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DECEMBER 2017 VOLUME 100 • NUMBER 12 ISSN 2327-2228
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Thanks to RIMJ’s Guest Editors of 2017

As the Rhode Island Medical Journal ends its Centennial year of 2017, we would like to take this opportunity to thank the Journal’s guest editors of this year. RIMJ’s mission, to report on the advances in medicine and healthcare in Rhode Island, could not be accomplished without the commitment of its guest editors and all the contributors throughout the year. We extend our gratitude to the following RIMJ guest editors of 2017, whose themed issues can be viewed in the Journal’s archives at rimed.org/rimedicaljournal/archives.

Our best wishes for a healthy 2018,
Joseph H. Friedman, Editor-in-Chief
Mary Korr, Managing Editor

OBESITY TREATMENT OPTIONS: AN OVERVIEW
March 2017
DIETER POHL, MD, FACS, FASMBS
Director, Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP)
Accredited - Comprehensive Center; Division Director, General Surgery, CharterCARE Medical Associates, Roger Williams Medical Center, Department of Surgery, Providence, RI.

THE EVOLVING LANDSCAPE OF THROMBOEMBOLIC DISEASE: DIAGNOSTIC AND MANAGEMENT STRATEGIES
May 2017
KENNETH S. KORR, MD, FACC
Associate Professor Emeritus of Medicine, Alpert Medical School of Brown University; Associate Editor, Rhode Island Medical Journal.

RECENT ADVANCES IN NEUROSURGERY
June 2017
ZIYA L. GOKASLAN, MD, FAANS, FACS
Gus Stoll, MD, Professor and Chair, Department of Neurosurgery, Alpert Medical School of Brown University; Neurosurgeon-in-Chief, Rhode Island Hospital and The Miriam Hospital; Clinical Director, Norman Prince Neurosciences Institute; President, Brown Neurosurgery Foundation.

SENIOR PHYSICIANS: ADDRESSING AGE, ABILITY AND ACUMEN
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HERBERT RAKATANSKY, MD, FACP, FACG
Clinical Professor of Medicine Emeritus, Alpert Medical School of Brown University.

MEDICAL ETHICS
October 2017
THOMAS A. BLEDSOE, MD, FACP
Clinical Associate Professor of Medicine, Alpert Medical School of Brown University.

PEDIATRIC REHABILITATION MEDICINE
November 2017
JON A. MUKAND, MD, PhD
Consulting Medical Director, Southern New England Rehabilitation Center; Medical Director, Sargent Rehabilitation Center; Clinical Assistant Professor, Rehabilitation Medicine, Brown University, Tufts University.
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When the doctor is crazier than the patient

JOSEPH H. FRIEDMAN, MD
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Like the children in Lake Wobegon, all doctors think, I believe, that they are above average. Or, at least average. Yet we are not. Some are sub-average because they are out of date and either cannot or will not keep up. Some were never too bright or well educated in the first place. Some are lazy. Some are overconfident and fail to challenge themselves. Others age poorly, especially in the technical areas of medicine. But there is a small group of us who practice poor medicine because they KNOW things that the rest of us fail to grasp. There is a doctor who sells an intravenous protein that he believes, or says he believes, stops Parkinson’s disease from progressing. While its use has a theoretical rationale, it has never shown promise and his only returning patients are the “true believers,” who either have had placebo benefit or, more likely, choose to believe that they are not worsening, despite evidence to the contrary. I attended a meeting of invited Parkinson’s disease experts to discuss particular issues related to the disease. One of these experts, someone with a fine reputation, opined on how experimental drug in a double-blind placebo-controlled study was astoundingly helpful. The doctor and the patients all “knew” they were on active drug. Another researcher, who saw all the patients for an imaging piece of the study, but was not treating any of them, noted that all the subjects reported how much improved they were, although half were on placebo. The drug was, in fact, useless.

We all “know” things. We’re all influenced by our experience, particularly the last two or three cases, but most of us recognize this. We can distinguish between what I call “experience-based medicine” and “evidence-based medicine.” Early in my career I had access to a drug that was experimental but was able to use on an open label compassionate basis. In my hands it was a miracle drug. So, after many years I was able to get funding to study it in a double-blind placebo-controlled manner. As the study was ending I became distraught because I could not tell which patients got the active drug and which the placebo. I was prepared to be devastated by the results, which, in fact, showed that the drug was near miraculous, later confirmed with a repeat study in Europe. Yet another drug which I thought almost as good produced negative results in three separate similar trials. Blinding is the best approach.

There are doctors who believe their experience over that of well conducted trials as well as expert consensus panels. And these beliefs are supported by a small percentage of patients who reject modern science in favor of beliefs that make sense to them. The largest groups I’m familiar with are the believers in autism being caused by vaccinations, the Lyme-explains-everything group, and the food “allergies” patients who believe that their illnesses have to do with eating something they are uniquely unable to process. The current food problem is gluten, but that will pass soon and be replaced by other things. The autism belief is, of course, not fading despite the bottom having fallen out of the supportive “data.” The Lyme belief has been persistent, possibly now expanding to include all tick bites as potentially causative of many disorders, whether there is evidence of an infection or not, whether it was treated or not.

We cannot control what our patients believe, and patients sometimes have their own ideas of what their diagnoses should be. In Rhode Island this tends to be Lyme disease, which can apparently take on more guises than the previous “great imitator,” tertiary syphilis. I have
seen significant numbers of patients who are loath to believe they have Parkinson’s disease, tics, or some other disorder, including the psychogenic, when Lyme disease would be a much easier and more acceptable diagnosis. The preferred diagnosis would also not likely be progressive, and, although it had not improved with three month’s worth of antibiotics, would likely be cured in the future with newer antibiotics. It is much more appealing, and easy to blame a problem on a nasty tick. And tick bites are not genetic. Or it may be due to gluten. Watch what you eat, suffer a bit, and you will be rewarded.

I learned from a multiple sclerosis expert at the University of Massachusetts that many of his patients had been treated for brain Lyme disease for months or years before they found their way to the MS clinic where the diagnosis was readily apparent. I’m sure Lyme is invoked in all areas of medicine, depending on location.

I understand why patients would like to believe these things. It makes sense to find an explanation for an illness. Why am I slow and have tremors? Lyme disease is a more comforting answer than Parkinson’s disease, whose etiology remains unknown. Lyme comes from a tick bite, an unpleasant way to get an unpleasant illness, but understandable. Wrong place at the wrong time. Bell’s palsy used to be caused by exposure to cold air on one side of the face, as from staying in front of an air conditioner for too long. Acne was caused by chocolate and oily foods. Gastric ulcers were caused by spicy food. Humans like rational explanations, even when incorrect.

What is puzzling is why some doctors make a career of it.

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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Addressing patient biases toward physicians

HERBERT RAKATANSKY, MD

Racial inequities in the delivery of health care to minority populations are well documented. Less discussed, but equally important, are patients who exhibit racial bias and refuse care from health care workers (HCWs) because of their ethnic and/or religious backgrounds. Their requests for accommodation can adversely affect their care as well as the care of other patients in the institution.

As much as doctors might dislike or condemn a person (ex: a terrorist), we strive to separate our dedication to healing from our personal opinions about the patient. Even the NY terrorist who recently killed 8 people and injured many others by driving a truck into them was taken to a hospital and treated. In war we treat the wounded enemy.

We are forbidden by ethical and legal imperatives to discriminate against patients on the basis of virtually any criteria except our medical expertise in treating the disease and, in non-urgent situations, the ability of the patient to pay.

Patients, however, are free to choose their doctor and to use any criteria they please, including Internet surveys, personal recommendations, race, religion, gender and age, among others. This process works well in the traditional out patient office setting. But what happens when a patient comes to an ER, urgent care center or hospital? Does the patient retain the right to those choices?

There are some cases where the patient’s request may have medical justification. For example, a woman with PTSD from previous sexual trauma might be more effectively treated by a female physician. In some religions, women have no contact with men outside their families and treatment by a female physician might be more effective.

But what about refusal by patients, based solely on bias and bigotry, to allow certain HCWs to treat them?

One Muslim ER resident was told by two patients that they did not want to be “taken care of by a terrorist.” In another case a senior ICU physician was told, “Go back to India. I don’t want to see you.” In one study 9% of Muslim physicians had a patient refuse care from them. 59% of doctors experienced bias from patients. “47% of 822 doctors surveyed had a patient request a different clinician because of that provider’s personal characteristics.”

Even doctors, when they become patients, may feel some bias. A black, woman anesthesiologist stated, “I immediately feel more at ease with clinicians sharing my cultural background.” But she also concludes, “I would never refuse a health care professional because of his or her demographic characteristics.”

In one reported case the parents of a child consented to heart surgery only if no black people were allowed in the OR. The team acceded to this request.

We might expect that hospitals and health care systems would have policies about how to respond to these requests. 24% of physicians said their institutions lacked a formal process. HCA has no system-wide policy. AAMC has no “formal, specific guidelines.” The AHA is “developing a best practice resource guide based on policies hospitals are already using.” The largest RI health care system does not have a specific policy or procedure but currently is working on this issue.

If the HCW is an employee of the institution, acceding to a patient’s request to not be cared for by a person because of race, religion, etc. may be illegal. The Seventh Circuit Court of Appeals has ruled that Title VII prohibits such discrimination in the workplace. Many doctors, however, as members of the medical staff and independent contractors, are not employees of the institution and therefore are not covered by Title VII.

Most patient requests of this nature are quietly resolved and not reported to the institution. Physicians “may be afraid of being ignored or accused of being overly sensitive.”

Doctors who have been in this situation often feel depressed and their
self-worth is questioned. This may contribute to burnout (over 50% of physicians have symptoms of burnout). Hospitals should be sure that such biased requests are dealt with openly and not hidden. These instances of bias impact the health of our professional caregivers and thus decrease effective care for all patients. Increased burnout results in decreased productivity, early retirement and job switching.

The institutional financial consequences are significant. Lower productivity means less revenue. And it is estimated that the total “organizational cost” to replace one full-time doctor is $500,000–$1,000,000.

Larger institutions will be able to deal with these issues more easily. It is especially important for academic training centers to be aware of this issue and have structured responses to these requests. Trainees must understand the psychodynamics and the ethical principles involved.

In the final analysis doctors must always act in their patients’ best interests. And that may involve giving in to patient bias in certain circumstances. A step-wise process to protect patients while upholding our values might resemble the following.

First, the patient should be counseled about the qualifications and skills of the HCW and told that the institution rejects racism and bigotry at all levels. Hopefully this will result in acceptance of the assigned HCW. In the event that such interventions fail, a consistent approach should follow.

If the request is determined to be medically appropriate (see above), accommodation would be considered to be a part of the care plan.

If the request is driven by bias and prejudice, a progressive process that protects all patients and supports our opposition to racial and other invidious inequities should be in place and followed.

In emergency situations: if alternative HCWs are available and if other patients would not be harmed by the re-arrangement of the schedules such requests should be accommodated.

In non-emergency but urgent situations the patient should be offered an opportunity to transfer to another institution that would accommodate the patient’s requests. If no such treatment facility is available and the patient would suffer significant harm without treatment, the request should be accommodated if possible (other HCWs available and other patients not put at risk).

In both of these situations, if it is not possible to accommodate the request, the choice of whether to be treated by the original assigned HCW resides with the patient. Treating a patient without consent violates our ethical and legal obligations. Unwanted treatment could be considered battery, a criminal offense. Adult capacitated patients have the right to refuse medical care for any reason, even if serious harm or death might result.

In medical situations in which there is no imminent danger of patient harm, the HCW or institution may, and I believe should, deny requests that are based solely on bias and bigotry. Why would a health care institution wish to do otherwise?

The combination of ethical and moral issues, personal distress of HCWs, quality of patient care and institutional financial risk should be sufficient to stimulate health care institutions and associations to formalize specific policies and guidelines that will enable and empower the staff to deal promptly and effectively with this difficult subject.

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Menstrual hygiene plight of homeless women, a public health disgrace

ALLEGRA PARRILLO, MD’18; EDWARD FELLER, MD, FACG, FACP

KEYWORDS: menstrual hygiene, homeless women, tampon tax

Last year, we read a study about how homeless women dealt with their menses. Women spoke of limited daytime shelter bathroom access and no access to feminine products; they resolved this problem inadequately by using toilet paper as makeshift cloth pads.

Lack of access to sanitary products for homeless women is a devastating and overlooked healthcare injustice that needs to be rectified. Homeless women confront the daunting challenge of securing materials to absorb blood and finding privacy to change and dispose of used sanitary products. Soiled clothing may be cleaned without soap, using dirty water. Indoor drying without sunlight is common. The Urban Institute estimates that 3.5 million people, including 1.35 million children, are homeless during a given year. Menstrual bleeding and its management are taboo as a public discussion subject. Although commonly reported in underdeveloped nations, our Google Scholar search for menstrual hygiene management in United States homeless women revealed sparse mention of this pervasive health concern.

Gloria Steinem said:
“What would happen if, magically, men could menstruate and women could not? Menstruation would become enviable, worthy, masculine: Men would brag about how long and how much. Congress would fund a National Institute of Dysmenorrhea to help stamp out monthly discomforts. Sanitary supplies would be federally funded and free.”

Most men never think about this predicament. Eighty-six percent of non-homeless women report having started their period in public without supplies and 79% have been forced to use toilet paper or some unhealthy and unsafe object because their period started without hygiene products.

This dismayingly common leads to repetitive use of unclean materials. Factors associated with reproductive tract infections, such as urinary tract infections, yeast infections, and vulvar contact dermatitis, include not cleaning genitals daily, especially during menstruation. The burden of gynecologic infections is a major worldwide public health concern. In the United States, the proportion of this epidemic attributed to poor menstrual hygiene is unknown. Other implicated factors include sexually transmitted infections and iatrogenic infections caused by agents other than those acquired through poor menstrual management.

Allegra relates, “Recently, a homeless patient told me that she also would wrap toilet paper around her underwear during her menses. She spoke about the expense of tampons and sanitary pads. Her shelter provided only 2 pads per cycle, whereas the average woman uses approximately 20 tampons/pads per cycle. Her inadequate options were toilet paper, reused clothes or ruining her only pair of underpants.”

Homeless women cannot afford sanitary products. Sales tax is a power of the states, not the federal government. Almost all states consider female sanitary products to be luxury items, not tax-exempt necessities. Only five states (MD, MA, MN, PA, and NJ) have removed state sales tax on sanitary products; Connecticut will follow in 2018. New York has passed laws mandating that correctional facilities, shelters and public schools have access. In 2015, Canada officially removed the tampon tax across the country.

The tampon tax exists because menstrual hygiene products are classified as items not qualifying as “treatment or prevention of illness or disease in human beings.” Thus, menstruation, a natural biological event that does not signify lack of health, but is a necessity, is not tax exempt. The “tampon tax” exists even though individual states exempt “necessary goods” – groceries and medical products – from sales tax. The result is that benefits available to the homeless, such as Supplemental Nutrition Assistance Program (SNAP) and Women, Infants, and Children (WIC), cannot be used to purchase these items. That state legislatures could consider sanitary products as a luxury instead of a necessity is ludicrous.

Furthermore, this injustice should be redressed because somewhat analogous items are not taxed in other states – pregnancy tests in Colorado, disposable heating pads in Vermont, and incontinence pads in North Dakota and Connecticut. Additionally, Alabama created “tax holidays” when common items, including clothes, computers, art supplies, and books, can be purchased tax-free; tampons are not included on the list.

The plight of homeless women and girls in Rhode Island (RI) is illustrative. CrossRoads of RI is a shelter in Providence which serves the homeless. This shelter is RI’s largest
women-only shelter which is frequently filled beyond its capacity of 41. Crossroads reports that since 1998, the number of individual homeless women in the shelter nightly has increased by 65% to more than one hundred. However, accurate aggregate numbers are unavailable since many more women are likely to be “hidden homeless”, meaning they stay with friends or family or on the street for extended amounts of time before going to a shelter where violence and victimization may be more common. The shelter itself has called for the need to increase female-centered management of homeless individuals, including menstrual care.10

Rhode Island now collects about $730,000 a year from taxes on pads and tampons, as well as medical supplies such as diabetic syringes and inhalers. In May 2017, RI lawmakers introduced a bill, House bill #5377, sponsored by Rep. Edith Ajello and Sen. Louis DiPalma, that would eliminate the 7% sales tax on menstrual products and related items since they believed the tax is a form of gender discrimination. The bill was held for further study on May 31, 2017.11

Public pressure reinforced the initiative leading Canada to become the first country to eliminate the “tampon tax.” We should push our legislators to readdress this issue, then pass a bill ensuring access without taxes for sanitary products, following the example of our neighbors. Eliminating the unfair financial burden is one simple improvement among many gender equality issues.12 The plight of homeless and poor women reflects the reality that supporting access to sanitary products, a first step, should be a concern for all. Vigorous vocal support from physicians is vital to publicize and advocate to eliminate gender discrimination using this issue as part of a widespread public health initiative to help all women, especially the homeless and poor.

