibles are means of keeping health expenditures low, they have also been cited as barriers that inhibit patients from accessing necessary healthcare. We aimed to evaluate Rhode Island residents’ experiences with cost-related access challenges within the state’s healthcare system. We conducted a cross-sectional survey of resident experiences with healthcare in Rhode Island. Our survey instrument was composed of the RAND Corporation “Short-Form Patient Satisfaction Questionnaire [PSQ-18]”, questions developed by the Rhode Island Office of the Health Insurance Commissioner, and ranking of health priorities based on prior community assessments conducted by the Rhode Island Department of Health. Data were collected at venues across the state as part of the Rhode Island Department of Health 2015 Statewide Health Inventory. From July to August 2015, 404 surveys were completed. We found that 40% of respondents had a co-pay of $20–$50, while 35.7% of respondents had a deductible of greater than $500. Further, one-third of respondents delayed receiving care due to financial barriers. This decision resulted in a worsening condition or hospital visit for nearly half of those respondents. Co-pays and deductibles pose challenges to Rhode Islanders accessing health care. Cost-related barriers to healthcare access should continue to be addressed, especially in the context of preventive care services, which are now being built into health insurance premiums through the Patient Protection and Affordable Care Act.

KEYWORDS: Rhode Island healthcare, financial barriers, co-payments, deductibles, preventative care

INTRODUCTION
Health insurance cost sharing is often described as a barrier that prevents patients from accessing healthcare. In fact, 45% of patients with a deductible of greater than $500 reported a new or worsening condition due to cost-related access challenges, conversely, 32% of patients with a deductible of less than $500 reported a new or worsening condition due to financial barriers. Further evidence suggests that individuals with no cost sharing are 15% more likely to utilize emergency department services than individuals with co-pays and deductibles. Although cost sharing is intended to keep health care costs low, it also induces a variety of cost-related access challenges. Individuals burdened by such financial challenges are less likely to consult a physician, fill necessary prescriptions, or complete indicated follow-up procedures.

On a national scale, it is known that co-payments and deductibles prevent both families and individuals from accessing the care that they require. This challenge is particularly pronounced in low- and middle-income families. Low- and middle-income populations are both significantly less likely to receive preventative care than high-income populations. However, the decision to forgo preventative care due to financial barriers is not solely linked to socioeconomic status. Income level aside, Medicare enrollees with supplemental insurance coverage are two to three times more likely to undergo breast cancer screenings than those without additional insurance benefits who pay additional costs to access care. The tendency to delay, skip, or forgo preventative care due to cost is present across multiple socioeconomic levels, and can lead to worsening conditions.

In order to increase access to preventative care it is important that public experience with healthcare cost and coverage is assessed. We surveyed patients and community members in Rhode Island (RI) in order to gather information that reflected actual resident experiences with the state healthcare system. This primary data collection was completed as part of the Rhode Island Department of Health (RIDOH) 2015 Statewide Health Inventory, with the intent of evaluating cost-related access issues. The aim of this study was to evaluate the financial challenges associated with healthcare access for RI residents.

METHODS
Survey Design
We used a cross-sectional survey designed to examine three cost-related access issues from the perspective of RI residents. In order to do so, the survey was composed of three sections. The first section consisted of questions from the Validated RAND Corporation “Short-Form Patient Satisfaction Questionnaire [PSQ-18]”. These questions were incorporated in order to assess residents’ experiences with RI healthcare. The second section consisted of questions designed by the Office of the Health Insurance Commissioner, and were used to evaluate financial barriers that limited residents’ access to healthcare. Finally, the third
section presented health priorities that were found to be consistent across communities based on prior assessments conducted by the RIDOH. Participants were asked to rank these priorities based on perceived importance in their communities. The described priorities included drug and alcohol abuse, and access to healthcare. The survey could be accessed online or over the phone. Respondents noted that it took less than five minutes to complete.

This survey was administered as part of the RIDOH 2015 Statewide Health Inventory in order to provide information about the financial barriers that currently prevent Rhode Island residents from accessing healthcare. The RIDOH 2015 Statewide Health Inventory was a comprehensive assessment of health service capacity and access to care for a variety of health services across the State.

Data Collection
Our team of eight interns distributed both English and Spanish copies of the survey directly to RI residents at a variety of locations throughout the state. Distribution venues included local farmers markets, Oakland Beach in Warwick, and Kennedy Plaza (the central bus terminal in Providence). Surveys were also distributed directly to patients and community members by many federally qualified health centers (FQHCs), Women, Infants, and Children (WIC) programs, and several community-based multiple service organizations.

In addition to direct distribution, surveys were also placed outside of the RIDOH’s Office of Vital records for individuals wishing to participate while waiting to be assisted. Furthermore, both an English and Spanish version of the survey was posted to the RIDOH website in August 2015. The posting of the survey was followed shortly after by a press release that encouraged residents to complete the online version.

Data Analysis
The John Snow Research and Training Institute, Inc. worked to clean and standardize the collected data. Descriptive statistics were generated in order to represent several attributes of interest. The standardized findings were aggregated into appropriate tables, and, in one case, a statistical map, in order to display the desired information. Analyses were conducted using SAS software.

RESULTS
From July to August 2015, surveys were distributed both online and in person. During this time, 404 surveys were completed; 258 respondents completed a paper version of the survey, and 146 completed an online survey. Responses were collected from 84% of RI zip codes. Only two municipalities were excluded entirely from our convenience sample: North Smithfield and New Shoreham.

Of the 400 participants who reported on the cost of their co-pay, 40% stated that they had a co-payment of between $20 and $50 per doctor’s office visit. Furthermore, 17.3% of respondents had a co-pay of less than $20, while an additional one-third (31.3%) stated that they had not have any co-payment (Table 1).

The cost of deductibles was also examined. Of the 404 respondents who provided information regarding their deductibles, 33% claimed to have a deductible of at least $500. Conversely, 30.4% of participants reported having no deductible whatsoever (Table 2).

In order to assess the effects of cost sharing on access to care, participants were also asked whether they or a member of their household had to delay or forgo receiving medical care due to cost. Slightly less than one-third (31.1%) of respondents said yes. Furthermore, of the 31.1% who answered yes, 46.7% reported that their condition either worsened or that they went to the emergency room as a result of their decision to delay or forgo receiving care (Table 3).

<table>
<thead>
<tr>
<th>Doctor’s Office Co-Pay</th>
<th>Percent of Respondents</th>
<th>n=400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $20</td>
<td>17.3%</td>
<td></td>
</tr>
<tr>
<td>$20-$30</td>
<td>30.3%</td>
<td></td>
</tr>
<tr>
<td>$30-$50</td>
<td>9.8%</td>
<td></td>
</tr>
<tr>
<td>$50-$100</td>
<td>2.8%</td>
<td></td>
</tr>
<tr>
<td>More than $100</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td>8.5%</td>
<td></td>
</tr>
<tr>
<td>No co-pay</td>
<td>31.3%</td>
<td></td>
</tr>
</tbody>
</table>

Source: RIDOH 2015 Statewide Health Inventory.

<table>
<thead>
<tr>
<th>Deductible</th>
<th>Percent of Respondents</th>
<th>n=404</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100</td>
<td>4.7%</td>
<td></td>
</tr>
<tr>
<td>$250</td>
<td>4.7%</td>
<td></td>
</tr>
<tr>
<td>$500</td>
<td>11.4%</td>
<td></td>
</tr>
<tr>
<td>$1,000</td>
<td>4.0%</td>
<td></td>
</tr>
<tr>
<td>Under $1,000 (cannot specify)</td>
<td>2.7%</td>
<td></td>
</tr>
<tr>
<td>Between $1,000 and $2,500</td>
<td>9.7%</td>
<td></td>
</tr>
<tr>
<td>Between $2,500 and $5,000</td>
<td>5.7%</td>
<td></td>
</tr>
<tr>
<td>Over $5,000</td>
<td>2.2%</td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td>24.5%</td>
<td></td>
</tr>
<tr>
<td>No deductible</td>
<td>30.4%</td>
<td></td>
</tr>
</tbody>
</table>

Source: RIDOH 2015 Statewide Health Inventory.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Percent</th>
<th>n=126</th>
</tr>
</thead>
<tbody>
<tr>
<td>I became sicker before seeking care</td>
<td>28.2%</td>
<td></td>
</tr>
<tr>
<td>Nothing – I got better on my own</td>
<td>27.4%</td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td>25.8%</td>
<td></td>
</tr>
<tr>
<td>I went to the emergency room</td>
<td>18.5%</td>
<td></td>
</tr>
</tbody>
</table>

Source: RIDOH 2015 Statewide Health Inventory.
**DISCUSSION**

Our survey results reflected healthcare experiences from 84% of RI zip codes. Our findings show that nearly half of RI residents are burdened by deductibles of greater than $500 and co-payments of $20-$50. Furthermore, approximately one-third of respondents substituted or forgone receiving necessary care, suggesting a correlation between cost and the decision to delay care. This decision ultimately resulted in a worsening condition or hospital visit for 46.7% of patients. These results exemplify a heightened tendency to make cost-saving decisions due to insurance cost sharing, and are consistent with those of previous studies.

Trivedi *et al.* gathered investigated the effects of cost sharing on screening mammographies. The study compared screening rates between participants who were subjected to gradual co-payment increases over the course of three years relative to those who maintained full-coverage plans. Investigators found that screening rates for individuals with rising co-payments were 7.2 percentage points lower than those enrolled in full-coverage plans. The effects of cost sharing were also more pronounced for women residing in lower-income areas. These results also demonstrate that individuals with high co-sharing responsibilities are less likely to seek necessary care, and suggest a correlation between income level and access challenges.

In assessing our results, we found that one-third of RI residents made decisions due to financial barriers, which caused nearly half of these respondents to report a worsening condition or an emergency room visit. In order to prevent similar outcomes, potential strategies to address such financial barriers should be considered. Exempting certain preventive care exams from cost sharing could be an effective means of reducing subsequent medical expenditures. This notion served as the foundation for the Essential Health Benefits Plan under the Affordable Care Act (ACA). Essential Health Benefits work to remove the effects of cost sharing on preventive care recommended by the United States Preventive Services Task Force. Examples of preventive services now included in insurance premiums are indicated mammography and colonoscopy exams.

Despite our consistent conclusions, there were several limitations to our study. First, we did not receive evaluations from every community in RI, and did we collect an equal number of responses from each zip code. Indeed, even though we collected responses from 84% of RI’s zip codes, our *convenience sample* cannot be considered representative of the entire Rhode Island population. Furthermore, we did not actually monitor patients in order to assess the outcomes of their delaying or forgoing necessary care. Regardless of these limitations, however, our conclusions paralleled those of previous studies.

Overall, our findings suggest that insurance cost-sharing measures present cost-related access challenges for many RI residents. In the setting of the ACA, which supports a reduction in the population of uninsured, the financial and access-to-care barriers faced by the underinsured due to certain cost-sharing concerns should not be underestimated. Our results inform future policy decisions related to improving access barriers based on cost burden to patients.

**Acknowledgments**

We would like to thank our Public Health Interns (summer interns at the Rhode Island Department of Health), including Brittany Mandeville, Madelyn McCadden, Jessica Miele, Lauren Poplaski, Christine Reavis, Emily Siliviva, Pamela Sturgis, Sydaya Tompkins, and Avery Trim, for their assistance as survey facilitators and interviewers. We are grateful for the support of the Rhode Island Department of Health in creating this manuscript.

**References**

12. RAND Corporation. Patient Satisfaction Questionnaire from RAND Health. http://www.rand.org/health/surveys_tools/psq.html. Accessed March 25, 2016. This survey was reprinted with permission from the RAND Corporation. Copyright © the RAND Corporation. RAND’s permission to reproduce the survey is not an endorsement of the products, services, or other uses in which the survey appears or is applied.


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ABSTRACT

Like most states in the U.S., Rhode Island’s rate of type 2 Diabetes Mellitus (DM) is rising as its population has both aged and become heavier. Risk of both BMI≥30 and DM has risen across almost all demographics, but disparities continue to exist in both conditions. We analyzed state health survey data to assess race/ethnicity-stratified DM and BMI and the age-adjusted rate of DM by weight status relative to the late 1990s. The prevalence of obesity increased across almost all demographic groups relative to 15 years ago, but the rise was greatest among non-Hispanic whites. The age-adjusted rate of DM had a similar increase across racial/ethnic categories where BMI≥30, but black adults were still at higher risk of DM even at a BMI<30. In sum, non-Hispanic whites and Hispanics are “catching up” to blacks’ historically higher prevalence of obesity and DM, but disparities remain in both conditions. We describe two ways providers can collaborate with the Department of Health to address these growing health problems.

KEYWORDS: Diabetes Mellitus, BMI, obesity, disparities, Rhode Island

INTRODUCTION

Obesity and type 2 diabetes mellitus (T2DM) have become high-priority health concerns of both the Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO). In the U.S., there is now regular talk of an “epidemic” of obesity, and the CDC projects a similar tripling of T2DM by 2050 if current trends continue. Additionally, an estimated 37% of American adults have dysglycemia below the threshold indicating full-fledged T2DM, putting them at high risk of advancing to T2DM. In 2015, the Rhode Island Department of Health (RIDOH) made reducing health disparities one of its leading priorities. Like most states in the U.S., Rhode Island’s rate of T2DM is rising as its population has both aged and increased its average BMI in the past generation, and RIDOH has struggled to navigate between interventions that are population-wide and those attempting to reduce racial/ethnic and economic disparities. We compare state disparities in T2DM and obesity status relative to 15 years ago, and suggest ways that healthcare providers can collaborate with RIDOH to address both obesity and T2DM by intervening at earlier dysglycemia.

METHODS

RI conducts the Behavioral Risk Factor Surveillance System (BRFSS) annually via random-digit dialing of both landlines and since 2011 cellphones. In light of the state’s relatively small black and Hispanic sample sizes, we pooled 2011-14 data to assess differences across groups with more confidence. The primary independent variable was self-reported race/ethnicity, categorized as non-Hispanic black, Hispanic, and non-Hispanic white. Due to small sample sizes, people who reported any other racial identity were excluded from analysis. The two dependent variables were BMI and T2DM. Weight status was calculated from self-reported height and weight as lean (BMI<18.5 and <25); overweight (BMI≥25
We conducted bivariate analyses to construct a demographic profile of the 4 weight categories and calculated T2DM prevalence by obesity status. We then pooled BRFSS data from 1997–2000 to create a 15-year comparison cohort. Because of a methodological change in 2011 to adjust for conversion from landline to cellphone use, strictly speaking, statistical tests should not be used to compare differences between the two cohorts; however, we tested for the cohort effect itself in multivariate logistic regressions to assess increased risk of class 1 and class 2 obesity and T2DM from 1997–2000 to 2011–14. All analyses were done with SAS 9.4 using survey weights provided by the CDC to accommodate BRFSS’s complex sampling design.

Table 1. Distribution of weight categories, Rhode Island adults 2011–2014.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>BMI 18.5–24.99 (lean)</th>
<th>BMI 25–29.99 (overweight)</th>
<th>BMI 30–34.99 (class 1 obesity)</th>
<th>BMI&gt;=35 (class 2 obesity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/ethnicity</td>
<td>black (non-Hispanic)</td>
<td>33.7</td>
<td>33.7</td>
<td>20.3</td>
<td>11.6</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>33.5</td>
<td>37.8</td>
<td>17.5</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>white (non-Hispanic)</td>
<td>35.7</td>
<td>36.8</td>
<td>16.8</td>
<td>9.3</td>
</tr>
<tr>
<td>p-value</td>
<td>0.324</td>
<td>0.524</td>
<td>0.032</td>
<td>0.227</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>18-44</td>
<td>41.4</td>
<td>32.5</td>
<td>15.1</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>45-64</td>
<td>29.3</td>
<td>39.8</td>
<td>19.1</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>65-74</td>
<td>27.0</td>
<td>41.8</td>
<td>19.5</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>75+</td>
<td>38.6</td>
<td>40.3</td>
<td>14.2</td>
<td>4.9</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>female</td>
<td>42.8</td>
<td>30.5</td>
<td>14.8</td>
<td>9.9</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>27.9</td>
<td>43.3</td>
<td>19.0</td>
<td>8.9</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
<td>0.056</td>
<td></td>
</tr>
<tr>
<td>Highest level of education</td>
<td>no high school degree</td>
<td>34.0</td>
<td>34.8</td>
<td>17.9</td>
<td>11.8</td>
</tr>
<tr>
<td></td>
<td>high school graduate/GED</td>
<td>32.2</td>
<td>37.2</td>
<td>18.4</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>any college</td>
<td>37.4</td>
<td>37.2</td>
<td>15.9</td>
<td>8.2</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
<td>0.056</td>
<td></td>
</tr>
<tr>
<td>Ever diagnosed with diabetes</td>
<td>no</td>
<td>37.5</td>
<td>37.2</td>
<td>15.8</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>yes</td>
<td>14.7</td>
<td>33.7</td>
<td>27.6</td>
<td>23.5</td>
</tr>
</tbody>
</table>

Table 2. Type 2 diabetes prevalence by weight category, Rhode Island adults 2011–2014.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total population</th>
<th>BMI &gt;18.5 &amp; &lt;30</th>
<th>BMI&gt;=30</th>
</tr>
</thead>
<tbody>
<tr>
<td>State average</td>
<td>9.3 (8.9-9.7)</td>
<td>6.2 (5.7-6.6)</td>
<td>17.9 (16.7-19.1)</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>black (non-Hispanic)</td>
<td>10.6 (8.1-13.1)</td>
<td>7.2 (4.9-9.6)</td>
<td>17.6 (11.9-23.4)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>9.0 (7.4-10.6)</td>
<td>6.3 (4.7-7.8)</td>
<td>16.1 (12.2-20.0)</td>
</tr>
<tr>
<td>white (non-Hispanic)</td>
<td>9.2 (8.7-9.7)</td>
<td>6.0 (5.5-6.4)</td>
<td>18.2 (16.9-19.5)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-44</td>
<td>2.8 (2.3-3.4)</td>
<td>1.3 (0.9-1.6)</td>
<td>7.6 (5.9-9.4)</td>
</tr>
<tr>
<td>45-64</td>
<td>11.5 (10.7-12.3)</td>
<td>7.2 (6.4-8.0)</td>
<td>21.4 (19.5-23.2)</td>
</tr>
<tr>
<td>65-74</td>
<td>21.1 (19.5-22.6)</td>
<td>15.2 (13.5-16.9)</td>
<td>34.6 (31.3-37.8)</td>
</tr>
<tr>
<td>75+</td>
<td>18.1 (16.4-19.8)</td>
<td>15.1 (13.3-16.9)</td>
<td>30.5 (25.9-35.1)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>8.7 (8.1-9.3)</td>
<td>5.6 (5.1-6.2)</td>
<td>17.7 (16.1-19.3)</td>
</tr>
<tr>
<td>male</td>
<td>9.9 (9.2-10.6)</td>
<td>6.7 (6.0-7.4)</td>
<td>18.1 (16.4-19.8)</td>
</tr>
<tr>
<td>Highest level of education</td>
<td>no high school degree</td>
<td>13.6 (11.9-15.3)</td>
<td>9.9 (8.2-11.7)</td>
</tr>
<tr>
<td>high school graduate/GED</td>
<td>10.3 (9.4-11.2)</td>
<td>6.5 (5.7-7.3)</td>
<td>19.5 (17.2-21.7)</td>
</tr>
<tr>
<td>any college</td>
<td>7.6 (7.1-8.1)</td>
<td>5.1 (4.6-5.6)</td>
<td>15.5 (14.1-16.9)</td>
</tr>
</tbody>
</table>

Data source: RI Behavioral Risk Factor Surveillance System. Boldface indicates statistical significance at p<0.05
whites (risk difference 5.7%) compared to obese blacks and Hispanics [RD -0.7 and 1.5 respectively; Table 3]. Adjusted odds ratios for obesity, severe obesity, and T2DM were all higher for white adults relative to 15 years earlier [AORs ranging from 1.54-2.80; Table 4]; they trended similarly for black adults but did not reach statistical significance, while the AOR for Hispanics was statistically significant only for obesity [AOR 2.05 [95% CI 1.17-3.58]].

**DISCUSSION**

Black adults in RI have historically been at especially high risk for unhealthy weight and T2DM, but since the late 1990s white adults have been closing that gap. Their odds of class 2 obesity nearly tripled, and obesity is where black, white, and Hispanic adults are reaching parity in age-adjusted T2DM. We note that black and Hispanic adults are still at higher risk for T2DM at BMI below 30, compared to whites, in addition to being diagnosed at an earlier age [data available on request]. These changing patterns reinforce the need for attention to multiple social and demographic factors in confronting these twin emerging epidemics.14,15

Substantial evidence now exists that lifestyle change resulting in moderate weight loss in early dysglycemia can reduce T2DM incidence. More specifically, the CDC’s Diabetes Prevention Programs [DPPs] are even more effective than metformin in preventing T2DM—e.g. reducing incidence by 58% versus 31% in the first 3 years alone—among people with prediabetes or otherwise at high risk for T2DM.5,9,11,12 With support from the CDC, RIDOH is building up free DPP offerings across the state, especially in designated Health Equity Zones (the YMCA also hosts DPPs). There are two ways in which providers have a critical role in increasing participation:

**Screen patients for prediabetes.**

Most providers using EHRs have experienced “flag fatigue” and may balk at one more trigger to check for a low-priority condition like early dysglycemia. However, patients are most likely to participate in a DPP when they are initially diagnosed with prediabetes.16

---

**Table 3. Age-adjusted T2DM, Rhode Island adults 1997–2000 and 2011–2014.**

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Total population</th>
<th>BMI&gt;=18.5 &amp; &lt;30</th>
<th>BMI &gt;=30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>11.5 (7.4-15.5)</td>
<td>11.9 (9.3-14.4)</td>
<td>0.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8.5 (5.6-11.5)</td>
<td>13.7 (11.7-15.6)</td>
<td>5.1</td>
</tr>
<tr>
<td>White</td>
<td>4.9 (4.5-5.3)</td>
<td>7.7 (7.3-8.2)</td>
<td>2.8</td>
</tr>
</tbody>
</table>

*Risk difference between cohorts  Data source: RI Behavioral Risk Factor Surveillance System

---

**Table 4. Adjusted odds of obesity and diabetes among Rhode Island adults in 2011–2014 relative to 1997–2000, by race/ethnicity.**

<table>
<thead>
<tr>
<th>Type 2 diabetes</th>
<th>White (non-Hispanic)</th>
<th>Black (non-Hispanic)</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI&lt;30</td>
<td>1.55 (1.35-1.78)</td>
<td>1.34 (0.75-2.41)</td>
<td>2.05 (1.17-3.58)</td>
</tr>
<tr>
<td>BMI&gt;=35</td>
<td>2.80 (2.29-3.42)</td>
<td>1.28 (0.95-1.70)</td>
<td>0.93 (0.45-1.92)</td>
</tr>
</tbody>
</table>

*Adjusted for age, sex, education, and income. Boldface indicates statistical significance.  Data source: RI Behavioral Risk Factor Surveillance System

**Refer patients to DPP programs and actively encourage them to complete the program.**

RIDOH has set up a Community Health Network [CHN], through which providers can request patients be enrolled in a DPP. (Contact DOH.community@health.ri.gov for more information.)

To counter the escalation of diabetes most effectively, providers and the public health sector will also need to recognize that the convergence of rates among black, Hispanic, and white adults does not necessarily mean equity and a one-size-fits-all approach. Rather, the increasingly similar numbers can still mask very different social and cultural circumstances and health needs. For instance, there is evidence that the 2015 U.S. Preventive Services Task Force [USPSTF] guidelines for screening for abnormal blood glucose leave out a large number of cases among black and Hispanic adults at risk at younger ages and lower BMI [8]; since USPSTF guidelines are the basis for whether screens are exempt from cost-sharing under the ACA, state stakeholders may need to assess whether strict adherence to the guidelines will fail to ensure adequate screening for patients of color and lower-income patients, and if so, what solutions might be worked out with legislators or third-party payors. The escalation of obesity and diabetes among whites and across all levels of education might suggest that traditional social advantages of race and socioeconomic status no longer offer the same extent of protective effect they used to17,18 but providers still need to be attentive to how meaningfully they implement CLAS [culturally and linguistically sensitive] standards...
when addressing unhealthy weight and dysglycemia for patients to respond well.

Perhaps most importantly, healthcare providers can leverage their considerable professional authority in support of state and local policies that facilitate healthy choices. We have reached a social and political situation in which it requires both cognitive effort and socioeconomic resources to maintain basic health behaviors.\textsuperscript{18,19} Leaving the dual problems of unhealthy weight and T2DM to the weight loss industry and promises of pharmaceutical fixes is not a viable solution. Healthcare providers, patients, their families, and the public health sector all need to commit a sustained effort to reducing these two emerging epidemics. Behavioral changes related to correcting energy imbalances are not easy, and may require not only multiple partners but multiple efforts—just as smoking cessation and addiction recovery often require repeated attempts. Even so, healthcare providers have much to gain by investing the minimal time in encouraging such efforts.

References

The Role of the State Health Laboratories in Advancing Health Equity

EWA KING, PhD; CYNTHIA VANNER, BS; HENRY LEIBOVITZ, PhD; ROBIN SMITH, MS

ABSTRACT
While laboratories play an important and recognized role in many public health programs that require surveillance of disease spread or monitoring of environmental conditions, the role of public laboratories in assessing and advancing health equity is not well understood. Yet, public laboratories collect, provide or generate much of the data used to determine health equity status and monitor health equity trends in multiple settings and disciplines. RI State Health Laboratories, a division of the RI Department of Health, operates programs that help measure and address health disparities. Health equity themes are present in laboratory programs that measure environmental determinants of health and assure equal access to laboratory screening and diagnostic services. This article will review the role of laboratory programs in advancing health equity in the state. Specific examples of laboratory contributions to health equity programs will be provided and examined. Future trends and unmet needs will also be discussed.

KEYWORDS: state health laboratories, health equity, health disparities

INTRODUCTION
The Rhode Island State Health Laboratories (RI-Labs) of the Rhode Island Department of Health (RIDOH) provide scientific expertise and comprehensive laboratory test data for multiple public health, environmental protection, and criminal justice programs throughout the state. Laboratory-provided test results and associated data inform core public health functions, including infectious disease outbreak designation and response, surveillance of the spread of sexually transmitted diseases, including HIV, and diagnosis of and response to vaccine-preventable diseases such as pertussis, mumps and measles. RI-Labs help assure safe drinking water and food by testing public and private water supplies for a variety of potential contaminants, and by testing food samples when bacterial or chemical contamination is suspected. These examples illustrate uses of laboratory data that are clearly defined and usually well understood by healthcare providers and the general public. However, the role of data generated by RI-Labs in helping to reduce health disparities, a priority for RIDOH, is not as well recognized. RI-Labs has a prominent role in at least two important aspects of addressing health disparities: providing reliable data to determine the extent of health disparities and to monitor trends in health disparities; and maintaining unique laboratory programs to address recognized disparities by assuring access to care or services otherwise inaccessible or unavailable to underserved populations.

ENVIRONMENTAL DETERMINANTS OF HEALTH
It is well known that physical environment affects health. Access to clean water, air and food, safe housing, workplaces, and neighborhoods all promote good health. Laboratories in the Center for Environmental Sciences at RI-Labs provide analytical services to support programs that assess environmental conditions for individuals and communities that may be disproportionately impacted by poor quality air, water and food.