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NEW ORLEANS, LOUISIANA

Celine Saade, MD; Laith Kadasi, MD; and Daniel Gealy, MD, all third-year residents in Ophthalmology at Rhode Island Hospital, check the November journal from their phones in the French Quarter. The residents attended the 2017 Annual Meeting of the American Academy of Ophthalmology in New Orleans.

Below, Dr. Gealy presented his research, The Role of Imaging in Children with Periorbital Cellulitis, selected as a Best Poster for having received the highest grades by the AAO Annual Meeting Program Committee.
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Slipping through the cracks: A cross-sectional study examining older adult emergency department patient fall history, post-fall treatment and prevention

ELIZABETH M. GOLDBERG, MD, ScM, FACEP; ELLEN M. MCCREEDY, PhD; CAMERON J. GETTEL, MD; ROLAND C. MERCHANT, MD, MPH, ScD

ABSTRACT
Falls are the leading cause of emergency department (ED) visits for fatal and non-fatal injuries among adults 65 years old and older. We aimed to better understand the fall history, risk for further falls, and actions taken to prevent further falls among this higher fall risk population. This cross-sectional study included older adults without cognitive impairment presenting to the Rhode Island Hospital ED from February to May 2017. Of the 76 participants, 35 self-reported no prior falls, and 41 self-reported at least one prior fall, of whom 20 fell on the day of ED presentation. Participants with vs. without self-reported prior falls were similar in age, gender, race, and substance use. Participants with prior falls scored lower on cognitive testing and had more comorbidities associated with falls. Only one quarter of those with prior falls reported making changes and few were evaluated by professionals to prevent future falls. This study highlights that older adult ED patients who sustain a fall are at higher risk for subsequent falls, and that greater fall prevention efforts are needed to protect this vulnerable group.

KEYWORDS: aging, emergency services, prevention, falls, injury

BACKGROUND
Falls by older adults are both preventable and predictable. They are the leading cause of fatal and non-fatal injuries among adults 65 years old and older¹ and constitute 13.5% of annual United States (US) emergency department (ED) visits in this age group.² Falls are a sentinel event in a senior’s life because they frequently result in injury, hospitalization,³ loss of independence,⁴ and mortality.⁵

Given that the population of older adults in the US is increasing and annual Medicare costs for adult falls are already estimated to be $31.3 billion,⁶ there have been many efforts to institute fall prevention programs. Overall multifactorial fall risk assessment and management programs have been successful in reducing fall risk among the elderly [adjusted risk ratio 0.82, 95% CI: 0.72-0.94].⁷ The most successful programs target modifiable risk factors and are tailored to the individual patient. Although many older adults who have a fall seek care in EDs, there is a noticeable lack of research into fall prevention specifically for ED patients. Therefore, the Society of Academic Emergency Medicine (SAEM) has specified falls as one of four high-yield research opportunities.⁸

In this investigation, we sought to better understand the characteristics of older adults with self-reported prior falls or a fall on the same day as the ED visit, as compared to older adults who present to the ED, but denied prior falls. In addition, we aimed to understand older adults’ prior healthcare interactions, care experiences, and their ideas for ED care improvement. We hypothesized that older adults with a history of falls would have unmet care needs that could be addressed in future ED-specific fall prevention protocols.

METHODS
This cross-sectional study was conducted at the Rhode Island Hospital ED, Rhode Island’s only level I trauma center, from February to May 2017. Eligible individuals were a convenience sample of adults 65 years old or older who were present in the ED during data collection periods, were able to communicate in English, were at low risk for cognitive impairment, and could consent to participate. The Six-item Screener, a six-point questionnaire validated in the ED setting⁹ to measure cognitive impairment, was used to determine cognitive impairment. For the purposes of the study, patients scoring ≥4 on the screener were considered to be at low risk for cognitive impairment and thereby study eligible. Participants did not have to self-report a history of prior falls to be eligible, as we planned to recruit patients with and without prior falls.

Research assistants (RAs) reviewed the ED electronic health record (EHR) to assess for potential study eligibility. Patients who met inclusion criteria by EHR (65 years old or older, English-speaking, not currently residing in the critical care bay) were approached during their ED stay to confirm study eligibility. Following consent, participants underwent an RA-administered questionnaire. Survey questions were drawn from prior studies about older adult health and health care experiences. Participants were asked about their demographic characteristics, self-reported fall history, comorbidities, current medications, activities of daily living (ADL) status, as well as questions about how to improve the ED care experience. The hospital’s institutional review board approved this study.
**Definitions**

Fall: A fall was classified as coming to rest on the ground or other lower level, but not due to an external force (e.g. struck by car or assault), syncope, or serious illness (e.g. stroke, acute myocardial infarction).

Prior fall: A “prior fall” is a fall that occurred anytime before presentation to the ED that day. This includes falls that occurred immediately prior to coming to the ED, as well as falls that occurred several days to years ago.

Fall on ED study visit day: This refers to any fall that occurred after midnight on the day of presentation to the ED.

**Analysis**

The survey responses were reported as the number and proportions of the total responses stratified by two groups, older adults presenting to the ED without any self-reported history of falls vs. those with at least one prior fall (on the day of the ED study visit and/or previously). Patients with at least one prior fall were further stratified into those that had a prior fall vs. those who had a fall on the day of the ED study visit. Any patient who reported falling after midnight on the day of the ED visit was classified as having a “fall on ED study visit day”.

Two study team members summarized participant suggestions on how to improve ED care and categorized them into major topics. The study team agreed on illustrative quotes that represented the relevant topics.

**RESULTS**

**Characteristics of Study Subjects**

Of 207 potentially eligible subjects, 82 met inclusion criteria and consented to being in the study, and 76 were included in the analysis (Figure 1). Of these, 35 self-reported no prior falls and 41 participants indicated that they had fallen previously (including 20 who had fallen on the ED study visit day).

The mean age of participants was 75 years old among those with and without prior falls (Table 1). Participants were predominantly female, white, and high school graduates. More than two thirds reported having both private and governmental insurance and most were retired and not working. Less than 6% of participants reported living in assisted living or a nursing home. Participants with prior falls scored lower overall on cognitive scores on the Six-item Screener, but had a similar mean functional ability score on the Barthel’s ADL questionnaire.

Compared to participants who denied having a prior fall, those who had fallen previously reported more comorbidities, including memory loss, arthritis, hypertension, dizziness, heart disease and diabetes. Participants in both the self-reported prior fall and no self-reported prior fall groups were equally as likely to be taking fall risk-increasing medications; however, approximately one third of participants were unable or unwilling to provide an accounting of their current medications. Most participants in both groups did not smoke or drink alcohol.

**Health Care Utilization History After Prior Falls**

Table 2 summarizes the timing and frequency of prior falls and the health care use of the 34 participants self-reporting any prior falls, excluding those who reported falling on the day of the ED study visit. As shown, slightly over one third had fallen within the past year, and over one quarter
had fallen more than once during this time period. Similar percentages reported having been evaluated initially in the ED vs. by their primary care provider after their last fall. Less than 10% reported being evaluated by a geriatrician, a physical therapist, occupational therapist or pharmacist after that fall, and none by a case manager. Over two thirds reported making no preventive changes after their prior fall.

**Suggestions for ED Care Improvement**

Table 3 summarizes participants’ free text answers to the following question: “Do you have any suggestions how your care in the Emergency Department could be improved in general?” Most participants reported that they had no suggestions to improve care. Approximately one quarter of participants indicated that the wait time to see a provider and the wait time for tests to return could be improved. Many participants made suggestions about making the ED environment more comfortable for patients like themselves.

Communication improvements were suggested on multiple levels, including the desire to have more frequent updates on results, minimizing repeated questioning, and wanting a friendlier attitude from ED staff and physicians. Very few were unsatisfied with the medical care provided.

**DISCUSSION**

In this study of older adults presenting for emergency care, those who self-reported prior falls were more likely to have significant comorbidities that might indicate a predilection to having subsequent falls and performed worse on cognitive testing. Those who self-reported a prior fall

### Table 1. Participant and visit characteristics (continued next page)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>No Self-reported Falls (n=35)</th>
<th>Any Self-reported Fall (Not Including ED Study Visit Day) (n=34)</th>
<th>Fall on ED Study Visit Day (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean/%</td>
<td>N</td>
</tr>
<tr>
<td>Age (Mean, in years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>20</td>
<td>57.1</td>
<td>21</td>
</tr>
<tr>
<td>Male</td>
<td>14</td>
<td>40.0</td>
<td>12</td>
</tr>
<tr>
<td>Race/Ethnicity (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Non-Hispanic</td>
<td>29</td>
<td>82.9</td>
<td>31</td>
</tr>
<tr>
<td>Black/African-American</td>
<td>2</td>
<td>5.7</td>
<td>1</td>
</tr>
<tr>
<td>White Hispanic</td>
<td>1</td>
<td>2.9</td>
<td>0</td>
</tr>
<tr>
<td>Black Hispanic</td>
<td>1</td>
<td>2.9</td>
<td>0</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>2.9</td>
<td>0</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
</tr>
<tr>
<td>Educational level (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school graduate</td>
<td>1</td>
<td>2.9</td>
<td>6</td>
</tr>
<tr>
<td>High school graduate / GED#</td>
<td>22</td>
<td>62.9</td>
<td>16</td>
</tr>
<tr>
<td>Any college</td>
<td>4</td>
<td>11.4</td>
<td>5</td>
</tr>
<tr>
<td>College graduate</td>
<td>6</td>
<td>17.1</td>
<td>5</td>
</tr>
<tr>
<td>Health insurance status (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>5</td>
<td>14.3</td>
<td>3</td>
</tr>
<tr>
<td>Governmental</td>
<td>3</td>
<td>8.6</td>
<td>4</td>
</tr>
<tr>
<td>Private and governmental</td>
<td>26</td>
<td>74.3</td>
<td>25</td>
</tr>
<tr>
<td>Employment status (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working full-time</td>
<td>4</td>
<td>11.4</td>
<td>4</td>
</tr>
<tr>
<td>Working part-time</td>
<td>4</td>
<td>11.4</td>
<td>2</td>
</tr>
<tr>
<td>Retired and not working</td>
<td>24</td>
<td>68.6</td>
<td>25</td>
</tr>
<tr>
<td>On disability and not working</td>
<td>2</td>
<td>5.7</td>
<td>2</td>
</tr>
<tr>
<td>Living arrangements (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing home resident</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
</tr>
<tr>
<td>Assisted living resident</td>
<td>2</td>
<td>5.7</td>
<td>1</td>
</tr>
<tr>
<td>Lives with others, not in a facility</td>
<td>23</td>
<td>65.7</td>
<td>20</td>
</tr>
<tr>
<td>Lives alone, not in a facility</td>
<td>9</td>
<td>25.7</td>
<td>11</td>
</tr>
<tr>
<td>Triage acuity (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESI 1*</td>
<td>2</td>
<td>5.7</td>
<td>0</td>
</tr>
<tr>
<td>ESI 2</td>
<td>9</td>
<td>25.7</td>
<td>13</td>
</tr>
<tr>
<td>ESI 3</td>
<td>21</td>
<td>60.0</td>
<td>18</td>
</tr>
<tr>
<td>ESI 4 or ESI 5</td>
<td>1</td>
<td>2.9</td>
<td>1</td>
</tr>
<tr>
<td>Unassigned</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
</tr>
<tr>
<td>Cognitive and functional ability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Six-item Screener score (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>8.6</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>17.1</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
<td>68.6</td>
<td>22</td>
</tr>
<tr>
<td>Barthel’s ADL score (mean)</td>
<td>33</td>
<td>19.0</td>
<td>31</td>
</tr>
</tbody>
</table>
also appear to be at risk for multiple subsequent falls, given that approximately one fourth had fallen more than once in the past 12 months. However, despite being at risk for subsequent falls, few patients reported having made preventive changes and few were evaluated by specialists who might offer care to reduce further fall occurrence.

The American College of Emergency Physicians (ACEP) soon will begin accrediting EDs that offer specialized geriatric care. Providing a standardized assessment for falls, as well as providing an ED environment that is tailored to older adults, are key criteria for accreditation. Suggested provisions include access to mobility aids, nonslip socks, pressure-reducing mattresses, bedside commodes, transition stools, and large-face analog clocks. Recognizing that ED physicians may lack the training and time to provide geriatric-tailored care, ACEP recommends that hospitals provide geriatric-trained professionals to complement the ED physician assessment, including physical therapists, occupational therapists, social workers, and pharmacists. As indicated by the responses from participants in this study, ED patients are cognizant of improvements that can be made to improve this care.

An interdisciplinary geriatric-focused team could greatly improve on the current status quo. Currently only 3.7% of older adults receive fall-guideline concordant care when they present to the ED after a fall. It is uncommon for the ED clinician to ask routinely and systematically about risk factors that frequently precipitate falls, including visual impairment, peripheral neuropathies, alcohol or medication use, appropriate footwear, and the safety of the home environment. Prior research of community-dwelling older adults who present to the ED after falls shows that their 6-month fall risk was 29.5% higher than age-matched controls and functional ability, and balance confidence and depression all worsened over six months. Our study findings that the majority of ED patients were not evaluated by their primary care provider after their most recent fall and did not make preventive changes, could explain in part why outcomes for this vulnerable population can be dire. An ED-initiated fall prevention protocol, better communication between ED and outpatient providers, and an interdisciplinary approach to falls are necessary to improve post-fall care and help prevent future falls and their sequelae.

### Limitations

While this study provides information on older adults lacking in the prior research on this topic, there are several limitations. First, given the convenience sample recruitment, inclusion only of English-speaking patients, and small sample size, it is not possible to generalize these study results.
Table 2. Fall and post-fall care history among those self-reporting prior falls before the ED visit

<table>
<thead>
<tr>
<th>Time since last fall (Not Including ED Study Visit Day)</th>
<th>n</th>
<th>Mean/%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 month ago</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>1 month to less than 6 months ago</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>6 months to less than 12 months ago</td>
<td>9</td>
<td>26.5</td>
</tr>
<tr>
<td>12 months or more ago</td>
<td>13</td>
<td>38.2</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2</td>
<td>5.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Times fallen in the past 12 months</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>21</td>
<td>61.8</td>
</tr>
<tr>
<td>Twice</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>Three times</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>Four times</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>Five times or more</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2</td>
<td>5.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Last visit to the ED after a fall</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 month ago</td>
<td>3</td>
<td>8.8</td>
</tr>
<tr>
<td>1 month to less than 6 months ago</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>6 months to less than 12 months ago</td>
<td>4</td>
<td>11.8</td>
</tr>
<tr>
<td>12 months or more ago</td>
<td>11</td>
<td>32.6</td>
</tr>
<tr>
<td>Don’t know</td>
<td>7</td>
<td>20.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Care provider seen after prior fall</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PCP</td>
<td>14</td>
<td>41.2</td>
</tr>
<tr>
<td>Geriatrician</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>ED provider</td>
<td>15</td>
<td>44.1</td>
</tr>
<tr>
<td>Orthopedist</td>
<td>4</td>
<td>11.8</td>
</tr>
<tr>
<td>Physical therapist</td>
<td>3</td>
<td>8.8</td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>Case manager</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessments after prior fall</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>Footwear</td>
<td>4</td>
<td>11.8</td>
</tr>
<tr>
<td>Home safety evaluation</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>Visiting nurse</td>
<td>3</td>
<td>8.8</td>
</tr>
<tr>
<td>Don’t know</td>
<td>3</td>
<td>8.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preventive changes made after last fall</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>23</td>
<td>67.6</td>
</tr>
<tr>
<td>Yes</td>
<td>9</td>
<td>26.5</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2</td>
<td>5.9</td>
</tr>
</tbody>
</table>

Table 3. ED post-fall care improvement suggestions

<table>
<thead>
<tr>
<th>Themes</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeliness</td>
<td>“too long of a wait time”, “faster”, “hurry up and wait, over two hours after tests, still sitting”</td>
</tr>
<tr>
<td>Environment/Comforts</td>
<td>“mattresses could be better”, “pillows”, “too noisy, hard to get comfortable”, “hard to get good rest”, “if they could make it less cold in the hospital, that would be great”, “shouldn’t have to pay for parking”</td>
</tr>
<tr>
<td>Communication/Interactions</td>
<td>“communication more frequent what will be done”, “doctors could have better attitude”, “some staff are friendly, some are not”, “more coordinated, they come in and ask the same questions”, “so many people coming in and out and no one knows anything”</td>
</tr>
<tr>
<td>Medical Care</td>
<td>“came in for heart problem, didn’t put on leads”, “specialist was requested, no one came”</td>
</tr>
<tr>
<td>None</td>
<td>”No”, “N/A”, “wonderful”, “don’t fix what’s not broke”</td>
</tr>
</tbody>
</table>

to all older adults presenting to the ED, particularly given that those with cognitive impairment were excluded. These patients represent a particularly high-risk group for falls and their care preferences are important and should be queried in future surveys. Additionally, participants were predominantly white and were presenting to a large academic Level I trauma center. Adults with different racial/ethnic backgrounds presenting to smaller, community hospitals in other regions of the country may have responded differently. The purpose of the study was to better understand older adults’ perceptions of their medical care; as such we did not collect information that was gathered by the ED provider such as the participant’s neurological exam, musculoskeletal exam, or gait evaluation.