Air Pollution Monitoring
In collaboration with the Rhode Island Department of Environmental Management, RI-Labs’ Air Pollution Monitoring Laboratory characterizes ambient air quality in representative parts of the state, with special attention directed toward areas inhabited by people especially susceptible to air pollution, such as children with asthma. Six of the State’s network of eight air pollution monitoring sites are located in the most densely populated areas of the state. Five-year population distribution assessments are used to determine if a change in the location of population-oriented monitoring sites is warranted, to better characterize air quality in those areas with the highest population of susceptible people. Rhode Island’s population is heavily concentrated in Providence County, which accounts for approximately 60% of the State’s residents. The rate of emergency room visits for childhood asthma is considerably higher in Rhode Island’s core cities – Providence, Pawtucket, Central Falls and Woonsocket (15.9 per thousand children)—than in the State as a whole (9.5 per thousand children). Recently, a Rhode Island “near-road” site was established on the east side of Interstate Route 95 near downtown Providence, to monitor the effects of traffic on air pollution in adjacent neighborhoods. Monitoring for several
Children’s Exposure to Lead

Lead poisoning is a persistent concern for Rhode Island citizens, especially for children under six years of age. Lead-poisoned children are likely to suffer life-long consequences, as exposure to even small amounts of lead can have a negative effect on a child’s development and can cause serious health problems, including learning disabilities, loss of IQ, and reduced attention span. While the rates of lead poisoning in Rhode Island have declined significantly, geographic and socioeconomic disparities exist and are well established. (See RIDOH’s lead poisoning webpage for more information.) RI-Labs provides laboratory tests in support of universal lead screening requirements for all children in the State and provide prompt notification of all elevated lead results to trigger comprehensive case management. These efforts, combined with strict regulations requiring environmental testing and proper clean-up of lead-contaminated properties, is widely credited with helping lower the rates of lead poisoning among Rhode Island children. While the overall percentage of children in Rhode Island with elevated blood lead levels (>5 ug/dl) in Rhode Island have declined from 25% in 2002 to 4% in 2015, the incidence rates for “core cities” (municipalities with >15% of families with children have incomes at or below the poverty level) was 5.7%. The results of screening tests performed by the Blood Lead Laboratory are available to health care providers and to the Childhood Lead Poisoning Program for surveillance and planning.

ASSURING EQUAL ACCESS TO QUALITY CLINICAL LABORATORY SERVICES

RI-Labs’ Center for Biological Sciences helps assure that all patients have access to high quality, affordable clinical laboratory services. (See Table 1.) This goal coincides with the mission of the state’s community health centers, which aim to provide comprehensive healthcare to residents in underserved geographic locations, especially those who are uninsured or underinsured. RI-Labs maintains agreements with these health centers to provide tests for diseases of public health significance, such as HIV and other sexually transmitted infections (STI), and childhood lead poisoning at no cost to patients. RI-Labs also maintains testing capabilities for intestinal parasites, which is accessed from time to time according to need.

Institutionalized populations at the Adult Correctional Institution (ACI) and the Rhode Island Training School are also served by RI-Labs. These populations are considered to be at especially high risk for HIV, STI and hepatitis infections. Nationally, Hepatitis-C (HCV) is 9-10 times more prevalent in correctional facilities than in the population at large, and the prevalence of diagnosed HIV among inmates of correctional facilities remains 4-5 times higher than the prevalence in the general population. It is estimated that over half the inmates infected with HIV are also infected with HCV.

A significant amount of testing is also performed for patients receiving care at Planned Parenthood, a provider of reproductive health services and education, helping to reduce the rates of STI among populations served by this organization, including a focus on LGBTQ patients.

Table 1. Services rendered to community partner agencies by the State Health Laboratories of the Rhode Island Department of Health.

<table>
<thead>
<tr>
<th>Partner Organization</th>
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<th>STI</th>
<th>Hepatitis</th>
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HELPING VICTIMS OF SEXUAL ASSAULT

RI-Labs’ Forensic Biology/DNA/CODIS laboratory at the Center for Forensic Sciences examines evidence in homicides, sexual assaults, burglaries, and other violent crimes. This includes clothing, weapons, tissues, fluids, and debris as sources of DNA that can be compared to a potential suspect, or for entry into CODIS, the National DNA database. RI-Labs’ scientists provide consultations and training, as well as expert courtroom testimony, in the areas of body fluid identification and DNA.

Every two minutes, somewhere in America, someone is sexually assaulted, with no deference to socioeconomic status, age, gender, or geographical location. In Rhode Island, it is estimated that one in eight women have been sexually assaulted at some point during their lifetime. However, more than 59% of all sexual assaults are not reported to law enforcement agencies. Among people with developmental disabilities, as many as 83% of females and 32% of males are victims of sexual assault. Sexual assaults comprise a significant portion of cases submitted for forensic biology examinations and DNA.

Despite a notable increase in case submissions in recent years, there is no backlog of sexual assault cases in the DNA laboratory. Sexual assault evidence collection kits (SAECKS) are most often received directly from hospitals throughout the state, and are held by the laboratory until notified of a criminal complaint by law enforcement authorities. Once notified, the SAECK is then processed for bodily fluids and/or other sources of DNA. Once a source is identified, the resultant DNA profile is uploaded into CODIS. The CODIS database, maintained by the FBI, has a network made up of 198 state and local laboratories, including Washington, DC and the Army. All participants upload profiles of convicted offenders, arrestees, forensic unknowns (casework samples), missing persons, and relatives of missing persons on a weekly basis. As of July 2016, the National DNA Index (NDIS) contained over 12,471,006 offender profiles, 2,429,723 arrestee profiles, and 720,873 forensic (casework) profiles. Ultimately, the success of the CODIS program is measured by the crimes it helps to solve. CODIS’s primary metric, “Investigations Aided,” tracks the number of criminal investigations where CODIS has added value to the investigative process. As of July 2016, CODIS had produced over 339,702 “hits” (identifications), assisting in more than 325,798 investigations.

In an effort to address the disparity of victimization, the Rhode Island Statewide Task Force to Address Adult Sexual Assault, in which RI-Labs staff actively participate, has authored a pamphlet with sexual assault FAQ’s and related resources for wide distribution, including colleges and universities throughout the state. In addition, there is an impetus underway to train medical personnel at all hospitals throughout the state, including facilities that treat patients who have limited or no health insurance. For those without insurance, the pamphlet addresses the mechanism for compensation via the Victim’s Compensation fund. "Day One," Rhode Island’s sexual assault resource and trauma center, assists with specially trained advocates who can assist victims with this process.

FUTURE TRENDS

RI-Labs will continue to provide quality laboratory services for at-risk populations, and produce accurate and precise environmental testing data to determine status and trends in health disparities. In addition to identifying environmental factors that affect health, it is expected that RI-Labs will have a greater role in directly assessing population exposures through biomonitoring. Biomonitoring involves testing human specimens for environmental pollutants. It allows more direct determination of actual exposures than measures of the concentration of pollutants in the environment at large. Biomonitoring studies performed so far at RI-Labs have demonstrated racial and socioeconomic disparities. For example, a study of mercury, cadmium and lead concentrations in umbilical cord blood revealed that non-Hispanic black mothers had a 9.6 higher chance of having an elevated mercury concentration than women of other racial or ethnic background. While the reasons for this disparity are not known, this approach illustrates a new avenue for laboratory investigations of inequalities in environmental exposures.
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Hydralazine-Induced ANCA Vasculitis in the Setting of Acute Clostridium Difficile Infection

SOMWAIL RASLA, MD; AMR EL MELIGY, MD; DRAGOS F. CUCU, MD

ABSTRACT
We report a rare case of Hydralazine-induced ANCA associated glomerulonephritis with alveolar hemorrhage in the setting of acute Clostridium difficile infection. A 71-year-old Caucasian woman with hypertension, who was being treated with hydralazine 25 mg twice a day for six years, presented to the hospital with diarrhea, nausea, vomiting, and anemia. She had acute kidney injury and urinalysis showed proteinuria, dysmorphic RBCs, and rare RBC cast. She was found to have Clostridium difficile colitis which was successfully treated. She became hypoxicemic; CT scan findings showed bilateral pulmonary infiltrates. Broncho-alveolar lavage was consistent with pulmonary hemorrhage. Kidney biopsy revealed focal segmental necrotizing and diffuse crescentic glomerulonephritis, pauci-immune type (ANCA-associated). Hydralazine was discontinued and the patient was treated with corticosteroids, intravenous cyclophosphamide, and plasmapheresis. To our knowledge, hydralazine-associated low complement in the setting of C-diff infection has not been previously reported. This is considered a potentially life-threatening condition requiring immediate discontinuation of the offending medication and expedited lifesaving measures.

KEYWORDS: Hydralazine, ANCA Vasculitis, Clostridium Difficile

INTRODUCTION
Drug-induced vasculitis (DIV) is known to be a form of inflammatory vasculitis in which a specific drug is the causal agent of disease and other forms of vasculitis are disregarded. Small-vessel vasculitis is the most commonly reported form of DIV. Hydralazine-induced vasculitis fall under the category of drug-induced vasculitis which includes other medications like antibiotics, antithyroid medication, and levamisole-adulterated cocaine. Hydralazine, being a direct vasodilator, is used as an adjuvant treatment for hypertension and heart failure.
transfused with 4 packs of red blood cells over a 4-day course until she started to have progressive shortness of breath with hemoptysis on her fifth day of hospitalization. A chest X-ray showed right upper lobe and left lower lobe opacities suggesting newly developed pneumonia with probable left pleural effusion. She was started on Cefepime for hospital-acquired pneumonia; subsequently her kidney function started to get worse with gradual increase of her oxygen requirements. After 48 hours she was requiring BIPAP 100% FiO2 with her creatinine reaching 6.93 mg/dL at the same time. She was transferred to the medical intensive care unit (MICU) given the rapid deterioration in her clinical status. On admission to the MICU, she had a CT scan of the chest without contrast [Figure 1], which showed right upper and middle lobe infiltrates with atelectasis in both lower lobes and the lingular associated with small pleural effusions. A few hours after the transfer to the MICU, she was intubated due to hypoxemic respiratory failure. Given her hemoptysis with worsening of her kidney function, the initial thoughts were that she has pulmonary-renal syndrome. Her Anti-Glomerular Basement Membrane Antibodies were negative < 0.2 unit. She was started on dialysis and autoimmune serology was ordered for suspicion of underlying vasculitis. Her total complement, C3, C4 were 41 unit/ml (normal), 53.8 mg/dl [low], 7.6 mg/dl [low] respectively. Her anti-neutrophilic antibodies were positive in 1:640 dilutions in a homogenous pattern suggesting strong positivity, while her dsDNA, anti-Smith, anti RNP were all negative. Drug-induced vasculitis was suspected and Hydralazine was stopped. Further confirmatory testing showed: P-ANCA positive at 1:80, positive MPO-ANCA 1.5 units, positive anti-histone 2.1 units. The patient had bronchoscopy with broncho-alveolar lavage which showed pulmonary hemorrhage with cytology negative for malignancy. Abundant fungal elements morphologically consistent with Candida were identified. A kidney biopsy was then done, which showed focal segmental necrotizing and diffuses crescentic glomerulonephritis [Figure 2], pauci-immune type (ANCA-associated/clinical), with mild to moderate activity and moderate chronicity. By the previous results, the patient was confirmed to have drug-induced vasculitis.

The patient was started on pulse steroids with 250mg of methylprednisolone IV q24h on admission to the ICU; this was tapered down to prednisone 50mg oral dose daily which she continued on. She was given cyclophosphamide at 25mg orally twice a day (renal reduced dose), which she continued to take for a month, along with Trimethoprim/Sulfamethoxazole every other day for Pneumocystis prophylaxis. Given the renal biopsy results, the patient underwent 5 sessions of plasmapheresis and continued hemodialysis. The patient was successfully extubated with improvement in her respiratory function a few days after cyclophosphamide started. She was discharged to rehab on hemodialysis.

**DISCUSSION**

This case presents combined complications of Hydralazine-induced vasculitis that affects both kidney and lung at the same time, precipitated by superimposed systemic infection. A high degree of suspicion is needed for quick intervention with life-saving measures.

The pathogenesis of Hydralazine-induced vasculitis remains unclear. One hypothesis posits that Hydrazine accumulates in neutrophils, binds to myeloperoxidase granules (MPO), and induces cytotoxic products formation that lead to neutrophil apoptosis. The cellular apoptosis in the absence of priming leads to the expression of ANCA antigen on the cellular surface, which can induce the production of antibodies. Binding of these antibodies to the cell membrane may propagate more neutrophils’ activation.

The presence of multi-antigenicity in drug-induced vasculitis is explained by the alteration in molecular configuration of MPO granules by Hydralazine, ultimately, inducing the autoimmune response to other neutrophilic proteins (including lactoferrin, elastase, and nuclear antigen), thereby provoking their immunogenicity.

Systemic manifestations include arthralgias, myalgias, hoarseness, and retinal vascular inflammation, with arthralgias and myalgias being the initial presenting symptoms. These symptoms have been reported to occur 6 months to 13 years after initiating treatment with Hydralazine. Hydralazine-induced cutaneous vasculitic manifestations have included lower extremity palpable purpuric and maculopapular eruptions, and hemorrhagic blisters on the lower legs, arms, trunk, nasal septum, and uvula. Using various search terminologies (e.g., Churg-Strauss syndrome, Good-pasture’s syndrome, Henoch-Schönlein purpura, various drugs suspected to induce vasculitis.

Patients with pauci-immune GN usually show rapidly progressive glomerulonephritis with features of brown-colored urine, suggesting hematuria. A 2009 review of the literature found 68 Hydralazine...
vasculitis reports [mean duration of drug exposure 4.7 years; mean dose 142 mg/d]; kidney disease was common on presentation. Combined pulmonary-renal syndrome with Hydralazine-associated ANCA vasculitis is rare, with only 15 suspected cases in the literature. Given the overlap in the clinical presentation of Hydralazine-associated SLE and ANCA associated vasculitis (AAV), both diagnoses should be considered.

There is no definitive criteria for the diagnosis of Hydralazine-induced vasculitis. History of exposure to Hydralazine for a long time is one of the strong positive features. Multiple serology work-up, including ANA, ANCA, MPO, with negative dsDNA, Anti GBM, can rule out other causes of renal-pulmonary syndromes. The gold standard diagnostic procedure is kidney biopsy which shows either necrotizing glomerulonephritis with no immune complex deposition or immune complex mediated glomerulonephritis.

Low C4 is usually associated with increased risk of AAV given the slow systemic clearance of the immune complexes. This may get worse with superimposed systemic infection like C-diff infection as was the case with our presenting patient.

Stopping the offending agents is the cornerstone of treatments.