CONCLUSIONS

In this study, older adult patients without cognitive impairment who self-reported a prior fall infrequently made changes to prevent future falls and had not been evaluated by professionals who might reduce subsequent fall occurrence. Because these patients are at higher risk for repeat falls, functional decline, and death, efforts aimed at fall prevention both in and outside the ED setting are needed. Future research should evaluate the effectiveness of geriatric-trained professionals in providing standardized fall assessments aimed at prevention in this setting.
References


Acknowledgments

Dr. Goldberg received research funding for this work from the Center of Gerontology and Healthcare Research, Brown University, AHRQ T32 postdoctoral training grant [Principal Investigator: Mor, Grant No. T32 HS000111]. The authors would like to acknowledge the following people who collected the data for this study: Divya Santhanam, Mitchell Yeary, Tien Hua, Julia Schoenewald, Xiaoshu Zheng, Wendy Gaztanaga.

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ABSTRACT
Violence against women is a public health issue. Monitoring assault-related injury and homicide death among women is imperative for understanding this public health issue. We used data from the 2014 Rhode Island emergency department (ED), hospital discharge (HD), and 2004–2014 Rhode Island violent death reporting system (RIVDRS) to provide a broad picture for violence against women injuries and deaths in Rhode Island. ED visit and HD data show that the majority of female assault injuries occurred among women aged 25–44, resided in the core cities, and had public insurance. RIVDRS data showed that over half of the homicides among women were aged 25–64, nearly two in five were non-Hispanic black or Hispanic. Precipitating circumstances include intimate partner violence, a preceding argument or a conflict, and precipitated by another crime. Evidence-informed interventions need to target high-risk populations and urban areas to effectively reduce violence against women.

KEYWORDS: assault; emergency department visit data; homicide; hospital discharge data; Rhode Island Violent Death Reporting System (RIVDRS); violence against women

The United Nations defines violence against women as “any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life”. Women refers to all females, including girls.

In the United States, the crisis of domestic violence has reached epidemic proportions. Women are the victims in over 94% of all spousal assaults, as reported by the National Crime Survey data. According to the United States Senate Committee on the Judiciary, this problem affects up to four million women nationally each year.

Rhode Island is no exception to the national norm. In 2015, RI’s six domestic violence agencies provided a comprehensive array of services to 8,934 victims of domestic violence, and responded to over 18,830 crisis calls through hotline services. Five hundred and four victims of abuse were sheltered in emergency shelters, for over 21,000 shelter nights.

In the U.S., there were 3,318 females who died of homicide (assault) in 2014; 1,619 of them were Non-Hispanic white, 1,049 Non-Hispanic black, and 485 Hispanic. About 1,500 women are killed per year by their husband/boyfriend/intimate partner. Violence against women is listed as a priority of public health problems because girls and women are frequently victims of severe injuries of interpersonal abuse. Age-adjusted death rates for homicide among women was 2.1 per 100,000 U.S. standard population in 2014. Female homicide (assault) mortalities vary by race/ethnicity: non-Hispanic black was 4.8, Hispanic 1.7, and non-Hispanic white 1.6.

There are a number of risk factors that increase the likelihood of an individual’s potential for experiencing domestic violence, including individual, relationship, community, and societal factors, such as lower levels of education; witnessing family violence; harmful use of alcohol; exposure to child maltreatment; and attitudes that are accepting of gender inequality and violence. Monitoring assault-related injury and homicide death among women is imperative for understanding this public health problem. Dissemination of surveillance findings to key stakeholders is crucial in improving intervention. Effective data-driven assault and homicide intervention programs can improve public health professionals, law enforcement, and community collaboration for prevention efforts. We used data from the 2014 Rhode Island emergency department (ED), hospital discharge (HD), and 2004–2014 Rhode Island violent death reporting system (RIVDRS) to provide a broad picture for violence against women injuries and deaths in Rhode Island.

METHODS
We used the 2014 Statewide ED and HD data for describing assault injuries. ED data are available for ED visits on or after January 1, 2005 at all ten non-federal acute-care hospitals in RI as well as RI’s women’s hospital and RI’s two psychiatric hospitals, and one rehab. HD data collected since 1989 include data on hospitalizations. Cases of violence against women are potentially identifiable from ED or HD data through ICD-9 codes specific to assault. E-codes are specialized ICD-9-CM codes used to identify the cause of the fatal injury and are identified by an ‘E’ before the number. Assault-related ED visits and hospitalizations ICD-9-CM E-codes are E960–E969. We excluded those ED visits which
ended up being admitted to the same hospital. Since three specialty hospitals did not have any visits for acute assault, this analysis only used 2014 data from the 11 acute-care hospitals.

We used the 2004–2014 RivDRS data for describing homicides. RivDRS is an incident-based public health surveillance system of suicides, homicides, deaths from legal intervention, deaths of undetermined intent, and unintentional firearm deaths. Comprehensive data are collected from death certificates, Medical Examiner investigative, autopsy, and toxicology reports; police reports; mental health records, hospital records, social service records, and ballistics reports, as applicable. A unique feature of the RivDRS is the detailed circumstance information. Homicides associated with women can be identified based on abstractor-assigned manners of death.

We calculated percentages of characteristics by the three different data sources among female assault injury and homicide victims. All analyses were performed by using SAS software [release 9.4, SAS Institute Inc., Cary, NC, 2014].

**RESULTS**

There were 1,676 ED visits and 86 hospitalizations due to assault injuries for women in 2014 in RI. When comparing the three data sources examined, it is noteworthy to mention that the age groups representing the highest proportion of ED visits, were those aged 18–24 (28.9%) and 25–44 (44.2%). These data differ from the hospitalization and death data, where the age group with the highest proportions were the 25–44 and 45–64 categories. About 38% of the female homicide decedents were non-Hispanic black and Hispanic. It should be noted that women account for 51.7% of the Rhode Island population based on 2010 census data. Over half of the ED visits and hospitalizations for female assault injuries were among those who resided in four urban core cities including Central Falls, Pawtucket, Providence, and Woonsocket. Over half of the homicides occurred in the core cities, which represents only 29.3% of the

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 18 years</td>
<td>9.8</td>
<td>19.8</td>
<td>12.2</td>
</tr>
<tr>
<td>18-24 years</td>
<td>28.9</td>
<td>11.6</td>
<td>21.1</td>
</tr>
<tr>
<td>25-44 years</td>
<td>44.2</td>
<td>30.2</td>
<td>33.3</td>
</tr>
<tr>
<td>45-64 years</td>
<td>15.6</td>
<td>30.2</td>
<td>24.4</td>
</tr>
<tr>
<td>65 years and older</td>
<td>1.5</td>
<td>8.1</td>
<td>8.9</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>61.5</td>
<td>68.6</td>
<td>56.7</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>15.0</td>
<td>15.1</td>
<td>20.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>19.9</td>
<td>10.5</td>
<td>17.8</td>
</tr>
<tr>
<td>Other</td>
<td>3.6</td>
<td>5.8</td>
<td>5.6</td>
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<tr>
<td>Discharged to home/Self care (Routine discharge)</td>
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<td>Transferred to general hospital for inpatient care</td>
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<td>Transferred to skilled nursing facility with Medicare Certification</td>
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<tr>
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<tr>
<td>E960:Fight, brawl, and rape</td>
<td>44.6</td>
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<tr>
<td>E961:Assault by corrosive or caustic substance, except poisoning</td>
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<td>E963:Assault by hanging and strangulation</td>
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<tr>
<td>E965:Assault by firearms and explosives</td>
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<td>E966:Assault by cutting and piercing instrument</td>
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<td>E967:Child and adult battering and other maltreatment</td>
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<td>37.2</td>
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<tr>
<td>E968:Assault by other and unspecified means</td>
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<tr>
<td>E969:Late effects of injury purposely inflicted by other person</td>
<td>1.2</td>
<td>8.1</td>
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</table>

Data sources: Rhode Island emergency department visit, hospital discharge, and violent death reporting system data.

*ED visits in this analysis do not include those subsequent admissions to the same hospital.
state’s female population. Almost half of the females who visited the ED and who were hospitalized for assault injuries used Medicaid insurance. Most of those women were discharged to home. About 45% of the ED visits were due to fight, brawl, and rape. (Table 1)

The majority of these female homicides occurred in a house or apartment. Most of the homicides took place at the victim’s residence. The most common method of injury was a firearm (29.9%), and the second most-common was a sharp instrument (20.7%). Twenty-eight percent of cases tested positive for alcohol, 12% for cocaine, 11% for marijuana, 11% for opiates, and 11% for antidepressants. In 38 of 88 cases, the decedent had an intimate partner violence (43.2%); 24 cases had argument or conflict (27%), and 16% precipitated by another crime. (Table 2)

Total charges for the ED visits (n=1,676) related to assault injuries among women were about $5.5 million; and total charges for hospitalizations (n=86) was over $3 million, length of stay was 468 days [data not shown]. The residents of the cities including Central Falls, Newport, Providence, West Warwick, and Woonsocket had a higher rate of ED visits for assault injury among women compared to other cities/towns. (Figure 1)

**Discussion**

ED visit and HD data show that the majority of female assault injuries occurred among women aged 25–44, resided in the core cities, and had public insurance. RIVDRS data showed that over half of the homicides among women were aged 25–64; nearly two in five were non-Hispanic black or Hispanic.

Cohen and Chehimi’s Spectrum of Prevention encourages organizations’ adoption of multiple strategies to engage men in violence prevention.4 It includes strengthening individual boys and men’s knowledge and skills; early childhood and family-based approaches; school-based programs; reducing alcohol abuse; gender equality training; public awareness campaigns; promoting community education; educating providers; fostering coalitions

<table>
<thead>
<tr>
<th>Characteristic, Toxicology, and Circumstance</th>
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<th>%</th>
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<tbody>
<tr>
<td>Marital Status</td>
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<tr>
<td>Never married</td>
<td>39</td>
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<tr>
<td>Married/Civil Union/Domestic Partnership</td>
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<td>Divorced/Married, but separated</td>
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<td>Single, not otherwise specified/Widowed</td>
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<td>Victim to Suspect Relationship</td>
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<tr>
<td>Domestic Relationship</td>
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<td>Person, known to victim</td>
<td>13</td>
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<tr>
<td>Stranger</td>
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<td>Injury Location</td>
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<tr>
<td>House or apartment</td>
<td>73</td>
<td>83.0</td>
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<td>Street/Road, sidewalk, alley, highway, freeway</td>
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<td>10.2</td>
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<tr>
<td>Injured at Victim Home</td>
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<tr>
<td>Yes</td>
<td>63</td>
<td>72.4</td>
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<tr>
<td>No</td>
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<td>Weapon Type</td>
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<tr>
<td>Firearm</td>
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<td>Handgun (78.3%)</td>
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<td>Sharp instrument</td>
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<td>19.5</td>
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<td>Hanging, strangulation, suffocation</td>
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<td>Blunt instrument</td>
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<td>Personal weapons (hands, feet, fists)</td>
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<tr>
<td>Other</td>
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<td>Toxicology Tested</td>
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<td>Toxicology Test Positive</td>
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<td>Alcohol</td>
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<td>Blood Alcohol Concentrations&gt;=0.08 g/dl</td>
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<tr>
<td>Cocaine</td>
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<td>Marijuana</td>
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<td>Antidepressants</td>
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<td>Intimate partner violence-related</td>
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<td>Jealousy (lovers’ triangle)</td>
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<td>Victim of interpersonal violence within past month</td>
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<td>Life stressor circumstance</td>
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<td></td>
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<tr>
<td>Argument or conflict</td>
<td>24</td>
<td>27.3</td>
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<tr>
<td>Crisis within previous or upcoming 2 weeks</td>
<td>6</td>
<td>6.8</td>
</tr>
<tr>
<td>Caretaker abuse/neglect led to death</td>
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<td>5.7</td>
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<tr>
<td>Crime and criminal activity circumstance</td>
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<td></td>
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<tr>
<td>Precipitated by another crime</td>
<td>14</td>
<td>15.9</td>
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<tr>
<td>Crime in progress</td>
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<td>9.1</td>
</tr>
<tr>
<td>Drug involvement</td>
<td>5</td>
<td>5.7</td>
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</table>

Data source: Rhode Island Violent Death Reporting System
and networks; and involving men in legislative advocacy efforts.³,⁵

The State Police, Governor’s Office, the Institute for the Study and Practice of Nonviolence are interested in using data to highlight the issue of violent crimes against women. Human trafficking is of specific interest. However, unfortunately, RIVDRS does not capture this information. It was noted that there is a Domestic Violence/Sexual Assault (DV/SA) database that can be used as an additional data source. In RI, police-reported data are compiled in a statewide database known as the DV/SA database. Rhode Island State Police and each police department are mandated to complete a DV/SA form when they respond to or investigate any DV/SA case. The Rhode Island Supreme Court Domestic Violence Training and Monitoring Unit (DV Unit) maintains accurate data on the extent and severity of DV/SA (arrested or non-arrested data). Another great potential database is the National Incident-Based Reporting System.

There are several limitations to our analysis. We cannot distinguish whether suicide attempts or suicide deaths were caused by domestic violence or intimate partner violence/problem, so we only included assault injuries or homicide deaths in our study. Post-traumatic stress disorder (PTSD), depression, and anxiety are commonly observed among assault survivors. Assault survivors may suffer inability to work, limited ability to care for themselves and their family, isolation, or lack of capability to participate in regular activities.³ We cannot calculate those economic and social costs, which have enormous effects on society. Many victims of domestic violence use alcohol to self-medicate, and many use prescribed anti-depressants to address symptoms caused or triggered by the abuse. In the future, we need to distinguish them from illicit substance abusing behavior. We used only the 11 acute care hospitals’ data in RI, and we did not have those who sought care in private physicians’ offices. In the future, we may utilize the CurrentCare data to include “walk-in” clinic data. Women from more affluent communities, where partner violence is considered shameful, might be less inclined to seek medical attention for injuries or to report that their injuries were caused by a partner. Our study might therefore underestimate female assault injuries.

There are some effective intervention strategies across a range of settings, including emergency departments, inpatient hospital stays, schools, and the criminal justice system.⁶ The RI State Steering Committee (SSC) tried to address the violence before it starts. They developed the primary prevention plan to target men and teens, and identified evidence-informed prevention strategies to alter attitudes, beliefs, behaviors, and cultural norms. In RI, policy makers use evidence-based information to target high-risk populations and urban areas to reduce violence against women. Subpopulation- or neighborhood-based interventions can be effective in parallel with improving neighborhood economic and social conditions.
More detailed information regarding the E-code could provide more useful data about violence against women and lead to further studies to better understand the trends and patterns of female homicide due to domestic violence. With the transition from ICD-9-CM to ICD-10-CM on October 1, 2015, the assault-related ICD-10-CM external cause codes can identify the cause of any physical injuries, assign a perpetrator code when the perpetrator of the abuse is known, and include whether the maltreatment was suspected or confirmed. The enhanced specificity in coding hospital data allows for the inclusion of suspected domestic violence, which will increase the number of documented domestic violence cases and may help in the treatment and prevention of domestic violence injuries and deaths.

Acknowledgments
The analyses are suggested by Linda Fraccola from the Rhode Island State Police. This brief was funded by a Centers for Disease Control and Prevention (CDC) grant [5U17CE002615] awarded to the Rhode Island Department of Health. We would like to express our special thanks to data abstractors Karen Foss and Shannon Young, who spent hours compiling the data and constructing sound narratives to make RIVDRS one of the best. We thank Kathy Taylor who provided the 2014 emergency department and hospital discharge data.