Treatment strategies consist of pulse dose steroids and, according to the severity of the disease, immunosuppressive agents including Cyclophosphamide, Mycophenolate, Methotrexate, Azathioprine or biological agents like Rituximab. Plasma exchange is the last resort in treatment as it prevents progression to end-stage renal disease.

References

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Disclosures
None

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A Case of Ileus and ST Segment Elevation

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ABSTRACT

ST segment elevation is associated with non-cardiac pathologies but is not as well reported as myocardial infarction. We present a case of a 63-year-old man who was admitted for an overdose on cyclobenzaprine with signs of anti-cholinergic toxicity. He developed signs of ileus on imaging and became progressively obtunded. He was noted to have ST segment elevations on electrocardiogram (EKG) with no troponin elevation. Patient required urgent catheterization which showed normal coronary arteries. His bowel was decompressed subsequently resulting in resolution of the ST segment changes. Other cases of ST segment elevations with gastrointestinal pathologies including cholecystitis, pancreatitis and gastric dilation have been reported but the etiology is still unclear. This case illustrates the importance of understanding EKGs in the clinical context. ST segment elevation on EKG, if there is contradicting symptomology and lab reports, should be further investigated to prevent unnecessary work-up and potentially dangerous therapies.

KEYWORDS: Ileus, non-cardiac, ST segment elevation, STEMI

INTRODUCTION

ST segment elevation is one of the widely used indicators of underlying significant myocardial infarction. Timely recognition and actions, including cardiac catheterization, are critical in improving outcomes in ST segment elevation myocardial infarction.

However, ST segment elevation has been associated not only with additional cardiovascular pathologies including: pericarditis, myocarditis, aortic dissection, takotsubo cardiomyopathy and pulmonary embolism but also gastrointestinal etiologies such as gastric dilation, acute cholecystitis, and pancreatitis. Therefore, a comprehensive differential for ST segment elevation should be kept in mind to avoid delay in time-sensitive investigations as well as unnecessary complications of thrombolysis and angioplasty. We report a case of ileus associated with ST segment elevation mimicking myocardial infarction (MI).

CASE REPORT

A 63-year-old man was referred for psychiatric evaluation. His past medical history was significant for hypertension, hyperlipidemia, obstructive sleep apnea, alcoholism, depression and a remote history of smoking. The patient had initially presented to another hospital due to overdose on Meloxicam, Ibuprofen and Cyclobenzaprine. He was admitted to a step-down unit and monitored for three days. His delirium improved and he started to regain bowel movements, which remained irregular, alternating between constipation and diarrhea. Paroxysmal atrial fibrillation developed, which was controlled by an oral calcium channel blocker. He was not started on anticoagulation given his low stroke risk with Congestive heart failure, Hypertension, Age, Diabetes, History of stroke, Sex, History of vascular disease (CHA2DS2-VASc) score of one.

On admission the patient was in stable condition but did not move his bowel on the first admission day. This was thought to be due to the remaining effect of recent anticholinergic toxicity associated with Cyclobenzaprine. His temperature (Temp) was 98.4, heart rate (HR) 95, blood pressure (BP) 140/90 and oxygen saturation (O2 Sat) 98% on room air. His electrocardiogram (EKG) at baseline showed sinus rhythm with no ST changes. The patient started to have nausea and dry heaves on the morning of the second day.

Image 1. Abdominal X-ray (Kidney, Ureter, Bladder film) showing a large air density in the gastric body and antrum.
of admission. He denied any chest pain but complained of shortness of breath. His mental status progressed to an agitated delirium with disorientation. Temp was 98, HR 130, BP 110/70, O2 Sat 96% on ventilator. On examination he had new-onset abdominal distention with diffuse tympani. An abdominal X-ray showed pattern consistent with ileus [Image 1]. A surgery consult was requested for suspicion of acute abdomen vs small intestinal obstruction. Simultaneous work-up for other causes of acute change in his mental status was sent including: liver function test, blood ammonia level, serum electrolytes, and Troponin-I, but all the results came back within the normal reference range, including Troponin of <0.01 (reference range 0.01-0.03). The patient’s mental status declined further requiring emergent intubation. The EKG ordered with the blood work showed ST segment elevation on the inferior leads II, III and AVF, and V4-V6 which were new compared to the EKG on admission [Image 2]. Cardiology was consulted and the patient was urgently transferred for a left heart catheterization (LHC) which demonstrated no signs of significant obstructive coronary lesions [Image 3]. Although an emergent bedside echocardiogram had limited views prior to the LHC, it showed normal left ventricular function and no apical ballooning. The patient’s cardiac enzymes remained negative after his cardiac angiography. His follow-up EKG [Image 4] obtained right after the decompression of his ileus showed resolution of his ST segments elevations.

**DISCUSSION**

ST segment elevation is considered one of the main features clinicians look for on an EKG to identify underlying acute ischemia. Many non-ischemic etiologies have a shared pattern of ST segment elevations, mainly pericarditis, myocarditis, aortic dissection and prinzmetal angina.

Non-cardiac etiologies have previously been reported as a cause of ST segment elevation. Chen et al. reported intraoperative pseudo myocardial infarction during a case of esophageal reconstruction where they conjectured that compression of the heart created an injury pattern in the inferior leads and clinical symptom of chest pain that had been mistaken as an acute myocardial infarction. Moreover, a report of acute pancreatitis associated with ST segment elevation suggested that changes in the vagal nervous systems may be the culprit for the EKG changes. Acute cholecystitis has also been associated with ST segment elevations despite negative echocardiography and angiography.
findings; this may be related to biliary cardiac reflex vs associated sepsis. There is a paucity of data linking obstruction or dilation of the gut with ST segment elevations. Only one case was reported to have acute ST segment elevation intraoperatively due to small bowel obstruction.

There is no consensus on the mechanism by which these EKG changes occur when the actual pathology is below the diaphragm. As seen in Image 1 our patient had a very impressive gastric dilation with increased air density secondary to ileus and as postulated by Chen et al. In our patient we believe the mechanism of ST elevations was due to the compression of the right coronary artery by the diaphragm under the intra-abdominal pressure caused by gastric air/ileus. In all of this uncertainty the common characteristic that stands out in most of the case reports is: patients often have no coronary artery disease and the EKG changes resolve once the inciting factor is relieved. The cardiac enzymes are usually negative and invasive cardiac work-up including coronary angiography or echocardiogram reveals no abnormal findings, as in our patient.

This case illustrates the importance of understanding EKGs in context of the clinical scenario given that most of the reported cases with suspicious inferior MI suggest inferior wall compression related to abdominal pathology. In these settings, further evaluation should always be judicious. When vague symptomology and laboratory values contradict EKG findings, other differentials should be considered in order to avoid unnecessary therapies.

References

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Introducing Rhode Island’s Health Equity Zones

MIA PATRIARCA, MA; CHRISTOPHER J. AUSURA

This article is the first in a series of Public Health Briefings that will explore the efforts of Health Equity Zones (HEZs) to reduce health disparities and improve health outcomes in 10 geographically defined, economically disadvantaged communities with poor health outcomes.

ABSTRACT

Many social and environmental factors contribute to the health – and unhealthiness – of a community, and the mix of these factors varies widely from one community to another. A persistent challenge to public health is just how to address so many variables, in so many combinations, in so many diverse communities. The Rhode Island Department of Health is exploring an innovative approach, its Health Equity Zone Initiative, to meet this challenge.

KEYWORDS: Health Equity Zones, HEZs, healthy communities, health inequities

Over the past several decades, efforts to improve health in the United States have focused primarily on reforming the health care system. Despite substantial investments, however, the United States (US) continues to experience poorer health outcomes than other developed countries, and significant health inequities between populations remain.1

There is increasing recognition that social and environmental determinants – economic status, education, the built environment;2 employment, social networks, and health care – have a considerable impact on health outcomes and play a pivotal role in fostering health inequities.3 One recent meta-analysis of almost 50 studies demonstrated that these factors accounted for over a third of deaths in the United States in one year.4

Lower-income and minority populations are more vulnerable to the impact of social and environmental determinants, since they are less likely to live in areas where these factors make a positive contribution towards promoting healthy lifestyles. Their neighborhoods are more likely to have higher rates of crime, limited access to healthy foods and physical activity options, few employment and job training opportunities, poor quality housing and education, and less access to health care and other services.5

Addressing the wide-ranging problems that confront at-risk communities requires an expansive view of what “creates” health. In contrast to traditional public health interventions – which focus on a narrowly defined set of disease causes, e.g., poor nutrition as a singular cause of obesity – public health solutions for at-risk communities must be comprehensive. It is also best for them to be “place-based,” to address the unique mixes of challenges and resources presented by individual communities. And, if we are to harness the social capital and local ownership needed to overcome these multifaceted problems, public health solutions must engage community members in all phases of work – assessment, planning, and intervention.

The Rhode Island Department of Health (RIDOH) has a long history of using community-driven approaches to address complex public health problems. Beginning in the 1990s, for example, our Parent Consultant Program engaged families of children with special needs in an effort to improve the public health programs that served them. More recently, RIDOH-sponsored Centers for Health Equity and Wellness pulled together and supported networks of community-based organizations and residents around efforts to prevent chronic disease.

RIDOH has synthesized “lessons learned” from these earlier efforts and has recently embarked on a new approach – the Health Equity Zones (HEZ) Initiative – to support the kind of comprehensive, placed-based, community-driven work that we believe is needed to confront the underlying systemic factors that promote poor health outcomes. We began by issuing a request for proposals (RFP) to solicit interest from communities interested in forming HEZs.

A HEZ is an economically disadvantaged, geographically defined area with documented health risks. A group of volunteer stakeholders, organized as a “HEZ collaborative,” works to achieve health equity for the residents of the HEZ by eliminating health disparities, and using place-based (where you live) strategies to promote healthy communities. The HEZ collaborative:

- **Convenes** regularly;
- **Assesses** the health needs of HEZ residents;
- **Plans** to achieve health equity by:
  - Defining goals;
  - Identifying evidence-based strategies;
  - Designing projects;
- **Develops** resources to conduct projects;
- **Implements** projects;
- **Evaluates** the effectiveness of projects.
A HEZ may be as small as several city blocks, or as large as a county. The size and boundaries of a HEZ are defined by stakeholders, as is the way the stakeholders are organized to engage in the activities outlined above. A HEZ collaborative may also vary in its composition, but typically includes scores of stakeholders drawn from local governments, local school districts and schools of higher learning, local businesses, local community service agencies, and local providers of health care. Members of a HEZ collaborative serve as unpaid volunteers. The collaboratives are intended to be inclusive; no one who resides in or serves the residents of a HEZ and who wishes to participate in its collaborative is restricted from doing so. Because the collaboratives thus formed tend to be large, they organize themselves into working groups; each working group focuses on a cluster of planned projects under categories such as “food and nutrition,” “physical activity,” “substance abuse awareness and prevention,” “personal mental health and wellness,” etc.

HEZs do not arise de novo, of course. To pull together an effective coalition of HEZ collaborators requires considerable community organizing – and later, management – and this requires resources for personnel and overhead costs such as rent, communication expenses, travel, etc. Even though a fully formed coalition may become self-sustaining by means of member contributions, a forming coalition usually requires several years’ “seed” funding to get it to the point where members are willing to invest in the enterprise.

Accordingly, RIDOH began by assembling seed funds “braided” from multiple state and federal funding streams in order to bring “categorical funding” to bear on the unique [and diverse] mix of problems found in real communities. Then RIDOH issued a Request-for-Proposals (RFP) from established community agencies [hospitals, non-profit community service organizations, etc.] who might be willing to serve as the hub or “backbone” of a HEZ, i.e., to function as community organizer, coalition manager, and single-point-of-contact between a HEZ and RIDOH. The RFP permitted considerable latitude in how the boundaries of a HEZ might be defined – by the applicant, not RIDOH – and required the applicant [the community agency proposing to serve as a HEZ backbone] to do considerable organizing of stakeholders [potential members of a HEZ collaborative] before submitting an application, or to have a well-formed plan for developing a robust collaborative in the early stages of their proposed program.

Eleven backbone agencies received HEZ awards in 2015. After a first year dedicated to organizing, assessing, and planning, 10 of 11 HEZs remain, and have begun implementing projects – projects as diverse as the local problems they address, including substance abuse, diabetes, limited access to fresh foods, limited access to primary health care and mental health care, problems with the built environment, and more. As well, evaluation efforts are underway to assess local and statewide impacts of the HEZ initiative. Each HEZ has written a strategy-specific evaluation plan to measure the community-level effect of its equity work [its projects]. In addition, a statewide evaluation plan has been written, focusing on the structures, processes, and outputs common to all HEZs, such as partnerships, leveraged resources, the advancement of policy, and barriers and facilitators to the advancement of health equity.

As the 10 HEZs enter the second of four years of seed funding from RIDOH, they are also focusing on the development of sustainable support streams. RIDOH is facilitating this process by suggesting alignments of the work of each HEZ with the work of better-resourced local and state partners, [foundations, hospital systems, etc.]. The goal – and main challenge, of course – is to develop sufficient and sustainable investment in each HEZ to assure continuity of the enterprise and to effect lasting change.

References
4. Ibid.
5. In Rhode Island, 20% of families with children under 18 years of age live below the poverty level, and 64% of these families live in 4 core cities – Central Falls, Pawtucket, Providence, and Woonsocket. (2016 RI Kids Count Factbook)
6. See http://horsleywitten.com/BristolHEZ/collaborative.html, in which the members of the Bristol, RI HEZ collaborative are listed.

Authors
Mia Patriarca, MA, is a Healthy Communities Specialist in the Physical Activity and Nutrition Program, Division of Community Health & Equity, Rhode Island Department of Health.
Christopher J. Ausura is Health Equity Zone Project Manager, Rhode Island Department of Health.
Health Equity Implications of Past Year Quit Attempts among Current Adult Smokers: Rhode Island, 2011–2015

ELSA LARSON, PhD, MS; DANA MCCANTS DERISIER, MS

Cigarette smoking is the leading cause of preventable disease and death in the US. Promoting quitting is one of four core components of state-based tobacco control programs. Cigarette smoking among US adults decreased from 42% in 1965 to 18% in 2012, partially due to increased successful quits among smokers. Helping smokers quit contributes to reductions in tobacco-related disease, death, and health care costs. Quitting smoking anytime is beneficial, but smokers who quit before age 35 have comparable premature mortality rates to persons who never smoked.

Interventions proven to help smokers quit include cessation counseling (e.g., Quitlines), use of cessation medications (e.g., nicotine replacement therapy [NRT]), and health systems change focused on treating tobacco dependence during routine clinical care. State-based tobacco control programs concurrently implement other population-based interventions such as mass-reach media campaigns, increased price of tobacco products due to high taxes, and comprehensive smoke-free policies. These interventions help create environments that motivate smokers to quit, direct smokers to cessation services, and support quit attempts by making it easier to stay quit.

Healthy People 2020 set a target to increase quit attempts among adult smokers to 80%. In 2015, 15.5% of Rhode Island (RI) adults smoked cigarettes, and 60.6% tried to quit in the previous year. National data also indicate that the majority of smokers try to quit, and certain groups are more likely to make a quit attempt. In the US, quit attempts were more likely among younger smokers, smokers with more than a high school education, and non-Hispanic black smokers. Understanding variations in quit attempts among RI smokers can help increase successful quits by targeting services to smokers who are ready to quit, but may need extra support to prevent relapse.

METHODS

We combined five years (2011-2015) of weighted data from the RI Behavioral Risk Factor Surveillance System (BRFSS) [N=31,200]. Years were combined to obtain sample sizes sufficient to examine smoking and quit attempts by race/ethnicity. The BRFSS is conducted annually by the RI Department of Health with support from the Centers for Disease Control and Prevention (CDC). The BRFSS uses a multistage cluster design based on random digit dialing of landline and cell phones to select a representative sample from each state’s noninstitutionalized civilian population aged ≥18 years. Additional information about BRFSS methodology is available at: http://www.cdc.gov/brfss/

The 2011-2015 combined data were used to determine the proportion of adults who were current smokers, and examine demographics associated with smoking. Current smokers were defined as persons who reported smoking ≥100 cigarettes during their lifetime and also reported currently smoking “every day” or “some days” at the time of the survey. Next, we determined the proportion of current smokers who reported a quit attempt, and examined how quit attempts varied by demographic and other tobacco-related variables. Quit attempts were defined as an attempt to stop smoking in the past year lasting one or more days. Other tobacco variables came from state-added questions about a healthcare provider’s recommendation to quit (in past year) and secondhand smoke exposure in the home (in past 7 days); a new weighting variable was created to account for the varying landline and cell-phone allocation across survey years. Weighted percentages and 95% confidence intervals (CIs) were calculated. Significant differences between groups were determined from non-overlapping CIs. Analyses were conducted in SAS Version 9.4.

RESULTS

Current smoking declined among Rhode Islanders from 20.2% (95% CI=18.8-21.7) in 2011 to 15.5% (95% CI=14.0-17.0) in 2015 (Figure 1). For combined years 2011-2015, current smoking was 17.4% (Table 1). Smoking was significantly higher among males (19.4%) than females (15.6%); significantly higher among uninsured adults (31.5%) than insured adults (15.5%); highest among adults aged 25-44 (23.5%) and lowest among adults aged ≥65 years (7.9%); highest among adults with <high school education (27.8%) and lowest among adults with ≥some college education (12.8%); highest among adults earning ≤$25,000/year (27.1%) and lowest among adults earning ≥$75,000/year (9.6%). Among racial/ethnic groups, Hispanic adults smoked significantly less (14.6%) than non-Hispanic white adults (17.5%). Smoking was slightly higher among non-Hispanic black adults (19.3%) than non-Hispanic white and Hispanic adults, but not statistically significant.

Of current smokers in 2011–2015, 62.0% made a quit attempt (Table 2). Quit attempts were significantly higher among non-Hispanic black smokers (76.2%) than non-Hispanic white smokers.
smokers (60.2%). No other differences by race/ethnicity were statistically significant. Quit attempts were significantly higher among smokers whose health care provider advised them to quit (65.6%) than smokers who were not advised (55.2%). Quit attempts were significantly higher among smokers who reported no exposure to secondhand smoke in their home (67.0%) compared to exposed smokers (54.7%). No other differences were statistically significant, but quit attempts were slightly higher among younger adults aged 18-24, and slightly higher among adults earning ≤$25,000/year.

Table 1. Current adult smokers, Rhode Island: 2011-2015

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Weighted Percentage</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19.4</td>
<td>(18.3 - 20.4)</td>
</tr>
<tr>
<td>Female</td>
<td>15.6</td>
<td>(14.8 - 16.3)</td>
</tr>
<tr>
<td><strong>Age Group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>15.7</td>
<td>(13.4 - 18.1)</td>
</tr>
<tr>
<td>25-44</td>
<td>23.5</td>
<td>(22.1 - 24.9)</td>
</tr>
<tr>
<td>45-64</td>
<td>17.8</td>
<td>(17.0 - 18.7)</td>
</tr>
<tr>
<td>65+</td>
<td>7.9</td>
<td>(7.2 - 8.6)</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>17.5</td>
<td>(16.8 - 18.2)</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>19.3</td>
<td>(16.0 - 22.6)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>14.6</td>
<td>(12.5 - 16.6)</td>
</tr>
<tr>
<td>Other Race, non-Hispanic</td>
<td>19.7</td>
<td>(16.5 - 23.0)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;High School</td>
<td>27.8</td>
<td>(25.4 - 30.3)</td>
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<tr>
<td>High School/GED</td>
<td>21.1</td>
<td>(19.8 - 22.4)</td>
</tr>
<tr>
<td>≥Some College</td>
<td>12.8</td>
<td>(12.1 - 13.5)</td>
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<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$25,000/year</td>
<td>27.1</td>
<td>(25.5 - 28.7)</td>
</tr>
<tr>
<td>$25,000-$49,999/year</td>
<td>19.2</td>
<td>(17.8 - 20.7)</td>
</tr>
<tr>
<td>$50,000-$74,999/year</td>
<td>15.6</td>
<td>(13.9 - 17.3)</td>
</tr>
<tr>
<td>$75,000+/year</td>
<td>9.6</td>
<td>(8.7 - 10.6)</td>
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<tr>
<td><strong>Health Insurance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>15.5</td>
<td>(14.8 - 16.1)</td>
</tr>
<tr>
<td>No</td>
<td>31.5</td>
<td>(28.9 - 34.1)</td>
</tr>
<tr>
<td><strong>Quit Attempt Past Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>62.0</td>
<td>(60.0 - 64.0)</td>
</tr>
<tr>
<td>No</td>
<td>38.0</td>
<td>(36.0 - 40.0)</td>
</tr>
</tbody>
</table>

Data Source: 2011-2015 RI BRFSS

Table 2. Current smokers who made a quit attempt (past year), Rhode Island: 2011-2015

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Weighted Percentage</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>61.6</td>
<td>(58.6 - 64.6)</td>
</tr>
<tr>
<td>Female</td>
<td>62.5</td>
<td>(59.9 - 65.1)</td>
</tr>
<tr>
<td><strong>Age Group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>67.2</td>
<td>(59.4 - 74.9)</td>
</tr>
<tr>
<td>25-44</td>
<td>63.8</td>
<td>(60.4 - 67.1)</td>
</tr>
<tr>
<td>45-64</td>
<td>58.8</td>
<td>(56.1 - 61.5)</td>
</tr>
<tr>
<td>65+</td>
<td>60.0</td>
<td>(55.3 - 64.0)</td>
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<tr>
<td><strong>Race/ethnicity</strong></td>
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<tr>
<td>Non-Hispanic white</td>
<td>60.2</td>
<td>(58.0 - 62.5)</td>
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<tr>
<td>Non-Hispanic black</td>
<td>76.2</td>
<td>(69.0 - 83.4)</td>
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<td>Hispanic</td>
<td>68.3</td>
<td>(61.1 - 75.6)</td>
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<td>Other Race, non-Hispanic</td>
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<td>(54.6 - 72.8)</td>
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<td><strong>Education</strong></td>
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<td>&lt;High School</td>
<td>61.0</td>
<td>(55.8 - 66.0)</td>
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<tr>
<td>High School/GED</td>
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<td>(57.5 - 64.0)</td>
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<tr>
<td>≥Some College</td>
<td>63.6</td>
<td>(60.8 - 66.3)</td>
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<tr>
<td><strong>Income</strong></td>
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<td></td>
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<tr>
<td>&lt;$25,000/year</td>
<td>65.5</td>
<td>(62.1 - 68.8)</td>
</tr>
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<td>$25,000-$49,999/year</td>
<td>58.7</td>
<td>(54.6 - 62.8)</td>
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<tr>
<td>$50,000-$74,999/year</td>
<td>61.7</td>
<td>(55.9 - 67.5)</td>
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<tr>
<td>$75,000+/year</td>
<td>61.5</td>
<td>(56.4 - 66.7)</td>
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<tr>
<td><strong>Health Insurance</strong></td>
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</tr>
<tr>
<td>Yes</td>
<td>61.9</td>
<td>(59.7 - 64.1)</td>
</tr>
<tr>
<td>No</td>
<td>62.1</td>
<td>(57.3 - 66.9)</td>
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<tr>
<td><strong>Advised to Quit by Health Care Professional</strong></td>
<td></td>
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<tr>
<td>Yes</td>
<td>65.6</td>
<td>(62.5 - 68.8)</td>
</tr>
<tr>
<td>No</td>
<td>55.2</td>
<td>(48.3 - 62.0)</td>
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<tr>
<td><strong>Secondhand smoke exposure in home</strong></td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>54.7</td>
<td>(48.7 - 60.7)</td>
</tr>
<tr>
<td>No</td>
<td>67.0</td>
<td>(63.6 - 70.3)</td>
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</table>

Data Source: 2011-2015 RI BRFSS
*2011-2015 (N=26,757)  
**2011,2013-2015 (N=25,720)
DISCUSSION
The burden of smoking continues to be concentrated among adults of low socioeconomic status. Most RI smokers were low-income, uninsured, and had less than a high school education. Data highlight the persistent health equity implications for tobacco control. Most smokers made a quit attempt in the past year suggesting the majority want to quit, but often do not succeed. Quit attempts varied by race and were highest among non-Hispanic black smokers. Findings underscore the need to ensure that evidence-based cessation services reach vulnerable populations ready to quit.

RI cessation programs prioritize the delivery of free, evidence-based cessation services [counseling and NRT] to low-income smokers and uninsured/underinsured smokers. Currently, smokers can access free counseling and NRT [supported by public funds] through the RI Quiltline or group counseling led by a Tobacco Treatment Specialist at community health centers. While RI has reduced barriers to cessation services for poor smokers, this study provides new data showing that race is associated with quit attempts. Over 75% of non-Hispanic black smokers tried to quit, exceeding other racial/ethnic groups. National data indicate non-Hispanic black smokers make more quit attempts, but fail more than non-Hispanic white or Hispanic smokers. One explanation for failed quit attempts among non-Hispanic black smokers is lower utilization of evidence-based cessation services. Additionally, higher rates of menthol cigarette use among non-Hispanic black smokers may contribute to disparities in cessation.

More research is needed to understand how utilization patterns vary by race, as well as how risk and protective factors specific to non-Hispanic black smokers influence cessation. Compared to non-Hispanic whites, non-Hispanic blacks smoke fewer cigarettes, start smoking later, are exposed to more tobacco advertising, and suffer higher mortality from smoking-related diseases. A practical next step for RI is to increase use of culturally-tailored mass media campaigns designed to engage non-Hispanic black smokers in evidence-based cessation services [i.e., CDC’s TIPS campaigns].

Quit attempts were more likely when a health care provider advised smokers to quit. Smokers expect their providers to advise them to quit, and are receptive to their advice. About 80% of smokers visit a provider each year creating opportunity moments for providers to intervene. Health systems change in RI aims to integrate cessation interventions into routine clinical care, and ensure that all patients are screened for tobacco use, advised to quit, offered cessation treatment, and referred to the Quiltline (through Quitworks-RI) or group counseling. Finally, smokers who reported no exposure to secondhand smoke in the home were more likely to have tried to quit. There is strong evidence that smoke-free homes simultaneously reduce secondhand smoke exposure while increasing cessation by creating barriers to smoking. RI’s Live Smoke Free program partners with Public Housing Authorities [PHAs] and affordable multi-units to implement smoke-free policies that simultaneously link low-income residents to cessation services.

Findings are subject to at least three limitations. Only current smokers with an unsuccessful quit attempt were included, this study does not provide data about successful quits in the past year. Secondhand smoke exposure was measured with a 7-day recall, while this variable can assess smoke-free homes, it measures recent behavior more than rule-making. Missing responses may increase potential for bias.

Tobacco control has a robust evidence base to inform state-based cessation interventions designed to work synergistically and not be punitive to smokers. RI has successfully implemented best practice interventions. RI has the 3rd highest state cigarette tax – purposefully calculated to provide public health benefit and not be regressive, or harmful to poor smokers. RI has a comprehensive indoor workplace smoke-free ban, and 22 of 25 PHAs have smoke-free housing policies designed to eliminate secondhand smoke exposure and help smokers quit. Despite progress, tobacco-related disparities persist. Updated data underscore longstanding social determinants related to smoking and indicate racial/ethnic disparities in quit attempts. Findings highlight the importance of making evidence-based cessation services available and acceptable to non-Hispanic black smokers. Interventions for non-Hispanic black smokers should be tailored to their unique risk factors and behavioral patterns. Future directions include further research about service utilization by race, as well as media interventions that increase non-Hispanic black smokers’ engagement in cessation services.

References

Acknowledgment
We thank the Center for Health Data and Analysis [RIDOH] for 2011-2015 RI BRFSS data.