References

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Disclosure
The authors have no financial interests to disclose.

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A Woman with a Necrotizing Soft-Tissue Infection

WILLIAM BINDER, MD; PAUL COHEN, MD; NICHOLAS MUSISCA, MD; FRANCIS SULLIVAN, MD

From the Case Records of the Alpert Medical School of Brown University Residency in Emergency Medicine

DR. PAUL COHEN: Our patient is a 62-year-old woman with type 2 diabetes mellitus who presented to the emergency department complaining of lightheadedness, headaches, poor appetite, as well as several days of fever to 102°F. The patient stated that she developed a tender buttocks’ “boil” beginning 4-5 days prior to presentation. She was seen by her primary care physician and was prescribed an oral antibiotic but she continued to have pain. Her blood glucose levels rose above 300, and while the wound spontaneously began to drain two days prior to presentation, the pain persisted. She was referred to the emergency department.

Her past medical history includes coronary artery disease (CAD), diabetes mellitus (DM), and hypertension. She currently takes atorvastatin, lisinopril, triamterene-hydrochlorothiazide, glyburide, metformin, and insulin. She does not use tobacco.

Physical exam was significant for an obese woman in no distress. Her temperature was 37.2°C, HR 84, BP 121/64 and oxygen saturation 98% on room air. Her lungs were clear to auscultation, cardiac exam demonstrated a normal s1s2 with regular rate and rhythm, and no murmurs, gallops, or rubs. The patient’s abdomen was obese, soft, with no masses or distention. Her skin was erythematous over the left side of her suprapubic region and was tender to palpation from the suprapubic region to the left labia. There was no crepitus. There was a cavitated abscess on the left buttock with an 8 x 5 cm area of necrosis. On genitourinary exam the left labia had an area of necrosis with erythema and induration, and was tender to palpation.

DR. THOMAS GERMANO: What did her laboratory examinations reveal?

DR. COHEN: The patient had a WBC count of 12.2 x 10^9/L with 88% segmented neutrophils and 2% bands. The hemoglobin and hematocrit were 12.4 g/dL and 38.9% respectively. Platelets were normal. The patient’s sodium was 121 mEq/L (corrected to 127 mEq/L for a glucose of 573 mg/dL), potassium was 4.6 mEq/L, chloride was 88 mEq/L, CO2 was 17 mEq/L and the anion gap was 16. BUN/Creatinine were 43 mg/dL and 1.3 mg/dL respectively. The patient’s CRP was 280 mg/L and the venous pH was 7.22.

DR. HALE SEASON: What was your main concern for this patient?

DR. NICK MUSISCA: Our main concern for this patient was whether she had a necrotizing soft-tissue infection (NSTI) leading to sepsis and significant metabolic abnormalities. NSTIs are fairly rare with only about 1000–2500 cases occurring annually in the US. Incidence is likely increasing, however, although the reasons are obscure—it may be due to increasing virulence of bacterial organisms, better reporting, or increasing resistance to antimicrobials. (1, 2) Patients with an NSTI can have signs and symptoms similar to other, less severe soft-tissue infections, such as cellulitis or an abscess. Clinical findings that should raise suspicion include

Figure 1. Patient’s CT scan showing subcutaneous emphysema and stranding in the perineal region (arrow).
pain that is out of proportion to the examination, clinical progression despite antibiotics, systemic toxicity, as well as bullae and skin ecchymosis. Subcutaneous emphysema, a classic finding in an NSTI, is less commonly noted. [1, 3]

**DR. JAY BARUCH:** This patient was a diabetic. Is there an increased risk for an NSTI in this population?

**DR. WILLIAM BINDER:** There appear to be certain populations with a higher incidence of NSTIs. Patients who are immunocompromised, drink alcohol heavily, have diabetes, obesity, or peripheral vascular disease, tend to have an NSTI more frequently than young and healthy patients. However, NSTIs do occur in the population without predisposing risk factors. Additionally, there have been some reports in the literature suggesting an association between non-steroidal anti-inflammatory medications and NSTIs, but there is no definitive relationship established at this point. [1]

NSTIs have been recognized for centuries, and Hippocrates described the disorder in the 5th century BC. [4] Initially, NSTIs were classified according to their anatomical location. Fournier, for instance, initially described the necrotizing skin infection that bears his name in the late 19th century. [5] In the modern era, NSTIs are now classified as Type I, Type II, and Type III infections. [6] Type I infections are the most frequent and account for over 70% of NSTIs. [7] These infections are polymicrobial, with gram + cocci, gram - rods, and anaerobes, and are frequently associated with comorbidities, but are not usually preceded by trauma. [1] Type II infections are monomicrobial and typically are due to Group A Streptococcus, although Staphylococcus aureus, Aeromonas hydrophila, and other organisms have been implicated in these infections. [7] These infections often have an inciting event such as a puncture wound or intravenous drug use. [8] Type III infections are often due to seafood ingestion or warm seawater contamination and are caused by gram negative marine organisms, particularly Vibrio vulnificans, and have a 30% – 40% mortality. They are more common in Asia. [7] A type IV infection caused by fungal organisms has been described, but these are rare. [8] Interestingly, there is significant heterogeneity in both anatomic location and microbial causation in NSTIs reported by various medical centers. This is likely due to different microbial patterns and environmental factors as well as population characteristics in different sections of the US and globally. [2, 9, 10]

**DR. ANDREW NATHANSON:** How is the diagnosis of an NSTI made? Is there a role for imaging? Surgical consultation is usually the most important intervention in these cases.

**DR. MUSISCA:** Historically, NSTIs were associated with a mortality rate of 30%–40%. Early diagnosis and treatment, rapid and aggressive surgical intervention, and advancements in critical care medicine have lowered the mortality rate in recent years to 10%–20%. [11, 12, 13] A high index of suspicion is usually necessary to make the diagnosis as common presenting features such as swelling, pain, and erythema, are non-specific. [14] Laboratory tests have contributed to early diagnosis, but they are not definitive. The laboratory risk indicator for necrotizing fasciitis (LRINEC), a risk stratification score, has not been validated in a multicenter prospective trial. [7, 15, 16] If the extent of disease on exam is equivocal, bedside exploration can facilitate early diagnosis and can be performed under local anesthesia.

**DR. FRANCES SULLIVAN:** Misdiagnosis and delayed diagnosis may have significant consequences in NSTIs. In one review of over 1400 patients with NSTIs, there was a 71% mean rate of misdiagnosis because physicians diagnosed cellulitis, abscess, or soft-tissue trauma. [14] Such delay can lead to further soft tissue destruction, systemic illness and a higher mortality. Plain films are not sensitive in detecting evidence of an NSTI, but a recent study demonstrated that CT has excellent sensitivity (97%) in identifying characteristics of an NSTI, such as thickened and enhanced skin and fascia, deep abscesses, and fluid collections. [17] Subcutaneous gas was noted in only about 70% of cases. [17] Consequently, we obtained a CT scan which revealed extensive subcutaneous inflammatory standing and subcutaneous emphysema extending from the left buttock to the perineal region and superiorly to the ventral abdominal wall and adjacent to the iliac crest laterally. [See Image 1.] A surgical consultation was obtained.

**DR. ANGELA JARMAN:** Is there a role for medical treatment?

**DR. MUSISCA:** Antibiotics are a component of early treatment and should cover gram positive skin flora including MRSA, as well as gram negative organisms and anaerobes. Clindamycin is unique because it mitigates toxin production and the Surgical Infection Society and the Infectious Disease Society of America (IDSA) both recommend combination therapy with a beta-lactam antibiotic and clindamycin in group A Streptococcus infections. Given that the causative agent for an NSTI is usually not initially known, it is reasonable to utilize combination therapy as an initial treatment in the emergency department. [7, 18] However, antibiotics are limited in their ability to penetrate infected necrotic tissue, and ultimately, surgical debridement is imperative in NSTIs.

**DR. MATIN SHAH:** Are there additional therapeutic interventions for patients with an NSTI? What was the outcome for this patient?

**DR. COHEN:** Medical therapies such as intravenous immunoglobulin (IVIG) and hyperbaric oxygen (HBO) have been used but data are limited. Studies of IVIG therapy for patients with necrotizing fasciitis show minimal or no benefit. [19, 20] Hyperbaric oxygen therapy inhibits anaerobic...
bacteria growth, potentiates antibiotic bactericidal activity, and limits clostridium toxin release in animal and human studies. (1) However, HBO use in polymicrobial NSTIs has had mixed results. Given the unique resources needed, and its mixed efficacy in humans, its use is generally institution specific and should not delay operative intervention. (1, 21)

The patient received two liters of 0.9% saline and was started on an insulin drip and intravenous vancomycin, piperacillin-tazobactam, and clindamycin. She was subsequently taken to the operating room overnight for extensive surgical debridement. Wide tissue incisions were made along the abdominal wall, buttocks, and perineal region. Surgical findings included significant induration, numerous small, septated abscesses, necrotic tissue, purulent discharge, and non-adherent fascia that was easily dissected. The excisions were extended to healthy, bleeding tissue to encompass the entirety of the infection. The wounds were packed and the patient was admitted to the surgical intensive care unit, where she was kept intubated for anticipated further surgical debridement. It is very common for surgery to take a “second look” in these cases.

After her arrival to the surgical intensive care unit, she became hypotensive and oliguric, requiring vasopressors and continued fluid resuscitation. Over the ensuing day her hemodynamic status improved but an area of erythema was noted to persist in her lower abdomen. She was taken to the operating room a second time where she was noted to have an additional abscess which organized despite the original debridement, as well as necrotic skin edges along the abdominal and perineal wounds. These were drained and packed, and the wounds were excised. After a 15-day hospital course, she was discharged to a skilled nursing facility to the operating room a second time where she was noted to persist in her lower abdomen. She was taken to the operating room overnight for extensive debridement, as well as necrotic skin edges along the abdominal and perineal wounds. These were drained and packed, and the wounds were excised. After a 15-day hospital course, she was discharged to a skilled nursing facility with twice daily dressing changes.

Patient’s recovering from NSTIs have significant morbidity with high rates of depression and PTSD and inability to return to previous employment. Additionally, they have a higher rate of premature death from infectious causes. (22, 23) Consequently, while our patient has improved, she will require close follow-up with both her primary care physician and her surgeons.

References

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The Physical Finding Points to the Diagnosis

ROBERT S. CRAUSMAN, MD; CHRISTINA N. WRIGHT

INTRODUCTION
An 88-year-old female patient presented with an acutely sore and painful index finger. (See Figures 1,2.)

DISCUSSION
The patient was diagnosed with an acute tophaceous gout attack. Gout is a crystalline arthropathy that arises from the accumulation of urate crystals in joints or surrounding soft tissues [1]. Uric acid is a normal byproduct of the breakdown of purines which can increase after consuming purine-rich foods (i.e. beef, organ meats, seafood, fructose-sweetened beverages, alcoholic beverages). It is estimated that 3% of the US population has gout. It is much more common in males then females before the 6th decade of life but rates begin rising in postmenopausal women along with their serum uric acid levels with about a 10-year lag resulting in a more equal sex distribution in the elderly [2].

When a patient experiences an acute gout attack, intense joint pain occurs within the first 12 hours of onset and is accompanied by inflammation, erythema, and subsequent lingering discomfort with limited range of motion, and generally slow resolution over days to weeks.

Patients presenting with these symptoms may undergo joint fluid examination, serum uric acid testing, and radiographic imaging for diagnosis. Often the presentation is “classic” and the diagnosis is made clinically.

Treatment options include nonsteroidal anti-inflammatory drugs, colchicine, and/or corticosteroids; and more recently Interleukin-1 antagonist agents. Recurrent or especially painful occurrences are considered an indication for preventative therapy with a drug that blocks uric acid production [xanthine oxidase inhibitors, e.g. Allopurinol] or improves uric acid excretion [Probencid].

If untreated, gout can result in joint erosion, painful or painless subcutaneous urate crystal deposition [tophi], and kidney stones.

This patient’s acute flair resolved with a short course of colchicine; she was later placed on daily Allopurinol.

References

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Figure 1. Photograph of the patient’s left index finger revealing a small creamy white lesion on its volar surface with surrounding inflammation of the distal interphalangeal joint.

Figure 2. Plain radiograph revealing corresponding bony erosion of the distal interphalangeal joint of the patient’s second digit.
Health profile of Rhode Island healthcare workers

MUKTI KULKARNI, MD, MPH; TRACY L. JACKSON, PhD; HANNA KIM, PhD; TARA COOPER, MPH

Healthcare workers [HCWs] feature prominently in the Rhode Island [RI] workforce. In 2015, they comprised a larger percentage of the overall workforce in RI than any state except West Virginia.1 Compared to the 2008 national average of 11.6%, nearly 20% of RI private sector jobs are in healthcare.2,3 HCWs in general are presumed to have good health literacy, and the health practices of a subset of HCWs – healthcare providers – have been shown to influence the counseling they deliver to patients.4,5 Because of their prominence in the local workforce, presumed high health literacy, and potential influence on the population at large, it may be helpful to understand the health status and practices of RI HCWs. This report compares the health behaviors, conditions, and healthcare service utilization of RI HCWs to workers employed outside of healthcare.

METHODS

Data were drawn from the 2014 RI Behavioral Risk Factor Surveillance System [BRFSS]. BRFSS is an annual telephone survey of randomly selected community-dwelling adults administered by the RI Department of Health [RIDOH] with support from the Centers for Disease Control and Prevention. Data are weighted to obtain state population estimates. More information on RI BRFSS is available at http://www.health.ri.gov/data/behaviorriskfactorsurvey.

The population of interest included employed RI adults, defined as respondents reporting they were employed for wages [including self-employed]. Those who were unemployed, retired, a student, a homemaker, or unable to work were excluded from analyses. Among RI workers, HCWs were defined as those answering “yes” to the question: “Do you currently volunteer or work in a hospital, medical clinic, doctor’s office, dentist’s office, nursing home or some other healthcare facility?” Those who were employed but did not report working in a healthcare facility were defined as non-HCWs. Chi-square tests were conducted to compare characteristics of HCWs to those of non-HCWs, and p-values <0.05 were considered statistically significant. Characteristics of interest included demographics, insurance coverage, risk behaviors, access to medical care, and health conditions. Analyses were conducted in SAS 9.4 [SAS Institute, Inc., Cary, North Carolina] to account for the complex sampling design.

RESULTS

In 2014, the total unweighted RI BRFSS sample size was 6450 adults. Of these, 2941 were classified as workers, with 15.4% HCWs and 84.6% non-HCWs. Compared to non-HCWs, HCWs were more likely to be female, have higher educational attainment, and have health insurance, and less likely to be Hispanic [Table 1].

RI HCWs and non-HCWs provided similar reports of overall health status and prevalence of mental and physical health conditions [Figure 1]. There were no significant differences between HCWs and non-HCWs in the prevalence of those reporting fair/poor general health [as opposed to excellent/good health], having at least one chronic health condition, or in any other health condition assessed. The two groups also reported a similar prevalence of frequent mental distress and frequent physical distress.

RI HCWs and non-HCWs were comparable with respect to the prevalence of several risky behaviors: smoking, physical inactivity, and inadequate sleep [Figure 2]. However, HCWs were significantly less likely to report inconsistent seatbelt use and excessive drinking [heavy or binge alcohol consumption, as defined in Figure 2]. HCWs also reported greater access to all healthcare services assessed except for cancer screenings [Figure 3]. Specifically, non-HCWs were less likely to have a healthcare provider, annual medical and dental check-up visits, and recommended influenza and tetanus vaccinations. The two groups reported similar rates of screening for colon, breast, and cervical cancer.

DISCUSSION

The 2014 BRFSS data reveal significant differences in gender, educational attainment, insurance status, and access to healthcare services between RI HCWs and non-HCWs. These results are largely consistent with a prior analysis of 2008-2010 national BRFSS HCW data.6 Higher rates of health insurance coverage, as well as presumed health literacy and familiarity with the healthcare system, may account for more regular use of healthcare services among HCWs. In addition, influenza vaccination has been mandatory for RI HCWs since 2012, and most healthcare facilities require employees to have current tetanus vaccination.7,8

Levels of screening for colon, breast, and cervical cancer were comparable between RI HCWs and non-HCWs.
Interestingly, the prior national analysis of BRFSS data found that female HCWs of screening age were less likely than other women to report having a mammogram in the past two years, while colon and cervical cancer screening rates were similar between HCWs and others. Although HCWs may be expected to report high participation in cancer screening because of their health literacy, frequent interactions with the healthcare system, or better recall, high rates of screening among both RI HCWs and non-HCWs could result in non-significant differences between the groups. Additionally, some BRFSS assessments of cancer screening behaviors do not precisely reflect national guidelines and overlook appropriate screening practices, making it difficult to draw conclusions regarding adherence with recommendations. For example, while the United States Preventive Services Task Force recommends colon cancer screening with stool-based or direct visualization tests at regular intervals from age 50–75 years, BRFSS questions only assess prior colonoscopy or sigmoidoscopy.