Authors
Elsa Larson, PhD, MS, is Program Evaluator for the Tobacco Control Program, Rhode Island Department of Health. Dana McCants Derisier, MS, is Cessation Coordinator for the Tobacco Control Program, Rhode Island Department of Health.
Rhode Island Monthly Vital Statistics Report
Provisional Occurrence Data from the Division of Vital Records

<table>
<thead>
<tr>
<th>REPORTING PERIOD</th>
<th>MAY 2016</th>
<th>12 MONTHS ENDING WITH MAY 2016</th>
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</thead>
<tbody>
<tr>
<td>VITAL EVENTS</td>
<td>Number</td>
<td>Number</td>
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<tr>
<td>Live Births</td>
<td>1014</td>
<td>11,672</td>
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<tr>
<td>Deaths</td>
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<td>10,122</td>
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<tr>
<td>Infant Deaths</td>
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<td>64</td>
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<tr>
<td>Neonatal Deaths</td>
<td>3</td>
<td>49</td>
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<tr>
<td>Marriages</td>
<td>615</td>
<td>6,804</td>
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<tr>
<td>Divorces</td>
<td>250</td>
<td>3,102</td>
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<td>Induced Terminations</td>
<td>173</td>
<td>2,386</td>
</tr>
<tr>
<td>Spontaneous Fetal Deaths</td>
<td>33</td>
<td>578</td>
</tr>
<tr>
<td>Under 20 weeks gestation</td>
<td>28</td>
<td>513</td>
</tr>
<tr>
<td>20+ weeks gestation</td>
<td>5</td>
<td>65</td>
</tr>
</tbody>
</table>

* Rates per 1,000 estimated population
# Rates per 1,000 live births

<table>
<thead>
<tr>
<th>REPORTING PERIOD</th>
<th>NOVEMBER 2015</th>
<th>12 MONTHS ENDING WITH NOVEMBER 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underlying Cause of Death Category</td>
<td>Number (a)</td>
<td>Number (a)</td>
</tr>
<tr>
<td>Diseases of the Heart</td>
<td>215</td>
<td>2,436</td>
</tr>
<tr>
<td>Malignant Neoplasms</td>
<td>164</td>
<td>2,308</td>
</tr>
<tr>
<td>Cerebrovascular Disease</td>
<td>38</td>
<td>443</td>
</tr>
<tr>
<td>Injuries (Accident/Suicide/Homicide)</td>
<td>69</td>
<td>866</td>
</tr>
<tr>
<td>COPD</td>
<td>32</td>
<td>528</td>
</tr>
</tbody>
</table>

(a) Cause of death statistics were derived from the underlying cause of death reported by physicians on death certificates.
(b) Rates per 100,000 estimated population of 1,056,298 (www.census.gov)
(c) Years of Potential Life Lost (YPLL).

NOTE: Totals represent vital events, which occurred in Rhode Island for the reporting periods listed above.
Monthly provisional totals should be analyzed with caution because the numbers may be small and subject to seasonal variation.
Are you e-reading

RIMS NOTES: News You Can Use

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Informative.

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The Rhode Island Medical Society now endorses Coverys.

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401-331-3207
RIMS honors outstanding physicians for leadership and service

At its annual Convivium meeting on Sept. 23 at the Squantam Association, The Rhode Island Medical Society (RIMS) honored members and leaders in the healthcare community.

Newell E. Warde, PhD, RIMS executive director, presents Sundaresan T. Sambandam, MD, with the Dr. Charles L. Hill Award for outstanding leadership and service.

Josiah D. Rich, MD, MPH, received the Dr. Herbert Rakatansky Award for exemplary professionalism and humanitarian service in the field of medicine. From left are Dr. Rakatansky, outgoing RIMS president, Dr. Russell Settipane, Dr. Rich, and Newell E. Warde, PhD.

Senator Christopher Ottiano, MD, received the John Clarke Award for distinguished public service.
RIMS hosts regional conference
‘Senior Physicians: Addressing Age, Ability & Acumen’

The Rhode Island Medical Society’s Physician Health Program hosted a regional conference September 30 on a hot topic: “Senior Physicians: Addressing Age, Ability & Acumen.”

More than 120 attended the day-long event, which featured the following topics and speakers:

- **Elderly Physicians and Their Brains: Is it Dementia, Just Aging, or Both?** Richard W. Besdine, MD
- **Legal Issues and the Aging Physician** Jeffrey Chase-Lubitz, Esq.
- **Evaluating Surgical Skills** Mark Katlic, MD
- **Assessing Physicians’ Neurocognitive Functioning** David Faust, PhD
- **The Model: Developing a comprehensive, multi-disciplined, age-based screening model in Rhode Island** Herbert Rakatansky, MD
- **Panel Discussion** G. Alan Kurose, MD; James McDonald, MD; John Murphy, MD
- **Retirement Opportunities for Senior Physicians** Donna Singer, MS, PCC, Coach and Consultant to Physicians

The Coverys Community Healthcare Foundation sponsored the event through an educational grant.

Sarah Fessler, MD, president of the Rhode Island Medical Society, welcomed attendees to the regional conference held at the Crowne Plaza Hotel in Warwick, which drew an audience of more than a hundred physicians and healthcare leaders from several states.

Richard Besdine, MD, (below) spoke on the topic of physician demographics, the elderly physician and the aging process.

Catherine Norton, RIMS’ assistant director, Professional and Community Services; attorney Jeffrey Chase-Lubitz, a featured speaker at the event.
Working for You: RIMS advocacy activities

October 3, Monday
Meeting with Blue Cross:
President Sarah Fessler, MD, President-Elect Brad Collins, MD, and staff

October 4, Tuesday
RIMS Physician Health Committee:
Herbert Rakatansky, MD, Chair
Meeting with American Heart Association regarding legislation
Meeting with legal counsel regarding RIMS Foundation governance
Meeting with Health Services Council
Interagency Food & Nutrition Policy Advisory Council

October 5, Wednesday
Meeting with RIMS Foundation Board
Meeting with RI Academy of PAs
Meeting with RIMS Foundation Board

October 6, Thursday
Meeting with Board of Medical Licensure and Discipline regarding Prescription Drug Monitoring Program (PDMP) utilization
RI Academy of PAs Annual Meeting:
recognition of Michael E. Migliori, MD, and Newell E. Warde, PhD, for support of the PA profession

October 7, Friday
Governor’s Health Care Workforce Transformation Initiative

October 11, Tuesday
RIMS Council Meeting with Blue Cross Medical Directors regarding Modifier 25

October 12, Wednesday
Board of Medical Licensure and Discipline
Governor’s Opioid Taskforce
Dept. of Labor and Training Workers Compensation Fee Taskforce

October 13, Thursday
SIM Leadership Meeting;
Peter A. Hollmann, MD
Senate HHS Meeting, committee meeting on behavioral health

October 17, Monday
RI Health Center Association
Annual Breakfast
Meeting of the Health Information Technology Survey Planning Committee

October 18, Tuesday
AMA Advocacy Resource Center Conference Call on opioids

On October 24, RIMS sponsored a social event at Maximo restaurant, Demystifying the Legislature. Members enjoyed the opportunity to meet and mingle with local legislators.

(Above L-R) Howard Schulman, MD; Senator Hanna Gallo; RIMS Public Laws Chair Michael Migliori, MD; RIMS President-Elect Bradley Collins, MD.

October 19, Wednesday
Primary Care Physician Advisory Committee
OHIC Public Hearing on Regulation No. 2 (OHIC’s “affordability standards” for insurers)
Reception for Brad Collins, MD, Independent Candidate for H-46, hosted by Michael Migliori, MD
RI Public Health Association Annual Meeting

October 20, Thursday
AMA conference call regarding Social Security Number Removal Initiative by CMS

October 21, Friday
Meeting with RI Quality Institute regarding TCPI Collaboration

October 24, Monday
RIMS Finance Committee Meeting:
Jose Polanco, MD, Chair
RIMS member social event with local legislators: “Demystifying the Legislature”

October 27, Thursday
Senate HHS Committee Meeting regarding behavioral health
RIMS ‘Employment 101’ Seminar

The Rhode Island Medical Society (RIMS) recently hosted an “Employment 101” financial and contractual considerations seminar at Kent Hospital in Warwick. Newell E. Warde, PhD, executive director of RIMS, introduced those present to the workings of the Society and the program. After several presentations, a Q&A period offered participants the opportunity to engage with the panel of experts.

Robert A. Anderson, Jr., (above right) president, RIMS Insurance Brokerage Corporation, spoke on professional liability insurance.

Guido M. Sarcione, CHFC, IAF, (right) Baystate Financial, Inc. was among the panel of experts. He spoke on personal financial considerations.

RIMS meets with BCBSRI on E&M code with modifier 25 reductions in payment

On Tuesday, October 11, the Rhode Island Medical Society (RIMS) Council met with representatives of Blue Cross Blue Shield Rhode Island (BCBSRI) to discuss the insurer’s decision to reduce payments by half for certain Evaluation & Management (EM) codes submitted with modifier 25. It went into effect October 15.

The discussion will continue when BCBSRI representatives address the full RIMS Council on December 5.

RIMS is appealing to the Health Insurance Commissioner to assess the impact on the medical community and the public and is awaiting a written response.
Care New England was founded in 1996 and is the parent organization of Butler, Kent, Memorial and Women & Infants hospitals, the VNA of Care New England, The Providence Center, CNE Wellness Center and Integra, a certified Accountable Care Organization. Care New England includes 970 licensed beds and 216 infant bassinets. Through Butler, Memorial and Women & Infants, Care New England has a teaching and research affiliation with The Warren Alpert Medical School of Brown University. Kent is a teaching affiliate of the University of New England College of Osteopathic Medicine.

Established in 1817, Claflin has been supplying medical equipment to physicians, clinics, and hospitals in the New England Region for nearly 200 years. Claflin is a leading medical equipment specialist, and now nationwide and abroad through our secure website. Claflin is a full-line distributor of medical and surgical products sourced from over 500 regional, national and international suppliers. We specialize in advanced logistics programs which are custom designed to fit the needs of all healthcare providers throughout the continuum of care.

Doctor’s Choice provides no cost Medicare consultations. Doctor’s Choice was founded by Dr. John Luo, a graduate of the Alpert Medical School at Brown University to provide patient education and guidance when it comes to choosing a Medicare Supplemental, Advantage, or Part D prescription plan. Doctor’s Choice works with individuals in RI, MA, as well as CT and helps compare across a wide variety of Medicare plans including Blue Cross, United Health, Humana, and Harvard Pilgrim.

Neighborhood Health Plan of Rhode Island is a non-profit HMO founded in 1993 in partnership with Rhode Island’s Community Health Centers. Serving over 185,000 members, Neighborhood has doubled in membership, revenue and staff since November 2013. In January 2014, Neighborhood extended its service, benefits and value through the HealthSource RI health insurance exchange, serving 49% the RI exchange market. Neighborhood has been rated by National Committee for Quality Assurance (NCQA) as one of the Top 10 Medicaid health plans in America, every year since ratings began twelve years ago.

RIPCPC is an independent practice association (IPA) of primary care physicians located throughout the state of Rhode Island. The IPA, originally formed in 1994, represent 150 physicians from Family Practice, Internal Medicine and Pediatrics. RIPCPC also has an affiliation with over 200 specialty-care member physicians. Our PCP's act as primary care providers for over 340,000 patients throughout the state of Rhode Island. The IPA was formed to provide a venue for the smaller independent practices to work together with the ultimate goal of improving quality of care for our patients.

The Rhode Island Medical Society continues to drive forward into the future with the implementation of various new programs. As such, RIMS is expanded its Affinity Program to allow for more of our colleagues in healthcare and related business to work with our membership. RIMS thanks these participants for their support of our membership.

Contact Megan Turcotte for more information: 401-331-3207 or mturcotte@rimed.org
RIMS gratefully acknowledges the practices who participate in our discounted Group Membership Program

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A Lifespan Partner

For more information about group rates, please contact Megan Turcotte, RIMS Director of Member Services
Why You Should Join the Rhode Island Medical Society

The Rhode Island Medical Society delivers valuable member benefits that help physicians, residents, medical students, physician-assistants, and retired practitioners every single day. As a member, you can take an active role in shaping a better health care future.

RIMS offers discounts for group membership, spouses, military, and those beginning their practices. Medical students can join for free.

RIMS MEMBERSHIP BENEFITS INCLUDE:

- Career management resources
- Insurance, medical banking, document shredding, collections, real estate services, financial planning, healthcare staffing
- Powerful advocacy at every level
  Advantages include representation, advocacy, leadership opportunities, and referrals
- Complimentary subscriptions
  Publications include Rhode Island Medical Journal, Rhode Island Medical News, annual Directory of Members; RIMS members have library privileges at Brown University
- Member Portal on www.rimed.org
  Password access to pay dues, access contact information for colleagues and RIMS leadership, RSVP to RIMS events, and share your thoughts with colleagues and RIMS
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URI biomedical engineering professor creating smart gloves to monitor Parkinson’s disease patients

KINGSTON – Prescribing a medication plan for a patient with Parkinson’s disease can be a challenge for doctors, but now a University of Rhode Island biomedical engineering professor and his students are making strides in solving that problem with their groundbreaking research.

KUNAL MANKODIYA, director of URI’s Wearable Biosensing Laboratory, says he’s researching how to transform gloves, socks, clothing and even shoes into high-tech items that will make people healthier—and improve their lives.

“We are in the era of game-changing technology, especially in health care,” says Mankodiya. “URI’s College of Engineering is pioneering new medical devices that will change the way people receive medical care.”

Born in India, Mankodiya received his bachelor’s degree in biomedical engineering from Saurashtra University and his doctorate in computer science from the University of Luebeck in Germany. He did post-doctorate research at Carnegie Mellon University and joined URI in 2014.

His research focuses on smart textiles – wearable items embedded with sensors, electronics and software that can collect data from patients, even though they are at home, and deliver it to doctors. The benefit is that doctors will be able to make more informed decisions remotely, and patients will be more involved with their care.

The professor and his team of students have been working on “smart wearables” for years as part of their research on the “Internet of Things,” a framework to automate human interactions with Cloud computing. One creation that made headlines last year was a wristband that monitors the tremors of Parkinson’s patients and sends that information to doctors over an Internet connection.

This year, the team is turning its attention to textiles, designing items for patients with neurological illnesses. The gloves are the latest project. They are embedded with sensors on the fingers and thumb that measure tremors and rigidity.

The gloves, in turn, are connected to cell phones, which process the data and deliver it to neurologists in their offices.

Mankodiya is also working on high-tech socks for people who have suffered strokes. Again, sensors and software woven into the fabric relay information about a patient’s gait to doctors and physical therapists so they can tailor rehabilitation therapy to each patient.

“The socks examine the walking stride,” Mankodiya says. “They can quantitatively movements of the knee and ankle joints to find subtle irregularities that require therapy. The socks also monitor a patient’s progress.”

Other projects focus on developing tools to image, sense and record brain function to treat Parkinson’s, as well as other neurological diseases, like epilepsy. The projects were made possible through National Science Foundation grants, one of which involves collaboration with Walter Besio, URI professor of biomedical engineering.

In addition, Mankodiya is partnering with Lifespan Hospitals to create smartwatch technologies for patients with psychiatric illnesses and autism. Although research is still in the early stages, the watches are expected to measure the patients’ daily behavior and activities.

Nick Peltier, a senior majoring in computer science, is creating the smartwatch app that will help people with autism. He says the project is the most satisfying one he’s tackled at URI.

“I hope the watch will help these patients learn about themselves and make it easier for the parents and caregivers to know what’s going on,” says Peltier. “Let’s say a response is triggered every Tuesday, at the same time, on the patient’s smartwatch. The next step would be to determine what’s happening during that time on that day so the person can make adjustments.”

Matt Constant, a junior computer engineering major, is also working on the smartwatch app, as well as the glove.

“It’s very fulfilling,” says Constant. “I get to apply what I’m learning in classes and also help people.”

Story courtesy University of Rhode Island
Staying competitive in today’s changing healthcare environment can be a challenge. It may require investing in new technologies, expanding services, even merging with another practice.

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Kent Hospital opens new cardiac catheterization lab
Dr. Robert Baute, past president, paved way for program

WARWICK – Kent Hospital dedicated the newly constructed, ROBERT E. BAUTE, MD, Cardiac Catheterization Lab, on Tuesday, October 25. The two labs were constructed after Kent received approval from the Rhode Island Department of Health in March 2015, to develop and implement a coronary angioplasty program. Kent began offering elective coronary angioplasty in August 2015 and to date has performed nearly 200 procedures with no major complications.

“The opening of this new cath lab is vitally important to Kent’s service area which represents more than 300,000 people,” said CHESTER HEDGEPETH, III, MD, PhD, executive chief of cardiology at Care New England. “Over the past year we have successfully offered elective angioplasty and vastly improved the health and well-being of many people. We now look forward to taking the next step in the program with emergency angioplasty beginning in the near future.”

The lab is named after DR. ROBERT E. BAUTE, who was instrumental in early efforts to grow Kent’s cardiology program, while helping to pave the way for the existing angioplasty program. Dr. Baute gave more than 35 years of dedicated service to Kent Hospital and Care New England, it is a pleasure and honor to officially recognize Dr. Baute for his tireless work both clinically and in shaping the course of Kent Hospital over many years. The dedication of this cath lab will stand as a lasting tribute to someone who means so much to the community and our hospital. We also recognize SANDRA COLETTA, COO, Care New England, for her commitment and direction of this project, as well as physicians and the tireless work of our nursing staff and many others.”

Said Dr. Baute, “This program is a culmination of a vision that began more than 20 years ago. Our commitment is to provide comprehensive and high quality cardiac services to our community. I’m so pleased that it has come to fruition and know it will provide a benefit for cardiac patients over generations. I am deeply grateful and humbled that the new facility will bear my name.”

Warwick Mayor Scott Avedisian said, “I’m extremely proud of the progress
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Southcoast Health, Care New England end plans to affiliate

In separate actions undertaken by their respective governance Boards, Southcoast Health and Care New England have voted to terminate their agreement to affiliate the two not-for-profit health care systems. The announcement was made October 17 by Jean MacCormack, chair of the Southcoast Health Board of Trustees, and Charles R. Repucci, chair of the Care New England Board of Directors.

The organizations first announced they would study a potential partnership in November 2015 when Care New England selected Southcoast Health through a competitive request for proposals (RFP) process. An announcement to proceed with a closer affiliation was made in May 2016. Since that time, while conducting due diligence reviews and preparing regulatory filings, the parties have come to recognize that their visions for the combined system could no longer be achieved. Southcoast Health and Care New England are parting on amicable terms and will continue their longstanding collegial relationship in the southeastern New England community.

“Care New England and Southcoast share a vision of creating a healthier community through community-based care,” said Repucci. “We believe both organizations will continue in their unrelenting pursuit of this goal. Yet, for Care New England, we now believe the full extent of our mission as teaching, research and clinical organizations will be better served through today’s decision. We wish all of our colleagues at Southcoast continued success in their commitment to excellence and to community.”

“We have a great deal of respect for our counterparts at Care New England, their staff and their high-quality programs. However, we believe that it is best for both parties to end affiliation discussions,” said MacCormack. “When we entered into this process, we did so with the promise that we would always keep the best interests of our patients, communities, physicians and staff at the forefront of our deliberations. We held true to that promise throughout this process, including with today’s announcement.”

“We appreciate that Care New England identified Southcoast Health as the best potential partner during their RFP process, and we have enjoyed getting to know many of their employees,” said Keith A. Hovan, president and CEO of Southcoast Health. “This was one opportunity that presented many potential benefits for both organizations, and, as we said from the beginning, Southcoast Health would always do what is best for our patients, communities, physicians and staff.”

He added, “Southcoast Health is fortunate in that we are well positioned in all aspects to confidently move forward. We are continuing to make strategic investments for growth that will provide our patients with even greater access to clinically excellent care close to home. While our strategic plans no longer include Care New England, we will continue to explore all options and opportunities to best serve our patients. We wish our colleagues at Care New England well in their future pursuits and endeavors, and we thank all those in Massachusetts, Rhode Island and our local regions, including elected and community leaders, for their interest and support throughout this process.”

Denis D. Keefe, president and CEO of Care New England, expressed gratitude for the Southcoast and Care New England governance, leadership, and advisory teams for their months of effort working to advance the proposed partnership. “There has been tremendous work that has gone on throughout this process. One tangible outcome of all this effort is coming to know some very fine people at Southcoast, and we hope to continue in these relationships as both organizations work to improve the health and well-being of our community across the region.

“Care New England has worked strenuously in the past year to improve its financial position and its programmatic excellence,” Keefe continued. “Over the coming months, we will reassess the local environment and, in working with our Board, our physicians and management team, determine our strategic plans for the future. I believe we are poised for a strong future.”

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Hope Hospice & Palliative Care Rhode Island Celebrates 40 Years

PROVIDENCE – Hope Hospice & Palliative Care Rhode Island (Hope Hospice RI), is celebrating its 40th anniversary. Hope Hospice RI was founded in 1976 by a volunteer planning committee of health care professionals and community members who cared deeply about providing stronger end-of-life care in Rhode Island.

Today, the organization is the major teaching affiliate for hospice and palliative medicine of the Warren Alpert Medical School of Brown University and recently expanded into Massachusetts through an affiliation with HopeHealth in Massachusetts.

“We are deeply committed to our mission of providing outstanding, high quality care for our seriously ill patients and their families for the past 40 years,” said Diana Franchitto, President & CEO of Hope Hospice RI. “As the second oldest hospice in the nation, it is an honor to be able to help people live with as much comfort and dignity as possible when time matters most.”

Women & Infants to participate in project to reduce primary cesareans

Hospital accepted into American College of Nurse-Midwives (ACNM) Reducing Primary Cesareans Project

PROVIDENCE – Women & Infants Hospital has been accepted into the American College of Nurse-Midwives (ACNM) Reducing Primary Cesareans Project. Women & Infants is working with other hospitals from across the United States and ACNM to improve healthy outcomes for mothers and families by focusing on reducing the incidence of first cesarean sections in low-risk women who have never given birth.

“Our team of academic and community-based midwives is thrilled to champion this interprofessional opportunity to strengthen our current knowledge of what promotes healthy labor and birth,” said Elisabeth Howard, PhD, CNM, FACNM, director of nurse midwifery in the Department of Obstetrics and Gynecology at Women & Infants Hospital and associate professor of obstetrics and gynecology (clinical) at The Warren Alpert Medical School of Brown University. “As providers, midwives possess considerable expertise in physiologic approaches to the care of women during childbirth. We look forward to working with others both here and around the country to identify the optimal care practices that will lead to a reduction in the cesarean section rate.”

The Reducing Primary Cesareans (RPC) Project is part of the ACNM Healthy Birth Initiative® (HBI), a long-term effort with representatives from leading maternity care organizations. HBI focuses on preserving normalcy by promoting evidence-based practices that support a healthy birth based on a pregnant woman’s own physiology. The HBI works to encourage a consistent approach to birth practices and is focused on reducing those that are not evidence-based.

Funded by the Transforming Birth Fund, the RPC Project builds on the HBI by offering unique opportunities for maternity care professionals and health systems to initiate action steps known as bundles. When implemented, these bundles prompt hospital system change that is aimed at reducing the incidence of primary cesarean births in the United States, which has continued to increase without associated improvements in health outcomes for mothers and babies.

Women & Infants will work with the multi-disciplinary Reducing Primary Cesareans Quality Improvement (QI) expert panel and ACNM staff to identify areas of improvement and track process and outcome measures to demonstrate improvement in readiness, assessment, reliable and appropriate care, recognition and response, and systems learning. Women & Infants will implement at least one of three bundles, based on a data-driven analysis of the major cause of first cesarean in low-risk women at that hospital:

- Improving Care and Comfort in Labor
- Promoting Spontaneous Progress in Labor
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Dr. Valery Danilack earns grant to study interventions for labor induction

PROVIDENCE – **VALERY A. DANILACK, MPH, PHD**, research associate in the Department of Obstetrics and Gynecology at Women & Infants Hospital and the Brown University School of Public Health, has recently received a five-year, $533,000 Research Scientist Development Award from the Agency for Healthcare Research and Quality (AHRQ). Her research is entitled “Comparative Effectiveness of Interventions for Labor Induction.”

“My goal is to determine optimal methods of labor induction that minimize harm and maximize benefits while balancing operational cost,” explained Dr. Danilack. “We propose to utilize advanced statistical techniques to study important trade-offs between the effectiveness, side effects, resource use, and patient preferences of interventions used for labor induction.”

The study has three aims:

- To establish what is known about the comparative effectiveness of labor induction through a systematic review and meta-analysis of published literature;
- To establish a comprehensive database of deliveries at Women & Infants Hospital involving labor induction and survey postpartum patients about the labor induction experience, then analyze the relationship between different labor induction methods and patient-relevant and hospital-level outcomes;
- To examine the trade-off between benefits, harms and costs across different labor induction interventions from the perspective of the patients and of the hospital using decision analyses.

W&I researcher receives two NIH grants to evaluate treatment strategies for perinatal brain injury

PROVIDENCE – Toward determining the most effective treatment strategies for full-term and premature infants exposed to HI and other perinatal brain injury, **BARBARA STONESTREET, MD**, a neonatal-perinatal specialist at Women & Infants Hospital and professor of pediatrics at The Warren Alpert Medical School, has received two two-year grants totaling $881,100 from the National Institutes of Health. The grants are entitled, “Beneficial effects of inter-alpha inhibitors in fetal brain injury” and “Inter-alpha inhibitors: Novel neuroinflammatory modulator of neonatal brain injury.”

Collaborating with Dr. Stonestreet on these programs will be **YOW-PIN LIM, MD, PhD**, founder and CEO of ProThera Biologics. ProThera Biologics is pioneering the application of Inter-alpha inhibitor proteins [IAIPs] to severe inflammatory diseases including HI. In addition, **XIAODI CHEN, MD, PhD** who is a member of Dr. Stonestreet’s team and an assistant professor at Brown, has significantly contributed in writing these grants.

IAIPs are known to be effective in modulating inflammatory responses. However, Dr. Stonestreet explained, there is limited information regarding the neuroprotective properties of IAIPs, which could be beneficial in treating full-term and premature infants suffering from perinatal brain injury.

Dr. Stonestreet said, “These studies have exciting translational potential for an important new treatment strategy to prevent or decrease brain injury in infants at risk for brain damage, mental retardation or cerebral palsy.”
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David A. Kobis to head Fatima Hospital

NORTH PROVIDENCE – DAVID A. KOBIS, FACHE, has been named President of Our Lady of Fatima Hospital. Most recently, he served as Chief Integration Officer and Vice President of Financial Operations for Prospect Medical Holdings. Kobis had been leading the acquisition and pre-integration work at Waterbury Hospital in Connecticut as Prospect continues to grow its network. Kobis brings extensive senior-level leadership experience in both the for-profit and not-for-profit health sectors to this position.

Prior to joining Prospect, he served as Chief Operating Officer/Vice President of Operations for Cortland Regional Medical Center in New York. He also served in a number of capacities with Upper Allegheny Health System in New York, including Administrator/Chief Operating Officer of Bradford Regional Medical Center and Vice President of Operations for Olean General Hospital. His previous experience also includes serving as a Senior Managing Consultant for ECG Management Consultants and in a variety of operational roles for Lakeland Regional Medical Center in Florida. Kobis earned his MBA from Ohio State University and is a Fellow in the American College of Healthcare Executives. He has held a number of leadership roles on various healthcare and community boards and advisory groups.

Plastic surgeon Erik Hoy, MD, joins CNE

WARWICK – ERIK HOY, MD, MBA, a board-certified plastic surgeon specializing in aesthetic surgery of the breast and body, reconstructive breast surgery, autologous fat grafting and anatomic breast implants, as well as soft-tissue reconstruction after cancer resection, has joined Care New England (CNE) Medical Group Surgical Care (formally known as Affinity Surgery), as well as the Wound Recovery and Hyperbaric Medicine Center at Kent Hospital.

Prior to joining CNE in September 2016, Dr. Hoy worked as a plastic surgeon for Premier Dermatology and Cosmetic Surgery in Newark, DE. He completed an aesthetic/reconstructive breast fellowship in 2012 at Maxwell Aesthetics in Nashville, TN, with the developer of the newest generation breast implants. Dr. Hoy completed his plastic surgery residency at Rhode Island Hospital in 2011 and that same year obtained his MBA from the University of Rhode Island. He received his medical degree from Rutgers-New Jersey Medical School in 2005.