Despite reporting more regular use of many healthcare services and some favorable health behaviors, RI HCWs and non-HCWs showed no significant differences in measures of overall health status, mental and physical health conditions, or other adverse behaviors (smoking, physical inactivity, and inadequate sleep). A 2002–2013 analysis of the National Health Interview Survey (NHIS), on the other hand, found that healthcare professionals were less likely to report a number of chronic diseases, smoking, and physical inactivity. The NHIS analysis, however, used a narrower definition of healthcare professionals that included only

### Table 1. Characteristics of RI workers, BRFSS 2014

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Employed in healthcare facility n=535 (15.4%)</th>
<th>Employed outside of healthcare n=2396 (84.6%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>437</td>
<td>1237</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-34 years</td>
<td>70</td>
<td>305</td>
<td>0.89</td>
</tr>
<tr>
<td>35-44 years</td>
<td>79</td>
<td>426</td>
<td>0.24</td>
</tr>
<tr>
<td>45-64 years</td>
<td>322</td>
<td>1354</td>
<td>0.36</td>
</tr>
<tr>
<td>65+ years</td>
<td>61</td>
<td>279</td>
<td>0.48</td>
</tr>
<tr>
<td><strong>Education level</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school or less</td>
<td>98</td>
<td>630</td>
<td>&lt;.0001**</td>
</tr>
<tr>
<td>Some college</td>
<td>144</td>
<td>520</td>
<td>.04**</td>
</tr>
<tr>
<td>College graduate</td>
<td>292</td>
<td>1238</td>
<td>.005**</td>
</tr>
<tr>
<td><strong>Annual household income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$25,000</td>
<td>47</td>
<td>274</td>
<td>.48</td>
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<tr>
<td>$25,000-49,999</td>
<td>91</td>
<td>426</td>
<td>.92</td>
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<tr>
<td>$50,000-74,999</td>
<td>109</td>
<td>397</td>
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<tr>
<td>$75,000</td>
<td>245</td>
<td>1071</td>
<td>.66</td>
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<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
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<tr>
<td>Non-Hispanic white</td>
<td>470</td>
<td>1998</td>
<td>.08</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>20</td>
<td>88</td>
<td>.63</td>
</tr>
<tr>
<td>Hispanic</td>
<td>20</td>
<td>177</td>
<td>.03**</td>
</tr>
<tr>
<td>Other race</td>
<td>21</td>
<td>98</td>
<td>.84</td>
</tr>
<tr>
<td><strong>Healthcare coverage</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Insured</td>
<td>525</td>
<td>2267</td>
<td>0.001**</td>
</tr>
</tbody>
</table>

** Indicates a statistically significant difference between groups (P < 0.05).
those with graduate-level training, whereas the present study included a wider range of people working in healthcare facilities. As a result, findings from the 2014 RI BRFSS data cannot be generalized to specific subsets of HCWs, such as nurses or physicians.

In addition to the broad definition of HCW and difficulty assessing adherence to cancer screening recommendations, there are other limitations worth noting. BRFSS data is self-reported, introducing potential underreporting of socially undesirable behaviors and recall bias. For instance, HCWs may be more likely to report health conditions due to greater health literacy or access to healthcare services. Additionally, all data analyses were bivariate and therefore did not account for potential confounding by demographic or other factors. However, due to significant differences in the gender distribution of HCW and non-HCW we did conduct sensitivity analyses to examine the demographic and health differences between HCW and non-HCW among a female-only subgroup. Findings from the analysis of this female-only subgroup were similar to that of the full population, with the exception of frequency of seatbelt use and dental visits, which were no longer significant, suggesting gender did not strongly confound the overall results. Moreover, the sample size of RI workers is modest and includes only one year of data. Finally, data were derived from a larger population-based survey, not a specific survey of RI workers, and estimates of health conditions and behaviors may not reflect the true prevalence.

Despite these limitations, assessment of HCW status in the 2014 RI BRFSS presented an opportunity to better understand health characteristics and behaviors of a large subset of the RI workforce. To our knowledge, this is the first health profile of RI HCWs. Overall, while RI HCWs reported some healthier behaviors and higher utilization of many clinical services, indicators of health status were similar to non-HCWs. RI HCWs may benefit from targeted health improvement efforts and, because of their potential influence on patients, the effects of such efforts could extend beyond the healthcare workforce.
References


Authors

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Hyun (Hanna) Kim, PhD, is a Senior Public Health Epidemiologist in the Center for Health Data and Analysis, RIDOH, and Assistant Professor of the Practice of Epidemiology, School of Public Health, Brown University.

Tara Cooper, MPH, is the Health Surveys Program Administrator in the Center for Health Data and Analysis, RIDOH.
Rhode Island Monthly Vital Statistics Report
Provisional Occurrence Data from the Division of Vital Records

<table>
<thead>
<tr>
<th>Vital Events</th>
<th>Reporting Period</th>
<th>June 2017</th>
<th>12 Months Ending with June 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (a)</td>
<td>Number (a)</td>
<td>Rates</td>
</tr>
<tr>
<td>Live Births</td>
<td>988</td>
<td>11,488</td>
<td>10.9*</td>
</tr>
<tr>
<td>Deaths</td>
<td>810</td>
<td>10,319</td>
<td>9.8*</td>
</tr>
<tr>
<td>Infant Deaths</td>
<td>5</td>
<td>73</td>
<td>6.4#</td>
</tr>
<tr>
<td>Neonatal Deaths</td>
<td>4</td>
<td>58</td>
<td>5.0#</td>
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<tr>
<td>Marriages</td>
<td>850</td>
<td>7,192</td>
<td>6.8*</td>
</tr>
<tr>
<td>Divorces</td>
<td>271</td>
<td>2,989</td>
<td>2.8*</td>
</tr>
<tr>
<td>Induced Terminations</td>
<td>162</td>
<td>2,099</td>
<td>182.3#</td>
</tr>
<tr>
<td>Spontaneous Fetal Deaths</td>
<td>71</td>
<td>687</td>
<td>59.8#</td>
</tr>
<tr>
<td>Under 20 weeks gestation</td>
<td>64</td>
<td>615</td>
<td>53.5#</td>
</tr>
<tr>
<td>20+ weeks gestation</td>
<td>7</td>
<td>72</td>
<td>6.3#</td>
</tr>
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</table>

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

<table>
<thead>
<tr>
<th>Underlying Cause of Death Category</th>
<th>Reporting Period</th>
<th>December 2016</th>
<th>12 Months Ending with December 2016</th>
<th>Rates (b)</th>
<th>YPLL (c)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (a)</td>
<td>Number (a)</td>
<td></td>
<td>Rates (b)</td>
<td>YPLL (c)</td>
</tr>
<tr>
<td>Diseases of the Heart</td>
<td>199</td>
<td>2,312</td>
<td>218.9</td>
<td>3,246.5</td>
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</tr>
<tr>
<td>Malignant Neoplasms</td>
<td>208</td>
<td>2,215</td>
<td>209.7</td>
<td>5,552.0</td>
<td></td>
</tr>
<tr>
<td>Cerebrovascular Disease</td>
<td>46</td>
<td>439</td>
<td>41.6</td>
<td>470.0</td>
<td></td>
</tr>
<tr>
<td>Injuries (Accident/Suicide/Homicide)</td>
<td>77</td>
<td>900</td>
<td>85.2</td>
<td>13,901.5</td>
<td></td>
</tr>
<tr>
<td>COPD</td>
<td>40</td>
<td>461</td>
<td>43.6</td>
<td>482.5</td>
<td></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.
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Contact Sarah if you’ve missed an issue, sstevens@rimed.org.
Working for You: RIMS advocacy activities

November 3, Friday
Federation of State Physician Health Programs, Northeast regional meeting, Harrisburg, PA

November 6, Monday
Kids Count Rhode Island, Annual Luncheon
RI Department of Health Diabetes Prevention Program
RIMS Board of Directors Meeting: Peter A. Hollmann, MD, President-elect, presiding

November 7, Tuesday
RIMS Physician Health Committee: Herbert Rakatansky, MD, Chair
OHIC Alternative Payment Method Advisory Committee: Peter A. Hollmann, MD, President-elect
Special Legislative Commission to Study the Effects of Legalizing Marijuana, John Femino, MD
Legislative Oversight Commission of the Medical Marijuana Act, Todd Handel, MD

November 9, Thursday
OHIC Care Transformation Advisory Committee: Peter A. Hollmann, MD, President-elect
SIM Steering Committee

November 9–10, Thursday–Friday
Annual meeting of state medical society CEOs, American Association of Medical Society Executives

November 10–14, Friday–Tuesday
AMA Interim Meeting: President Bradley J. Collins, MD, AMA Delegates Peter A. Hollmann, MD, and Alyn Adrain, MD

November 12–15, Sunday–Wednesday
American Tort Reform Association Annual Meeting

November 15, Wednesday
Primary Care Physicians Advisory Committee [RI Department of Health]

November 16, Thursday
Hospital Association of RI Annual Meeting
RI Health Care Association conference call regarding Federal regulations

November 17, Friday
Meeting with RI Pharmacists Association regarding 2018 legislation

November 20, Monday
RI 1115 Medicaid Waiver public meeting regarding behavioral health

November 21, Tuesday
Improving End of Life Care Coalition Meeting with Governor’s staff and RI ACP regarding 2018 legislation

November 28, Tuesday
Legislative Commission to Study School Start Times, Susan Duffy, MD

OFFICE SPACE AVAILABLE
RIMS has 442 square feet of newly renovated office space (3 contiguous offices of 200 sf, 121 sf and 121 sf), 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

The New England Delegation to the AMA, meeting at the Hawaii Convention Center on Saturday, November 11. At the lectern, Richard Evans, MD, of Maine, Chair of the Delegation. Seated in foreground, Peter A. Hollmann, MD, of Rhode Island, Vice Chair of the Delegation and President-Elect of RIMS. Standing, Alice Coombs, MD, Delegate from Massachusetts.
The Rhode Island Medical Society now endorses Coverys.

Coverys, the leading medical liability insurer in Rhode Island, has joined forces with RIMS to target new levels of patient safety and physician security while maintaining competitive rates. Call to learn how our alliance means a bright new day for your practice.

401-331-3207
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 Marc Bialek for more information: 401-331-3207 or mbialek@rimed.org

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.
RIMS gratefully acknowledges the practices who participate in our discounted Group Membership Program
Former Marine Eddie L. Copelin, II, MD, PGY3 at RWMC, shares his path to medicine

MARY KORR
RIMJ MANAGING EDITOR

In honor of Veteran’s Day in November, the Rhode Island Medical Journal caught up with former decorated U.S. Marine Corps veteran EDDIE L. COPELIN, II, MD, a PGY3 internal medicine resident at Roger Williams Medical Center in Providence.

Q. Can you share some information about your background and early life?
A. I am 36 and grew up on Long Island, NY. At an early start I have had a passion for pushing myself outside of my comfort zone by striving to not conform to what was considered the norm for my community, family, or race.

I come from a family with 11 siblings who taught me to enjoy and embrace each other’s differences. I was always intrigued with science from the television shows of Mr. Wizard, The Magic School Bus, Bill Nye, fueling my fascination to learn more about the scientific world around me. My father’s failing health with type 2 diabetes influenced me to pursue medicine.

In high school, I was introduced to the U.S Marine Corps; its slogan, “The Few, The Proud, The Marines,” captured my desire to challenge further my ability to be a stronger person while being part of an elite organization with a strong military tradition and history. I fulfilled my first dream of becoming a U.S. Marine when I enlisted at the age of 17, despite my mother’s wishes due to my father’s recent death. I served in the U.S. Marine Corps reserve from 1999–2007 with the 6th Communications Battalion, Floyd Bennett Field in Brooklyn.

During this time, I was deployed to Kuwait and Iraq as part of Operation Iraqi Freedom [OIF] where, after an 11-month tour in Iraq, I received the Navy Achievement Medal along with other unit citations.

Before my deployment, I had started undergraduate school as a pre-med student at the New York Institute of Technology in Old Westbury, NY. Due to my deployment, I missed a year and a half of college, pushing my graduation time expectancy back.

Q. Was your service in any way a decisive factor in your decision to study medicine?
A. My service was a decisive factor in pursuing my dream to become a physician. After my deployment and being back in school I realized that I had no mentors or even the faintest idea of what steps I needed to take to become a physician. However, as a U.S. Marine, we are trained to improvise, adapt, and overcome the challenge we have in front of us – giving up is not an option for Marines. With those values instilled in me, I made sure to pursue my dreams despite the challenges ahead.

I attended the American University of Antigua School of Medicine (AUA) from 2010–2014. One of the main motivators of going to AUA was that I could use the remainder of my GI Bill, and receive scholarships for veterans and EMS personnel.
When reviewing AUA, my service was a decisive factor; it was warming to find out that AUA not only accepts the GI Bill but also created a scholarship program honoring American veterans and EMS personnel who want to pursue a career in medicine.

**Q. Who has been the most important influence in your professional life?**

**A.** There are so many important, influential people in my professional life that have helped me; however, the most influential person has been my sister, Natasha Copelin, RN. She has been there for each rise and fall of my professional life, from my time in the U.S. Marines, undergraduate school, medical school, internal medicine residency, now pursuing a fellowship in gastroenterology and eventually family life. Natasha has not only been a sister but also a friend. I am truly blessed to have her.

**Q. Are you involved with veterans today as a physician, and if so, what are the greatest medical issues veterans deal with in your experience both as a vet and young physician?**

**A.** As the VA is directly across the street from Roger Williams Medical Center, the bulk of veterans go there for care. However, when I have the privilege of taking care of fellow veterans the greatest medical issues I commonly see from a fellow veteran’s view is that the older vets with complex medical problems require more home services to prevent hospitalizations. However, these services may not always be available to the individual, which creates an issue in decreasing overall U.S. healthcare cost. As a young physician, a common medical issue veterans and the U.S. as whole deals with is the cost of medications.

**Q. What do you do to chill out and get away from the rigors of residency?**

**A.** By experiencing new things. Outside of weightlifting, I enjoy the outdoors, which includes hiking. My mind loves to be stimulated by new experiences so whether it’s trying new vegan dishes my fiancé makes, hiking, traveling, or entertainment, the main criteria when I plan to get away is to ask myself: Have I experienced this yet?

**Q. What are your plans after completing residency?**

**A.** After residency, I will continue being involved with Big Brothers and Sisters with youth who have an interest in medicine. I will also continue to push myself beyond my comfort zone by entering a gastroenterology fellowship and rejoin the U.S. Armed Forces as a reserve physician while seeking out other leadership positions in my next phase of medical training.
Brookdale Overview

Independent Living *An ideal retirement living experience*
- Spacious apartments with minimal maintenance
- Restaurant-style dining
- Plenty of planned activities every day

Assisted Living *The right choice for people who need extra help with daily activities*
- Qualified staff assists with taking medication, dressing, bathing, etc.
- Floor plans, from studio to two-bedroom apartments
- Activities and events for various levels of acuity

Alzheimer’s & Dementia Care *Person-centered care for people at various stages*
- Programs that leverage the latest dementia care research
- A care philosophy defined by more than the symptoms of Alzheimer’s & dementia
- An experienced staff who help residents thrive

Rehabilitation & Skilled Nursing *For short-term surgerical recovery or long-term rehabilitation*
- Around-the-clock, licensed nursing care
- Providing clinical resources in a comfortable setting that feels like home
- A mission and focus to helping residents get well and then get home as quickly as possible

Personalized Living *For people who just need a little help with things*
- One-on-one non-medical services for home care needs
- Additional personal needs for those in assisted living or home such as escorts to doctor appointments and more

Home Health *For qualified people in need of therapy or rehabilitation — all in the comfort of home*
- Get Medicare-certified assistance from experienced professionals
- Many healthcare services such as wound care and stroke therapy

Therapy *Specialized programming personalized to encourage recovery*
- An emphasis on education, fitness and rehabilitation that helps seniors retain or enhance their independence
- Most insurances accepted

Hospice *Promoting comfort by addressing the full range of needs of patients and families*
- Primary focus of quality of life
- Specially trained staff help families and patients cope with overwhelming feelings accompanying end-of-life care

Not all services are available at all communities. Contact community for details

The Rhode Island Network

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Brookdale Cumberland
Brookdale Smithfield
Brookdale Greenwich Bay
Brookdale Pocasset Bay

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Brookdale East Bay
Brookdale West Bay
Brookdale South Bay

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Rhode Island Hospital receives $7.9M NIH grant to develop community-based pediatric asthma care program

Initiative to identify disparities, barriers to managing asthma among high-risk kids

PROVIDENCE – The National Heart, Lung and Blood Institute [NHLBI] has awarded a $7,999,307 grant to Rhode Island Hospital to develop a community-based asthma care implementation program [ACIP] to address disparities in asthma outcomes in children. The center – one of only four in the country – will help determine both best practices for improving asthma outcomes among high-risk children with asthma and long-term program sustainability.