“I am excited to join Care New England and look forward to bringing my clinical expertise to those in the community who have a need or interest in aesthetic surgery, especially those patients who may need reconstruction after undergoing treatment for cancer,” said Dr. Hoy.

AMA honors Adam Levine, MD, with international service award

ADAM LEVINE, MD, an associate professor of emergency medicine at the Warren Alpert Medical School, is the recipient of the Dr. Nathan Davis International Award in Medicine, given by the American Medical Association (AMA) Foundation. It comes with a grant of $2,500 to the International Medical Corps.

The award recognizes Dr. Levine for outstanding international service. He has responded to humanitarian emergencies in Haiti, Libya, South Sudan and Liberia, and has led research and training initiatives in Zambia, Bangladesh, Rwanda, Liberia and Sierra Leone.

He currently serves as the emergency medicine coordinator for the USAID-funded Human Resources for Health Program, helping to develop the first emergency medicine training program in Rwanda. He serves as the primary investigator for the Ebola research team of the International Medical Corps, a disaster and humanitarian relief organization, and as director for the Humanitarian Innovation Initiative at Brown University.

Dr. Levine also is editor-in-chief of Academic Emergency Medicine’s annual Global Emergency Medicine Literature Review. His research focuses on improving the delivery of emergency care in resource-limited settings and during humanitarian emergencies.
Recognition

Hasbro Children’s Hospital Fostering Health Program receives national Angels in Adoption award

Program honored for work with Rhode Island children in foster care system

PROVIDENCE – The Fostering Health Program at Hasbro Children’s Hospital was recently awarded the 2016 Angels in Adoption honor for the program’s work with Rhode Island’s foster youth. The program aims to address the special health care needs of children in foster care and post-adoption, who are at increased risk for chronic illnesses such as asthma and obesity, as well as mental, behavioral and educational issues.

As a component of Hasbro Children’s Hospital’s primary care clinic, the program provides care to newborns and children through 18 years of age who do not have an identified primary care provider. The program is a family-centered medical home committed to providing timely and comprehensive care to any foster or adopted child. The program’s clinicians work collaboratively with community partners to ensure that the well-being and safety needs of foster and adopted children are being met.

The Congressional Coalition on Adoption Institute (CCAI), which orchestrates the Angels in Adoption Program, honored members of the Fostering Health Program, COLLEEN DEEMS, MSN, PNP and LAURIE SEPE, LPN, at a recent awards ceremony in Washington, D.C. Senator Jack Reed nominated the Fostering Health Program at Hasbro Children’s Hospital for the award.

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Recognition

Jennifer A. Sanders, PhD, honored with 2016 Bruce M. Selya Award for Excellence in Research

Providence – Jennifer A. Sanders, PhD, was honored with the 2016 Bruce M. Selya Award for Excellence in Research at Rhode Island Hospital’s 24th Annual Hospital Research Symposium on Thursday, Oct. 20.

Sanders, whose research interests include normal and abnormal cellular growth in the liver, is also a member the diabetes and endocrinology team at Hasbro Children’s Hospital. She was nominated for the award by Hasbro Children’s Hospital Pediatrician-in-Chief Phyllis Dennerly, MD.

“Throughout her research career, [Dr. Sanders] has demonstrated exceptional creativity, insight and ability. Her publication record includes numerous papers to which she made important contributions and, more importantly, work behind which she was the driving force,” wrote Dr. Dennerly in her nomination letter. “In the past several years, she has become well known to senior liver biology scientists across the U.S. and abroad.”

Sanders earned her doctoral degree in molecular biology, cell biology and biochemistry from Brown University and completed her postdoctoral training in gastroenterology at Rhode Island Hospital. She is an assistant professor of pediatrics, pathology and laboratory medicine at Brown. The award was presented by the Honorable Bruce M. Selya.

OFFICE SPACE AVAILABLE

The Medical Society has 442 square feet of newly renovated office space (3 contiguous offices of 200 sq ft, 121 sq ft and 121 sq ft), complete with convenient sheltered parking and the opportunity for tenants to share three well-equipped meeting spaces, break room, office machinery, etc. on the western edge of downtown Providence. Suitable for a small non-profit organization, boutique law firm, CPA firm or other office-based small business.

Inquiries to Newell Warde, nwarde@rimed.org

Dean Wette announces resignation as Dean of the Brown University School of Public Health, effective next year

Providence – Terrie Fox Wette, PhD, the inaugural dean of the Brown School of Public Health, which opened in July 2013, announced on Oct. 26 that she will be stepping down from her position but remain at Brown.

In an email to the Brown community, she wrote: “After considerable thought, I have made the personal decision to step down as Dean of the Brown University School of Public Health as of September 2017. Since my arrival at Brown 16 years ago, I have focused on building the Program in Public Health into the now fully accredited School of Public Health. With the School’s notable strengths in research and educational programs, it is an opportune time to allow new leadership to take the reins for the future.”

Wette, also Professor of Health Services Research, Policy and Practice, said she plans to remain on the faculty to participate in research, teach and mentor students, faculty and staff, after taking a brief sabbatical.

Just prior to coming to Brown in 2000, she was, for six years, Deputy Director, National Institute on Aging, at the National Institutes of Health, and was recruited as Associate Dean of Medicine for Public Health and Public Policy to develop a strategic growth plan for Brown’s public health program, then a component of the Alpert Medical School.

“Through her relentless drive and sharp focus, she led the successful effort to develop the School of Public Health, established in 2013, and was appointed as the school’s founding Dean,” said Brown’s President Christina Paxson and Provost Richard M. Locke in a statement.

“During the last 15 years, public health has made significant strides under her direction, solidifying its position at the forefront of teaching and research, and culminating in the program becoming a fully accredited School of Public Health in June 2016. She has recruited and retained exceptional faculty, expanding the tenure-track faculty from 10 in 2000, to 35 today, and cultivating a total faculty body of nearly 250.”

Among her accomplishments, they noted, has been her success in forging critical partnerships, including collaborating with the Rhode Island Department of Health to form the Public Health Academic Center, and working with the Alpert Medical School, Hasbro Children’s Hospital and Women & Infants Hospital to launch the Hassenfeld Child Health Innovation Institute.

In addition, Paxson and Locke cited her successful efforts at growing the School’s undergraduate and graduate offerings, which “are both highly subscribed and highly rated, and the undergraduate concentration was ranked sixth in the country by USA Today College,” and in raising the School’s profile in the community and expanding its research potential, which has resulted in externally sponsored research rising from $12 million in 2002, to $42 million in FY 2016-17.

They announced the university will shortly form a broad-based search committee to identify the next dean.
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Obituary

JOHN E. FARLEY, JR., MD, FAAP, 92, a Riverside pediatrician and tireless advocate for the health and welfare of Rhode Island children, died on October 18 at the Philip Hulttar Hospice Center in Providence after a brief illness.

He was the beloved husband of Mary C. [Sylvia] Farley. Born in Providence, he was the only son of boxing promoter John E. “Duke” Farley and Ann [Barlow] Farley. A 1942 graduate of La Salle Academy, he received his bachelor’s degree from Providence College in 1945. A veteran of the U.S. Army, he received his medical degree from Tufts University in 1948, training at Boston-area hospitals, including the Floating Hospital for Children and Boston Children’s Hospital. He completed his residency at St. Joseph’s Hospital in Providence.

He and Mary were married in 1949 and settled in Riverside in 1953, where he launched a pediatric practice based out of their Willett Avenue home that he would operate for the next four decades. He was an “old school” doctor: he made house calls, black leather bag in hand, and took patients’ phone calls late into the night. He had absolute devotion to his patients, and provided compassionate care and counsel to three generations of East Bay families.

With a firm belief that physical and mental health are tightly intertwined, he had a long-standing affiliation with Bradley Hospital, where he served for decades as director of pediatrics. As an adjunct clinical professor at Brown University, he trained medical residents at Bradley in the psychiatric dimensions of children’s health. In the early 1960s, he was instrumental in founding the East Providence Community Mental Health Center, and the Adams-Farley Counseling Center in Riverside is co-named in his honor.

He was named a fellow of the American Academy of Pediatrics, and was chair of its Rhode Island chapter. A communicant of St. Brendan Parish in Riverside, he was inspired in early life by Dorothy Day’s Catholic Worker movement, which fueled his profound, lifelong commitment to social justice, especially for children. An early advocate of the Head Start Program, he worked to promote universal school breakfasts for Rhode Island children, work for which he was honored in 2000 by the Rhode Island chapter of the AAP. For his unwavering dedication to the wellbeing of children and youth, he was inducted into the East Providence High School Hall of Fame in 2004. Even in retirement, he continued to work with the George Wiley Center and others on behalf of disadvantaged Rhode Island children.

A college basketball fanatic, he was a long-time holder of season tickets to Providence College Friars games, and he continued to follow the team avidly throughout his retirement. An enthusiastic member of the Sons of Irish Kings, he was a man of insatiable curiosity and wry humor, and a voracious reader who regularly sent envelopes stuffed with clipped-out magazine and newspaper articles to family and friends everywhere. He never tired of exploring the byways of southern New England, especially Cape Cod, and also spent many memorable vacations with family and friends on Siesta Key, Florida.

A lover of the visual and performing arts and of music, particularly jazz, he was a dedicated attendee of the Newport Jazz Festival during its heyday in the 1960s and 1970s.

He is survived by his wife, Mary, three sons John, and his wife, Deborah; Michael, and his wife, Christina; and Peter, and his wife, Kerry; five granddaughters, and three great-children. He was predeceased by his son Paul.

Memorial donations may be made to Bradley Hospital Foundation, P.O. Box H, Providence, RI 02901 [http://giving.lifespan.org/Bradley-Hospital-Donation]; or East Bay Center, 610 Wampanoag Trail, Riverside RI 02915 [http://www.eastbay.org/donate.php].
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New Bedford Surgeons: Stewards of the Light

MARY KORR
RIMJ MANAGING EDITOR

NEW BEDFORD – On a granite boulder along the Whaling City shoreline near East Beach, a bronze plaque is inscribed with the following:

JOHN B. O’TOOLE, JR., MD
1904–1987
W.W. II
JOHN B. O’TOOLE, III, MD
1933–1991
VIET NAM
U.S. NAVY SURGEONS
SAILORS IN THIS HARBOR
PHYSICIANS TO THIS AREA’S PEOPLE
PRESERVATIONISTS OF BUTLER FLATS
AND PALMERS ISLAND LIGHTHOUSES

I find the great thing in this world is not so much where we stand, as in what direction we are moving: To reach the port of heaven, we must sail, sometimes with the wind and sometimes against it – but we must sail, and not drift, nor lie at anchor.

Oliver Wendell Holmes, Sr.

The words of Dr. Holmes are a fitting tribute to the father/son surgeons who sailed Buzzards Bay and served in the U.S. Navy. The younger Dr. O’Toole, Boston University Medical School ’59, served on the aircraft carrier USS Ticonderoga during the Vietnam War era. He then interned at the Chelsea Naval Hospital in Boston.

Beyond the plaque honoring both men, cormorants and seagulls swoop over the Butler Flats Lighthouse and dive into the harbor waters. It was a sight familiar to the younger Dr. O’Toole, who lived along East Rodney French Boulevard, opposite the lighthouse.

For many years, he served as the head of the New Bedford Port Society. When the U.S. Coast Guard decommissioned the Butler Flats Light in 1978, and made plans to dismantle it, the City of New Bedford stepped in and leased it from the Coast Guard, with the stipulation that it be maintained as a lighthouse. Dr. O’Toole led a citizen’s group to preserve it in 1978, and restoration efforts began.

The group enlisted the aid of federal workers who helped Dr. O’Toole and citizen volunteers automate Butler Flats with solar panels. It then became a private aid to navigation, maintained by the group. He also led the efforts to restore the Palmers Island Lighthouse in the western end of the harbor. School children gathered tons of debris and set up a lighthouse fund.

Engineer/architect Francis Hopkinson Smith, who built the foundation for the Statue of Liberty, designed the brick and cast iron Butler Flats Light in New Bedford Harbor, at the mouth of the Acushnet River. The sparkplug-style beacon is 35 feet in diameter and 55 feet high at mean low tide, and rests on a caisson foundation. It was activated in 1898.
“Everybody loves the lighthouse,” Dr. O’Toole told the late Boston Globe columnist Peter Anderson, referring to Butler Flats. Anderson interviewed him in 1985 for his “Off the Road” column, and reported: “He has a little beach and rows out to the lighthouse every four months to put water in the batteries and clean the solar panels...If too much of a solar panel is covered with droppings, the panel will not produce current to the battery...He has a secret way to deter the birds but asked me not to tell.”

In 1987, the Butler Flats Light was placed on the National Register of Historic Places.

Four years later, in 1991, Dr. O’Toole died at age 57. His obituary in the Boston Globe stated that he was stricken while visiting a patient in Marion, Mass., and later died at Tobey Hospital in Wareham, Mass., of an apparent heart attack.

Volunteers took over where Dr. O’Toole left off and Butler Flats celebrated its Centennial in 1998.

In 2000, the National Historic Lighthouse Preservation Act allowed the federal government to offer Butler Flats and other historic lighthouses to prospective stewards at no cost. None came forth for Butler Flats and the General Services Administration (GSA) put it on the auction block in 2013.

It ultimately sold for $80,000 in 2015, to a private individual from Texas, according to newspaper reports. Speculation among townspeople is that the new owner will rehab the structure and turn it into a B&B. But just as the New Bedford harbor, an EPA Superfund site, is still undergoing a cleanup for PCBs and heavy metal contaminants, so too will this sentinel require an interior and foundational overhaul, as these photos from the GSA auction listing show, and which can be accessed here: https://www.flickr.com/photos/99593054@N05/sets/72157635624479263/

Until that happens, the lighthouse remains a roost for the seagulls and cormorants that alight on its parapet and promenade, just as they have done for more than a century, except when Dr. O’Toole kept them away with his secret method.

Lighthouse keeper Captain Charles Baker rows out to Butler Flats Light. He served from 1911–1941. Shortly thereafter, the Coast Guard took control of the beacon. (Photo Courtesy of New Bedford Whaling Museum. www.whalingmuseum.org)