“Nationally we are in need of coordinated systems of asthma care and this initiative represents a first step in building a sustainable delivery model for evidence-based pediatric asthma interventions,” said co-principal investigator ELIZABETH MCQUAID, PHD, staff psychologist at Rhode Island and Hasbro Children’s Hospitals and a professor of psychiatry, human behavior and pediatrics (research) at the Alpert Medical School of Brown University.

The rate of asthma morbidity in the United States is increasing year after year and according to the American Lung Association's 2012 report, “Trends in Asthma Morbidity and Mortality,” racial and ethnic minorities have greater prevalence and higher rates of urgent health care use such as hospitalizations, where the rate for minority groups can be as much as three times higher than that of whites. Locally, according to the Rhode Island Department of Health, Rhode Island has recently seen an increase in emergency department visits and hospitalization rates (up 2.2 percent and 10.9 percent respectively in 2014) after previously showing a decline.

“We’ve been invested in providing high-quality pediatric services to children at high risk for over two decades. This project builds on our research and intervention efforts with urban families, allowing us to make comprehensive asthma care services more tailored to childrens’ specific needs, and more accessible to at-risk families in a way that’s less burdensome to them,” said co-principal investigator DAPHNE KOINIS-MITCHELL, PHD, a staff psychologist at Rhode Island Hospital and Hasbro Children’s Hospitals and an associate professor of psychiatry and human behavior and pediatrics (research) at the Alpert Medical School of Brown University.

With this funding, asthma researchers McQuaid and Koinis-Mitchell will be examining 16 targeted communities. They will evaluate the effectiveness of an integrated system called the Rhode Island Integrated Response Program (RI-AIR), created to identify children with asthma living in the most afflicted/high-risk areas, conduct screening, and refer to their evidenced-based interventions. The assessment will center around approximately 1,500 urban, ethnically diverse children with asthma and their families over a period of six years and will include a review of program effectiveness among communities and school districts, families’ acceptance of the program, and long-term program sustainability.

McQuaid and Koinis-Mitchell, also researchers at the Hassenfeld Child Health Innovation Institute [HCHII], used funding provided by HCHII in February, 2016 to develop an asthma innovation program, which supported the development of RI-AIR. Funding from HCHII allowed for the establishment of The Asthma Community Collaborative, a coalition of community stakeholders that informed a needs assessment to identify gaps in pediatric asthma care in the state. Support from HCHII also allowed for piloting the RI-AIR model, including the development and testing of:

- An algorithm to classify asthma services based on level of asthma control (multi-level school-based education and/or intensive home-based environmental intervention)
- A system of enhanced coordination between caregiver, school nurse, and health care provider to promote care integration

“The innovative integration of technology and thoughtfully reimagined clinical care apparent in RI-AIR is exactly the kind of groundbreaking research on behalf of children's health that we imagined when the Hassenfeld Institute was created,” said PHYLLIS DENNERY, MD, Hasbro Children’s pediatrician-in-chief, chair of the department of pediatrics at The Warren Alpert Medical School of Brown University, and a Hassenfeld Institute executive committee member. “With the new grant, Drs. McQuaid and Koinis-Mitchell will be able to improve asthma care for even more children. In addition, with increased availability of pulmonary and allergy/immunology services at Hasbro Children’s, we will make great strides in the care of children in Rhode Island suffering from this devastating condition.”

As part of this NHLBI program, McQuaid and Koinis-Mitchell will also meet with investigative teams from the other three supported centers in the U.S. to discuss approaches to implementing evidence-based interventions, measuring sustainability, and defining best practices in specific settings. Results will be disseminated to communities caring for children with asthma to improve outcomes for children.

“We hope that sustainable implementation of this model will help streamline care for pediatric asthma, leading to improvements such as reduced school absences for kids and increased overall wellbeing,” McQuaid added.
Clinical trial tests effectiveness of freezing breast tumors to kill cancer cells

PROVIDENCE – Rhode Island Hospital is one of only 10 sites in the nation studying the effectiveness of freezing tumor cells to treat small malignant breast tumors.

Cryoablation – killing cancer cells with extreme cold – is a promising treatment for small, early-stage breast tumors. Most women diagnosed with small malignant breast tumors typically have them removed surgically – before beginning a regimen of other cancer treatments.

“This minimally invasive procedure takes just 15 to 30 minutes, requires very little recovery time and only local anesthesia, is less costly and causes no scarring or tissue deformities,” said ROBERT C. WARD, MD, a radiologist at the Anne C. Pappas Center for Breast Imaging and the lead investigator for the clinical trial.

Rhode Island Hospital, where the center is located, is the only hospital in New England participating in the so-called FROST clinical trial.

The study, expected to span 10 years, is sponsored by Sanarus Technologies, maker of the medical equipment that is being used in the study.

During the research procedure, a small needle guided by ultrasound is inserted through a small incision in the breast and is then used to freeze the tumor, thaw it, and freeze it a second time. The tumor dies and is then naturally resorbed by the body over time. The procedure can be performed in an office setting rather than an operating room.

“Patients leave with a Band-Aid,” Dr. Ward said.

Rhode Island Hospital’s participation in the study began late this summer. The hospital is recruiting women ages 50 and up whose biopsies have revealed an invasive tumor no greater than 1.5 centimeters in diameter. The malignancy must not have spread into any lymph nodes and must be hormone receptor positive and HER2 negative.

“The National Cancer Institute sponsored a prior study which demonstrated that cryoablation was effective in 92 percent of the lesions targeted,” Dr. Ward said.

While cryoablation is significantly different compared with surgical excision, everything else about a patient’s care for breast cancer remains the same, Dr. Ward said. For example, trial patients will undergo hormone (endocrine) therapy, which is typical for women with early-stage breast cancer.

The goal of the study is to enroll about 200 patients in the trial and then check for any sign of the tumor recurring at six-month intervals for five years.

“It has the potential to become the new standard of care for certain women with breast cancer,” said Dr. Ward. “Of course, we have to do these studies and see if that will bear out.”

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Rhode Island Hospital awarded $5.8-million NIH grant for skeletal health

Research interests include cartilage and joint diseases such as osteoarthritis, rheumatoid arthritis, osteoporosis, bone tumors, and genetic bone diseases including chondrodysplasia

PROVIDENCE – The Center of Biomedical Research Excellence (COBRE) for Skeletal Health and Repair at Rhode Island Hospital recently secured a $5.8-million, 5-year Phase III COBRE grant from the National Institute of General Medical Sciences to support ongoing research in the area of cartilage and joint diseases. The center, led by principal investigator QIAN CHEN, PhD, brings together researchers with the common goal of developing treatment for musculoskeletal diseases including osteoarthritis, rheumatoid arthritis, osteoporosis, bone tumors and genetic bone diseases.

“This funding for Phase III is the capstone on a decade of work,” said Chen. “We have achieved tremendous success in building our research capacity and funding eligibility in musculoskeletal diseases, and Phase III will allow us to transition the COBRE research infrastructure into a competitive, independent, and self-sustaining academic center of excellence over the next five years.”

The COBRE for Skeletal Health and Repair supports a multi-disciplinary approach to translational research, with clinicians, biologists, and engineers all aiming to find practical applications that will bring benefits to patients in the near future. The center provides state-of-the-art core services in imaging, molecular biology, nanomedicine and bioengineering to biomedical investigators, and continued grant funding allows for investment in this laboratory infrastructure.

CNE announces new Center of Excellence to combat opioid overdose epidemic

Care New England (CNE) along with CNE members Butler Hospital, The Providence Center, and Continuum Behavioral Health, recently announced a new Center of Excellence for opioid addiction that will offer a longer treatment period and access to substance use disorder services. As part of a comprehensive, nationally-recognized action plan, Rhode Island established a Center of Excellence model to provide outpatient treatment for Rhode Islanders suffering from substance use disorder. Centers of Excellence are certified by the State and offer medically assisted treatment (MAT) and additional supportive services.

With the Center of Excellence designation, CNE received $242,224 grant monies in June. Through this funding, the launch of the program was accelerated and clinicians began seeing patients in October at its Providence and North Kingstown locations. The funding is administered by the Department of Behavioral Healthcare, Developmental Disabilities and Hospitals (BHDDH) and will primarily be used for salaries to staff the new program.

The new treatment service is called the Recovery Stabilization Program and will be led by Butler Hospital’s Chief DR. KEVIN BAILL, unit chief of intensive inpatient adult treatment services, Continuum’s Director of Operations HEATHER LYKAS, LMHC, Medical Director CATHERINE DEGOOD, DO; and Clinical Director GRETHEN ANDERSON, LICSW. Baill is also a member of Governor Raimondo’s Overdose Prevention and Intervention Task Force.

For 2016, the Rhode Island Department of Health reports there were 56 accidental deaths from prescription drugs, 216 from illicit drugs, and 66 involving both pharmaceutical and illegal drugs in the state. This is 46 more deaths from opioid overdose than reported for 2015. There are almost an equal number of deaths for those 25 to 34 years of age as there are for those 45 to 54 years of age, respectively, at 96 and 97 accidental overdoses for each age group. Also alarming is a nine-fold increase since 2009 in the number of deaths related to Fentanyl, a highly potent opioid. Since 2009, 1,534 Rhode Islanders have lost their lives to opioids.

At Butler Hospital, in the 12 months from October 1, 2016 through September 30, 2017, there were 1,549 discharges from inpatient addiction services of which 30.1 percent were for opioid use; 712 discharges from alcohol and drug addiction partial hospital (day) program with 25.8 percent related to opioid use treatment; and more than half (55.8 percent) of the 254 discharges from Butler’s ambulatory detoxification clinic were being treated for opiate use. Likewise, Continuum saw between 350 and 400 individuals over 500 treatment episodes, with a significant percentage returning multiple times for care.

The outpatient Recovery Stabilization Program provides easy access to care and is offered at Butler and Continuum locations in Providence and North Kingstown. The specialized service is designed to provide six months or more of treatment. The recovery team may include an addiction specialty physician, registered nurse, licensed therapist, and case manager. The team manages the outpatient treatment and determines when someone requires more intensive services, such as inpatient, partial hospital, or ambulatory detoxification, because of early stages of recovery, relapse, or increased risk of relapse.

Once patients are stabilized, long-term treatment is transferred to a primary care provider (PCP) and a therapist to manage medications and continue counseling, respectively. The recovery stabilization team remains available for consults should there be a need to intervene or consider adjusting medications.

People are admitted to the program through a referral from their physician or therapist, an emergency department doctor, or when self-presenting to Butler Hospital’s Patient Assessment Services in its Emergency Department.
Memorial Hospital submits application for closure with RI Department of Health; closes ICU

PAWTUCKET – Memorial Hospital has submitted its application for closure to the Rhode Island Department of Health as required by the state Hospital Conversions Act. The filing advises the Department of Health that Memorial plans to cease operations as a licensed inpatient hospital and requests the approval of the Director for the elimination of the Emergency Department and certain other services. Following the closure of the hospital, Care New England currently intends to provide certain community-based primary and specialty care services in Pawtucket. Specific to impacted employees of Memorial, Care New England is working to implement a transition plan that would help find placement throughout the system and beyond for those impacted, wherever possible.

“Today’s submission to the Department of Health represents a required and critically important step in the process Care New England carefully outlined recently,” said James E. Fanale, MD, EVP, chief operating officer and chief clinical officer.

According to the application, “At 9.3 percent occupancy, Memorial’s daily census has been significantly below capacity and below what is required to be financially viable. Due to service readiness, staffing, and operational requirements to meet licensure conditions, Memorial loses approximately $2 million per month. Given such under-utilization and unsustainable chronic financial losses, Memorial cannot continue to adequately staff and deliver patient care services in a clinically safe and financially viable manner and intends to cease all operations as soon as possible.”

As part of the phased Plan of Closure, the Intensive Care Unit (ICU) at Memorial Hospital closed effective Nov. 13. According to a CNE statement, the closure of the ICU was determined to be in the best interest of patient care and was coordinated with the Department of Health.

The ICU at Memorial has been averaging one to two patients a day and was not able to admit and care for the most critically ill patients normally cared for in an ICU due to limited availability of specialty physicians. In recent months, such critically ill patients have been appropriately diverted or transferred to other ICUs that were able to better meet their medical needs. Any patients remaining in the ICU as of Nov. 13th have been provided with care options at other ICUs or step-down facilities including Kent Hospital, a CNE facility, or an appropriate location of the patient’s choosing.

The application further addresses employee support services during this transition to include, “…upcoming job fairs to be scheduled, and similar outplacement efforts. Memorial and CNE look forward to the continued assistance of, and plan to collaborate with, state and local leaders and other area medical facilities to find jobs for employees in non-CNE facilities if suitable positions are not available within CNE. CNE appreciates the current and ongoing efforts of Gov. Raimondo and other community leaders to secure commitments from other health system leaders to assist Memorial Hospital employees to find suitable employment following the closure of Memorial.”

On the issue of ongoing access to care for the community, the application details a wide range of medical facilities available immediately within the existing service area and just a few miles from Memorial Hospital. The application also highlights that Memorial and CNE leadership “…have had meetings with representatives of several hospitals and community health centers…and each has indicated the capacity and willingness to accept patients and provide services for patients transitioning from Memorial.”

Care New England believes that convening a forum comprised of representatives from Care New England, state officials, and community leadership would be an appropriate next step to identify and address the need for community-based services after the closure. A successful, cooperative, and collaborative effort that provides a thorough and thoughtful review will help to determine the best future use of the Memorial campus.

As was stated recently when the plan to close Memorial was first announced, the impetus for the changes include the chronic financial losses being incurred at Memorial, continuing a nearly 10-year slide, resulting in an operating loss in the past fiscal year of $23 million.

Care New England recorded a $68 million loss from operations in fiscal year 2016 and is projected to show a $49 million operating loss for the fiscal year that just ended on September 30. Its plan to restore financial well-being to the health care system focuses in large part on the resolution of the ongoing losses at Memorial, which is not financially viable and is not projected to ever be viable.
CNE outlines initial plans for medical centers, residency program

Care New England announced on Nov. 21 initial plans for the continuity of community-based care in the Pawtucket region as it works with the Rhode Island Department of Health through the reverse certificate of need process. CNE has also started to engage and work collaboratively with Governor Raimondo’s office and Mayors Donald Grebien and James Diossa.

Family and Internal Medicine
While CNE continues to address key next steps, these plans call for maintaining family care and internal medicine offices in Pawtucket. The Family Care and Internal Medicine Centers, delivering primary care to thousands of community residents, will continue to see patients in a similar fashion as they currently do. The ability for residents to have access to high-quality family care and internal medicine practices is crucial to meeting the health care needs of the community.

Medical Residencies
Currently, the Family Care and Internal Medicine Centers serve as training sites for residencies affiliated with The Warren Alpert Medical School of Brown University. CNE will seek to maintain these residencies and this affiliation under Kent Hospital. This transfer will require approval by both the American College of Graduate Medical Education and the Centers for Medicare & Medicaid Services, as well as by The Warren Alpert Medical School of Brown University. CNE is hopeful that it will be able to obtain these approvals. Physician practice-based training for these residencies would continue to be performed at office sites in Pawtucket and hospital-based training would be done at Kent Hospital and other hospitals in the region.

“Care New England is dedicated to meeting the needs of the population that have historically been served by Memorial Hospital in a way that honors and continues the legacy of this institution, while acknowledging the industry-changing dynamics and future of health care,” said JAMES E. FANALE, MD, CNE executive vice president, chief operating officer and chief clinical officer.
Pelvic organ prolapse (POP) is a common problem in women that is caused by a weakness of the ligaments and muscle that normally hold up the bladder, vagina, uterus, and rectum. While it is not usually dangerous, POP can be very uncomfortable and interfere with healthy living. Often, health care providers struggle with how to properly evaluate and counsel patients with POP.

The American Urogynecologic Society (AUGS) Guidelines and Statements Committee recently published a Best Practice Statement in the journal Female Pelvic Medicine & Reconstructive Surgery entitled “Evaluation and Counseling of Patients With Pelvic Organ Prolapse.” The statement was prepared with the assistance of a team that includes Cassandra L. Carberry, MD, MS, a member of the Division of Urogynecology and Reconstructive Pelvic Surgery at Women & Infants Hospital of Rhode Island and an assistant professor (clinician educator) at Brown University.

According to the statement, “Women with prolapse should have an examination to quantify the loss of anatomic support and should be evaluated for associated bladder, bowel, and prolapse symptoms, as well as associated bother. Treatment options should be tailored to meet the patient’s medical health and personal functional goals. In most cases, women should be informed of the range of treatment options including observation as well as nonsurgical and surgical management.”

Dr. Carberry has explained that there are several treatment options for pelvic organ prolapse, including specialized physical therapy to help strengthen the pelvic muscles that support the vagina, bladder, and rectum; a pessary to provide support; or surgery to correct the POP.

She said, “It’s important for women with pelvic organ prolapse to be properly evaluated and given all their options. Any health care provider taking care of women may encounter patients with pelvic organ prolapse. They should be aware of the necessary evaluation and treatment options, and can work collaboratively with specialists to treat those women who are symptomatic to improve their quality of life.”

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Mandated coverage for fertility preservation featured in *New England Journal of Medicine*

This summer, it was announced that Rhode Island became the first state to pass a law explicitly requiring coverage for fertility preservation prior to gonadotoxic medical therapy, treatment that could directly or indirectly cause infertility. A perspective on this mandated coverage in Rhode Island and similar legislation in Connecticut has been published in the October 26, 2017 edition of the *New England Journal of Medicine*.

The perspective was written by **Eden R. Cardozo, MD; Warren J. Huber, MD;** and **Ruben J. Alvero, MD**, of the Fertility Center at Women & Infants Hospital of Rhode Island, and **Ashley R. Stuckey** of Women & Infants’ Program in Women’s Oncology/Breast Health Center, the team that initiated the legislative process in Rhode Island, co-wrote the bill, and, along with patients, testified on behalf of its passage at hearings at both the Rhode Island House of Representatives and Senate.

In the perspective, the authors write, “There are two general approaches to legislatively mandating fertility-preservation coverage: establishing a new mandate defining fertility preservation as an extension of cancer treatment, or revising a current infertility coverage mandate by either redefining ‘infertility’ (as Connecticut revised its definition to cover cases in which ‘such treatment is medically necessary’) or providing an additional definition for fertility preservation (as Rhode Island has done). The separate definition allows for explicit coverage of fertility preservation for iatrogenic infertility as part of medical treatment, without risking interpretation as an elective infertility benefit.”

The authors offer recommendations to other states considering establishing new mandates and warn about potential resistance related to provisions in the Affordable Care Act that are “intended to discourage states from passing mandates that exceed the essential health benefits requirements…A potential alternative approach, particularly promising in states that lack an existing infertility mandate, is to revise an existing non-infertility-related mandate, such as one related to cancer (every state has at least one, including the Women’s Health and Cancer Rights Act).”

The authors concluded, “Though we recognize the challenges posed by the national economic and health policy environment, we hope other states will soon follow the lead of Rhode Island and Connecticut. As health care providers, we believe it’s our obligation to work to preserve our patients’ reproductive futures.”

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Dr. Donald Coustan recognized as giant in obstetrics and gynecology

DONALD R. COUSTAN, MD, of Jamestown, director of the Prenatal Diabetes Program in the Division of Maternal-Fetal Medicine at Women & Infants Hospital and professor of obstetrics and gynecology at the Alpert Medical School, has been recognized as a “Giant in Obstetrics and Gynecology.” This recognition is part of a series by the American Journal of Obstetrics and Gynecology (AJOG) through which AJOG recognizes individuals who have changed the practice of medicine.

Dr. Coustan is an internationally recognized expert on the management of diabetes in pregnancy and is the author of more than 200 research papers and scholarly publications. He was chairman of the Department of Obstetrics and Gynecology at Women & Infants Hospital and the Alpert Medical School from 1991 to 2008.

“This is a wonderful honor for Dr. Coustan and the hospital in general,” said Diane Rafferty, interim president and chief operating officer of Women & Infants Hospital, a Care New England hospital. “Dr. Coustan, like so many of our physicians, works tirelessly every day to help improve the lives of women. Through his innovative work in the field of maternal-fetal medicine, and in particular his groundbreaking research on treating diabetes in pregnancy, he has impacted women’s health care in unique and valuable ways.”

Dr. Matthew Bivens recognized as EMS Physician of the Year by GFREMSCC

FALL RIVER – The Greater Fall River Emergency Medical Services Coordinating Committee (GFREMSCC) has named DR. MATTHEW BIVENS, EMS Medical Director for St. Luke’s Hospital, as 2017 EMS Physician of the Year.

“I am very honored to accept this award, and it is a real privilege for me to be associated with the EMS services in our region, which I consider to be truly elite EMS services,” Dr. Bivens said at the GFREMSCC annual conference on October 27. He added that the award reflected the commitment of the entire St. Luke’s emergency department team, under DR. JENNIFER POPE, to supporting and partnering with local EMS.

Dr. Bivens was nominated jointly by Acushnet Fire/EMS Chief Kevin Gallagher and New Bedford EMS Director Mark McGraw.

Chief Gallagher lauded Dr. Bivens for his successful efforts to inspire significant policy changes with the office of Emergency Medical Services (OEMS).

In particular, the award recognized the work organized by Dr. Bivens and involving multiple local private and municipal EMS companies – including Acushnet EMS, Alert EMS, EastCare EMS, Fairhaven EMS and New Bedford EMS – to provide prehospital tranexamic acid (TXA), an inexpensive and life-saving medication for trauma patients. Randomized trials, and also U.S. military battlefield experience, have shown that TXA, when provided as early as possible to a trauma patient, can be life-saving.

Use of the medication by 911 ambulances was pioneered by EMS companies affiliated with St. Luke’s Hospital, in a year-long program administered by Dr. Bivens and Brian Giorgianni, the St. Luke’s Hospital EMS Coordinator, and in cooperation with Rhode Island Hospital trauma services. This year, the pilot program led to changes in statewide EMS protocols for both Rhode Island and Massachusetts.

Dr. Bivens was also one of many EMS leaders and medical directors who, concerned about the opioid epidemic, have championed non-opioid pain management options for the state’s ambulances. Working with Acushnet EMS, Dr. Bivens coordinated a special project application to include Ondelat, an IV preparation of acetaminophen (better known in pill form by its brand name Tylenol) on ambulances. There was such strong interest in this and other non-opioid pain management options that the Department of Public Health skipped the standard approach of a special project, and in October adopted “IV Tylenol” and other non-opioid pain relievers as emergency protocol update options for EMS.
Lifespan hospitals earn top patient safety scores in national Leapfrog ratings

PROVIDENCE – Rhode Island, The Miriam, and Newport hospitals all received an “A” in the Leapfrog Hospital Safety Grade released recently by The Leapfrog Group. Lifespan is the only health system in Rhode Island to receive the top score for all its eligible hospitals.

Leapfrog, the national nonprofit health care ratings organization, gives grades of A, B, C, D and F to hospitals based on their performance in preventing medical errors, infections and other harms. Nationwide, 832 hospitals earned an A.

“Our outstanding professionals work diligently every day to ensure that patients receive the highest quality care and best possible outcomes in the spirit of delivering health with care,” said CATHY E. DUQUETTE, PhD, RN, executive vice president for nursing affairs at Lifespan.

“We are proud and honored that Leapfrog has recognized the tremendous investment in continuous improvement at each of our hospitals.”

Developed under the guidance of a blue ribbon national expert panel, the Leapfrog Hospital Safety Grade uses 27 measures of publicly available hospital safety data to assign grades to more than 2,600 U.S. hospitals twice each year. It is calculated by top patient safety experts, peer reviewed, fully transparent and free to the public.

Recognition

Rhode Island Hospital named one of the nation’s 50 top Cardiovascular Hospitals by IBM Watson Health

PROVIDENCE – Rhode Island Hospital is among the nation’s top cardiovascular programs, according to IBM Watson Health’s recent “50 Top Cardiovascular Hospitals 2018” study. Rhode Island Hospital is one of only three hospitals in New England to earn the distinction, and the only one in the state.

The annual study, conducted by IBM Watson Health’s Truven Health Analytics, identifies the top U.S. hospitals for in-patient cardiovascular services. The study uses a balanced national scorecard of hospital performance metrics to identify the highest performing cardiovascular service lines in the nation.

The Watson Health 50 Top Cardiovascular Hospitals study measures attainment in key performance areas: risk-adjusted inpatient mortality, risk-adjusted complications, percentage of coronary bypass patients with internal mammary artery use, 30-day mortality rates, 30-day readmission rates, severity-adjusted average length of stay, wage- and severity-adjusted average cost per case and CMS 30-day episode payment measures. The study has been conducted annually since 1999. This is the fourth time Rhode Island Hospital has been recognized with this honor.

“We are so honored that Rhode Island Hospital has been recognized by IBM Watson for our cardiac care. This speaks volumes to the tremendous expertise within the Lifespan Cardiovascular Institute, and the outstanding patient care provided in the inpatient setting at Rhode Island Hospital,” said MARGARET M. VAN BREE, MHA, DrPH, president of Rhode Island Hospital.

The top hospitals were announced in the November 6, 2017, edition of Modern Healthcare magazine.
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Recognition

Southcoast Health hospitals receive ‘A’ grades for Patient Safety in Leapfrog’s Fall 2017 Hospital Safety Grade

NEW BEDFORD – Southcoast Health has been recognized for its dedication to patient safety by being awarded an “A” grade in the Fall 2017 Hospital Safety Grades, which rates how well hospitals protect patients from preventable medical errors, injuries and infections within the hospital. Southcoast Health’s three hospitals – St. Luke’s Hospital in New Bedford, Charlton Memorial Hospital in Fall River and Tobey Hospital in Wareham – were each recognized with the top rating.

The Leapfrog Hospital Safety Grades assign A, B, C, D and F letter grades to hospitals nationwide. St. Luke’s, Charlton Memorial and Tobey were three of 832 hospitals to receive an “A” for its commitment to reducing errors, infections, and accidents that can harm patients.

“Patient safety is paramount to everyone at Southcoast Health,” said KEITH HOVAN, President & CEO of Southcoast Health. “When patients are admitted to a Southcoast Health hospital, they and their families can be confident that we have the personnel, training and systems in place to maintain the highest level of clinical care and patient safety.”

The Hospital Safety Grades are compiled under the guidance of patient safety experts and administered by The Leapfrog Group, a national, independent nonprofit. The Hospital Safety Grades are free to the public and designed to give consumers information they can use to protect themselves and their families when facing a hospital stay.

HARI holds annual meeting; members recognized for service

PROVIDENCE – The Hospital Association of Rhode Island (HARI) recently hosted its 85th annual meeting at the Providence Marriott Downtown. Recipients of the Benjamin R. Sturges Distinguished Service Award, Francis R. Dietz Award for Public Service, and the American Hospital Association (AHA) Grassroots Champion Award were honored by the association and its attendees.

HARI recognized MICHAEL DACEY, MD, president and chief operating officer of Kent Hospital and president of Memorial Hospital of Rhode Island, as the newly-appointed chair of the HARI Board of Trustees. John Holiver, chief executive officer of CharterCARE Health Partners, has been elected vice chair of the board.

EVE KEENAN and STEPHEN GREEENE were awarded the Benjamin R. Sturges Distinguished Service Award. Keenan was honored for her commitment and dedication to South County Health where she serves as chair of the board of trustees. Greene was recognized as chair of the Westerly Hospital Board of Trustees. The Distinguished Service Award is bestowed in honor of Benjamin Sturges, a community leader who devoted his life to health care and to bettering the community.

The Francis R. Dietz Award for Public Service was presented to SEN. V. SUSAN SOSNOWSKI and REP. TERESA TANZI for their leadership on legislation to reduce the regulatory burden of physician offices acquired by hospitals or healthcare systems. The Francis R. Dietz Award for Public Service honors individuals for remarkable contributions to health care issues.

The American Hospital Association’s Grassroots Champion Award was presented to CHRISTOPHER LEHRACH, MD, executive director of network development for the Eastern Connecticut and Rhode Island Division of Yale New Haven Health. The award recognizes hospital leaders who effectively educate elected officials on how major issues affect hospitals’ vital role in the community, who have done an exemplary job in broadening the base of community support for hospitals, and who have been tireless advocates for hospitals and patients.

HARI President TERESA PAIVA WEED presented the HARI 2017 Annual Report. The report included highlights of the association’s numerous legislative victories and quality initiatives. In addition to HARI’s advocacy efforts, Paiva Weed provided attendees with a summary of HARI’s member-focused services and business plan for 2018.
Appointments

Linda Hunter, EdD, named president-elect of the American Midwifery Certification Board

**LINDA HUNTER, EdD, CNM, FACNM**, of Pawtucket, a certified nurse midwife and assistant professor of obstetrics and gynecology [clinical] in the Midwifery Program in the Department of Obstetrics and Gynecology at Women & Infants Hospital and The Alpert Medical School, has been appointed president-elect of the American Midwifery Certification Board (AMCB). She will be appointed president in 2019 and will serve a three-year term.

Hunter joined the Midwifery Program in November 2007, previously working as a registered nurse in the emergency room, labor and delivery, and as a staff educator at Women & Infants from 1982 to 1995. Once completing her graduate education in nurse midwifery at the University of Rhode Island, Hunter worked in private practice in New London, CT. She then joined the faculty of the University of Vermont (UVM), during which time she worked in a hospital-based nurse midwifery practice and held faculty appointments in the College of Medicine and Nursing. Hunter actively participated in the classroom and clinical education of nursing and medical students and received her doctorate in educational leadership and policy studies from UVM in 2008.

A contributing editor, Clinical Rounds section for the *Journal of Midwifery and Women’s Health*, Hunter is also the current chair of the Certificate Maintenance Committee of the AMCB.

J. Tessa Draper, MD, joins Southcoast Physicians

**FALL RIVER** – Family medicine physician **J. TESSA DRAPER, MD**, has joined Southcoast Physicians Group.

Dr. Draper earned her bachelor’s degree at the University of Massachusetts Boston before completing her medical degree at the University of Massachusetts Medical School in Worcester. She completed residency in family medicine at Cambridge Health Alliance and Carney Hospital through Tufts University School of Medicine.

Dr. Draper is a member of the American Academy of Family Physicians, American Medical Association, Massachusetts Academy of Family Physicians and Massachusetts Medical Society. Her professional interests include addiction medicine, women’s health and quality improvement.

Ganary Dabiri, MD, PhD, joins CharterCARE

Dermatologist **GANARY DABIRI, MD, PhD**, joins CharterCARE as the Associate Program Director for CharterCARE Medical Associates and Director of the Dermatology Wound Healing Clinic at Roger Williams Medical Center.

Dr. Dabiri is board-certified by the American Board of Dermatology and a Fellow of the American Board of Dermatology.

She completed her residency at Roger Williams Medical Center/Boston University School of Medicine, where she served as chief resident in dermatology in her final year. She also completed a Wound Healing Fellowship at Roger Williams.

Dr. Dabiri completed medical school at Albany Medical College, where she also received her PhD and master’s degree in cell biology and cancer research. She received her Bachelor of Science in Biological Sciences from Florida International University.

A member of the American Academy of Dermatology, The Rhode Island Dermatology Society, the New England Dermatology Society, and the American Medical Association, Dr. Dabiri has numerous research publications and presentations to her credit.
Obituaries

ALBERTO V. ERFE, MD, 78, of Lincoln passed away peacefully November 11, 2017. He was the beloved husband of Hilda [Giron] Erfe.

Born in the Philippines, he had lived in Lincoln for the past 43 years.

Dr. Erfe was a physician specializing in internal medicine and cardiology for over 40 years. He was a graduate of University of Santo Tomas Faculty of Medicine & Surgery in the Philippines. After arriving in Rhode Island, he was trained at Miriam and Rhode Island Hospitals. He was on the staff of Landmark Medical Center, Woonsocket and the former Fogarty Memorial Hospital, North Smithfield.

Besides his wife, he is survived by his loving son, Vincent Erfe and his wife, Kirstin of Washington, D.C.; his beloved grandchildren, Jack and Madeleine; a sister and several nieces and nephews.

In lieu of flowers, contributions in Dr. Erfe’s memory to LaSalette Shrine, 947 Park Street, Attleboro, MA 02703 would be appreciated.

DR. HO YONG LEE passed away at the age of 91 years on October 29, 2017 surrounded by his loving family at his home in Providence.

Dr. Lee was born in Korea and raised in Seoul, younger of two brothers. After graduating Seoul National University College of Medicine, Dr. Lee served as Captain in the Korean Air Force during the Korean War. He first came to the United States in 1953 to complete his medical training. He subsequently, returned to Korea, obtained a position as a medical school professor, married and started a family there. Ultimately, though, he and his wife chose to immigrate to the United States, and settled in Rhode Island.

Dr. Lee served as the Chief of the Pathology Laboratory at the Rhode Island State Department of Health for 25 years. He worked on many public health initiatives to improve the quality and efficiency of care given to the people in the state. He was active for decades in the Korean Association of Rhode Island, serving as its president for a time.

Dr. Lee was a caring and devoted father who spent many hours chauffeuring his children to and from classes, camps, tournaments, and team practices, helping them with homework, and encouraging their hobbies and enthusiasms. With his wife, he built a beautiful home in Barrington, which was a haven for his children and grandchildren during their visits. The magnificent flowering magnolia and cherry blossom trees and the annual harvest of tomatoes and cucumbers there were a testament to that fact that Dr. Lee was ever a gardener and farmer at heart. A talented and inspired artist, his many paintings are a legacy that continue to grace the homes of his children and friends.

Dr. Lee is survived by his wife of 57 years Theresa Soon Yung, daughters Susanna, Marian and Sandra Lee Chen, son-in-law, Sidney Chen, and his grandchildren Larissa, Alexander Chen and Elizabeth Chen. In lieu of flowers, donations may be directed in memory of Dr. Ho Yong Lee to LEEF [Laurelmead Employee Educational Fund] 355 Blackstone Boulevard, Providence, RI 02906 or Zion Korean United Methodist Church, 35 Kilvert St., Warwick, RI 02886.

FRANK MERLINO, MD, 93, of Warwick, died November 18, 2017, after self-diagnosing his AFib, but uncharacteristically, misdiagnosing an unrelated complication. For 59 years, he was the beloved husband of Mary Ellen [Murtagh] Merlino, who he lovingly cared for until her death in 2010.

He graduated from Classical High School and attended Brown University before completing medical school at Tufts University. He was a Captain in the U.S. Navy tending to the needs of injured soldiers during the Korean war.

Dr. Merlino was the second board-certified cardiologist in the state, and practiced at Rhode Island Hospital for over 35 years. He was the president of the medical staff of the hospital from 1972 to 1973.

He is survived by his six sons, and their wives, John and Melissa of Atlanta, GA, Mark and Bobbie of Washington, DC, Matthew and Debora of Sandy Springs, GA, Andrew and Lynne of Dallas, TX, Frank and Hike of Warwick, Paul and Kia of Atlanta, GA, and his 12 grandchildren. Frank was predeceased by his son Francis and his daughter, Maribeth.

In lieu of flowers, contributions to Nursing Education, RI Hospital Foundation, PO Box H., Providence, RI 02901 will be appreciated.
ROBERT DENNIS TARRO, MD, 82, of North Kingstown passed away peacefully on November 8, 2017 surrounded by his loving family. He was a resident of Cranston, Rhode Island and Green Hill, Rhode Island.

He graduated from Classical High School, Georgetown University College of Arts and Sciences, and Georgetown University School of Medicine. He went to the Graduate School of Medicine at the University of Pennsylvania and completed his residency training in otolaryngology/head and neck surgery at Rhode Island Hospital. He served as a Captain in the United States Air Force. After his military service, he returned to Rhode Island to raise his family and begin his career.

From 1967 until his retirement in 2012, Dr. Tarro practiced in partnership with Drs. Vartan Papazian and Thomas Della Torre, later to become Rhode Island Ears, Nose, and Throat Physicians.

He was on staff at Memorial Hospital of Rhode Island, Rhode Island Hospital, Hasbro Children’s Hospital, Miriam Hospital, Our Lady of Fatima Hospital, and Blackstone Valley Surgicare. At Memorial, he served as president of the medical staff and chief of otolaryngology. He was a fellow of the American Academy of Otolaryngology/Head and Neck Surgery, the American College of Surgeons, and the American Society of Otolaryngology Allergy. Dr. Tarro was a member of the Pawtucket Medical Society, Rhode Island Medical Society, and New England Otolaryngologic Society. It was his honor and privilege to serve his patients and the community for almost 50 years.

He was a good father, a committed physician, and an honorable man who lived a happy, full and productive life until the end. He will be missed and cherished by all those who knew him.

Dr. Tarro is survived by his eight children: R. Dennis Tarro II and his wife Lissa of Sterling, VA; Anthony M. Tarro and his wife Patricia of North Kingstown; John M. Tarro, MD, and his partner James Mooney of Cranston; Pamela A. Tarro of Providence; Jennifer J. Walsh and her husband Richard of Hingham, MA; Christopher T. Tarro and his wife Tejal of Greenville; Matthew R. Tarro of Santa Monica, CA; and Mark S. Tarro of Quincy, MA.

He also leaves nine grandchildren, several nieces and nephews, a large extended family and many dear friends.

In honor of his passion for life, memorial donations may be made to the Memory & Aging Program at Butler Hospital, 345 Blackstone Boulevard, Providence, RI 02906 or the Alzheimer’s Association, www.alz.org.
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ABSTRACT
Using editorials published in the Rhode Island Medical Journal’s inaugural year, this article examines what it meant to practice medicine in Rhode Island in 1917. One hundred years ago, the state’s medical community was undergoing rapid transformation epitomized by a turn toward the germ theory of disease, ongoing education and hospital reform, and a growing sense of the profession’s political and social role. In many ways, the social and professional concerns of Rhode Island physicians in 1917 continue to resonate today. Physicians writing in the Journal were excited by but concerned about technological advancement in medicine, debating how new institutions and sites of care would shape their interactions with patients. They were also influenced by broader social changes affecting the medical profession, expressing ambivalence toward regulation, debating the implications of social insurance and compulsory health insurance, and reflecting on their financial livelihood and the social prestige of their profession.

KEYWORDS: history of medicine, 1917, medical profession, Rhode Island Medical Journal

FIGHTING DISEASE
The most publicly recognizable physician in Rhode Island was Charles V. Chapin, Providence’s long-serving superintendent of health (Image 1). By 1917, Chapin had been superintendent for 33 years, and he would remain in that position for another 15 years. Born and raised in Providence, Chapin graduated from Brown, studied medicine in New York City, and spent the entirety of his career in Providence. As one of the foremost public health officials in the United States, Chapin was a particularly effective communicator of the tenets of modern public health, particularly the germ theory of disease. His seminal texts, such as The Sources and Modes of Infection (1910), translated bacteriological principles and practices for both medical professionals and the broader public. In 1917, Chapin published How to Avoid Infection, a short, popular book in which he argued that greater attention to personal hygiene was more effective than municipal sanitation for preventing the spread of disease-causing microorganisms. As Chapin argued, “personal cleanliness is the cheapest insurance against infection.”

Chapin’s local success as superintendent and national renown as an effective crusader for the germ theory epitomized how advances in bacteriology and immunology reinforced the social authority of physicians in early 20th-century America. By 1917, laboratory scientists and physicians had confirmed that specific microorganisms caused specific diseases such as diphtheria, gonorrhea, syphilis, and tuberculosis. This, in turn, led to the introduction of diagnostic tests such as the Schick test for diphtheria, the Wassermann test for syphilis, and the Widal test for typhoid fever. The development of effective agents such as diphtheria antitoxin and Neo-Salvarsan for syphilis further reinforced the notion that laboratory discoveries could lead to improved public health.

As the germ theory transformed efforts to diagnose, manage, and treat infectious diseases, public attention and resources turned toward more chronic conditions. In Rhode
Island, cardiovascular disease was the leading cause of death in 1917, joined by seven other non-infectious conditions among the top ten (Table 1). This mirrored developments nationwide, with scientists and physicians forming new organizations like the American Association for Cancer Research and the Association for the Prevention and Relief of Heart Disease to combat these new threats. But even as these chronic diseases were on the rise, infectious conditions continued to exact a heavy toll in the pre-antibiotic era. In that same year, pneumonia and tuberculosis remained the second and third leading causes of death in Rhode Island.

PROFESSIONAL MATTERS

Rhode Island medicine occupied an unusual spot on the Eastern Seaboard, with many physicians concerned they were practicing in the shadow of Boston’s medical mecca. One March 1917 editorialist argued that the “unfortunate proximity of Boston...encourages local men to sit at the feet of their Massachusetts colleagues and gather from them new ideas and principles instead of working these out for themselves amid the wealth of materials presented by the clinics of the state.” In part, “local men” looked toward Boston because Rhode Island lacked one notable institution: a medical school. Although Brown University had offered medical training for 16 years, from 1811 to 1826, the university discontinued medical studies in 1827, leaving Rhode Islanders no other option for in-state medical training. Although editorialists called for the “unifying and stimulating influence of a local medical school” in 1917, Brown would not re-establish its medical school for another 55 years, in 1972.

Medical Education

Nevertheless, Rhode Island physicians participated in and were beneficiaries of wide-ranging reform in both medical education and clinical practice in the 1910s. Although they practiced in one of the few states that did not have a medical school when Abraham Flexner, a Hopkins- and Harvard-trained reformer of American higher education, published his influential 1910 investigation of medical education in the United States and Canada, medical education reform efforts both before and after Flexner’s report nevertheless impacted newly minted medical graduates who trained out of state and returned (or in some cases, moved to) Rhode Island to practice medicine. Medical education reformers in the early 20th century decried the inconsistent, often minimal training given to most American medical graduates and argued that medical training should include two years of training in laboratory sciences followed by two years of clinical rotations in a teaching hospital, recommendations ultimately endorsed by the American Medical Association.

Hospitals

The first decades of the 20th century were also an active period of change for hospitals, where reformers advocated incorporating principles of efficiency and scientific management into hospital administration. By 1917, hospitals were moving away from their legacies as filthy repositories for the poor and becoming well-regarded centers for medical care, research, and teaching (Images 2, 3). Most Rhode Island hospitals operating in 1917, including Rhode Island Hospital

<table>
<thead>
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<th>Table 1. Leading Causes of Death in Rhode Island, 1917.</th>
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<tr>
<td>Diseases of heart and arteries</td>
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<tr>
<td>Pneumonia (all forms)</td>
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<tr>
<td>Tuberculosis (all forms)</td>
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<tr>
<td>Cerebral hemorrhage</td>
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<tr>
<td>Chronic nephritis</td>
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<tr>
<td>Cancer (all forms)</td>
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<tr>
<td>Diarrhea (under 2 years)</td>
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<td>Premature birth</td>
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<td>Congenital debility</td>
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<td>Senility</td>
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<td>Total deaths, all causes</td>
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and St. Joseph Hospital, and later, The Miriam Hospital, which opened its doors in 1926, traced their origins to the voluntary hospital movement, which was based on the philanthropic provision of clean, ordered, and dignified care for the “worthy poor.” Many served specific religious groups; St. Joseph Hospital first opened its doors to the “poor and suffering sick of Rhode Island” in 1892 under the auspices of the Roman Catholic Diocese of Providence, while The Miriam Hospital traces its origins to 1902, founded by a small group of Jewish women who collected $1,000 in coins to fund a down payment to establish a hospital for the “care of indigent Jews.”

Two notable Rhode Island facilities dedicated to infectious disease opened their doors after 1900: in 1905, the Rhode Island State Sanatorium opened in Burrillville to treat tuberculosis patients, and in 1910, Providence City Hospital opened as an infectious disease facility (and is now the eastern part of the Providence College campus).

Organized Medicine

Founded in 1812, the Rhode Island Medical Society (RIMS) represented the interests of any Rhode Island physician who was licensed in the state and was granted membership upon application. In January 1917, the Society purchased and re-launched the Providence Medical Journal as the Rhode Island Medical Journal. The state medical society’s new ownership stake transformed a local publication into a statewide one, allowing the Journal to receive advertising and financial support from the American Medical Association (AMA). The decision to re-brand also reflected the AMA’s rapid consolidation of power and influence: between 1900 and 1920 the organization’s membership grew more than tenfold and represented sixty percent of the nation’s physicians.

Fees and Taxes

Early editorialists also addressed the pressing economic matters of physician fees and income taxes. As was custom, Rhode Island physicians charged relatively modest fees for the care they provided. But in 1917, the economics of care were in flux. Technological innovation shifted care into hospitals and educational reform led to fewer, albeit more highly trained, physicians entering the profession. Together, these trends increased the cost of care. Some physicians felt they deserved more, however. As one editorialist argued, “professional fees are practically the same as they were a generation ago…The time is not far distant when, in simple justice to ourselves, there must be a general increase in professional fees.”

The December issue of the Journal even included a sample tax return in order to demonstrate how the War Revenue Act of 1917 would impact physicians. The Act increased federal income tax rates, particularly for those in higher income brackets, to which some physicians objected. As one editorialist noted, “the present taxes are designed particularly to gouge the professional man. While we believe that the medical profession desires patriotically to bear its burden, we know that there is a limit.” One way to alleviate the added tax burden, the editorialist concluded, was to voluntarily increase physician fees.

While it is unclear if Rhode Island physicians ever collectively agitated in opposition of these tax increases, most likely continued to do very well for themselves. Advertisements included in numerous issues of the Journal shed light on their status as high-class consumers. Those for Michelin tires or automobile manufacturers like Cadillac promoted the automobile as an integral adjunct to medical practice and an arbiter of professional prestige. Other advertisements were more professionally directed. While the Victor Electronic Corporation touted its new x-ray equipment, the Rathskeller restaurant near Providence City Hall offered “gastronomical replenishment” to physicians. Numerous pharmacies and device manufacturers also promoted their wares.

THE SPECTERS OF WAR AND SOCIAL INSURANCE

Rhode Island physicians grappled with two important social concerns in 1917: wartime medical preparedness and social insurance legislation. After the United States officially declared war on Germany in April 1917, physicians and state medical societies across the country anticipated that physicians would be called into medical service during wartime. Several issues of the Journal took up the issue,
Physicians are Gluttons for Work
and so are called upon to renew their physical and mental energies by means of
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Michaelin
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Waite Auto Supply Co.
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emphasizing medical preparedness as a patriotic duty. The RIMS was “unhesitatingly in favor” of a medical draft, and proclaimed that “the profession of this state must wake up to the fact that they have a duty to perform.”

Although a medical draft did not take place during World War I, the Army Medical Department did rely on the American Medical Association and other professional organizations to help encourage physicians to volunteer for medical service.

The Journal simultaneously paid considerable attention to the local impact of an ongoing national debate about social insurance. In 1912, the Rhode Island General Assembly enacted the Workmen’s Compensation Act, which required employers to provide medical services to injured employees for two weeks after an injury. By 1917, the General Assembly revisited the law, with the state’s physicians playing an integral role in debating the measure.

Editorialists argued that injured employees and the physicians who cared for them shared a common interest: while injured employees had an “ancient right to choose his own physician,” physicians had an economic right to be fairly compensated for their services. One editorialist argued that physicians should not be compelled to concede to “a dictatorial insurance company.”

In May, the state’s physicians declared victory: not only did the General Assembly permit injured employees to select their physician, but physicians had legal standing to sue for disputed fees.

In one sense, the Rhode Island medical community’s response to worker’s compensation legislation was tied not to a clear defense of social legislation, but rather the perceived impact upon the professional autonomy and financial livelihood of the state’s physicians. This tension was also apparent in the ongoing national debate about compulsory health insurance, with one later editorial urging physicians to oppose “vicious legislation” for compulsory health insurance that would surely impose upon their professional autonomy.

CONCLUSION

In 1918, Rhode Island’s medical community was harshly tested by the influenza pandemic. The pandemic had a striking impact on Rhode Island, which saw deaths from influenza skyrocket from 128 in 1917 to 2306 in 1918. The state’s medical community, transformed by ongoing education and hospital reform, a growing sense of the profession’s political and social role, and a turn toward the germ theory of disease, would stumble in the face of this global pandemic. Ultimately, however, it grew stronger in its wake, and continues to grapple with many of the same issues its predecessors faced a hundred years ago.

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Acknowledgment

The author thanks Deborah Doroshow, MD, PhD, for her insightful comments during the preparation of this manuscript.

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