

RHODE ISLAND MEDICAL JOURNAL



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PUBLICATION STAFF

MANAGING EDITOR

MARY KORR
mkorr@rimed.org

GRAPHIC DESIGNER

MARIANNE MIGLIORI

ADVERTISING

STEVEN DETOY
SARAH STEVENS
ads@rimed.org

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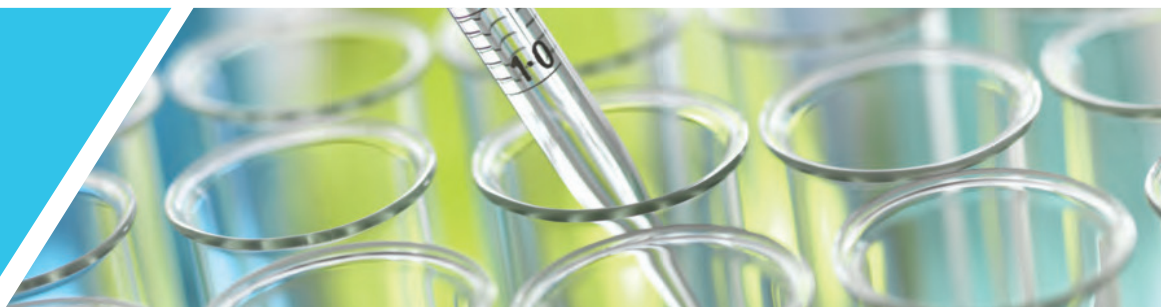
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Medical Passports

JOSEPH H. FRIEDMAN, MD
joseph_friedman@brown.edu

"THIS WAS THE BEST EXAM I've ever had. You really examined me very well and I feel very fortunate to have been directed to you and I think you explained my situation better than anyone else. But I really can't see you again. I live in Wakefield." This occurred this week.



I explained to the patient that Providence was also in Rhode Island, so that, unlike seeing a doctor in Boston, a medical passport was not required. However, it seems that crossing the Pawtuxet River represents a bridge too far for some South County residents.

When I moved my practice from Warwick to Providence six years ago, one of my patients, a 72-year-old man with Parkinson's disease, told me he wouldn't be able to see me anymore. It was too far and too difficult to get to. "But you don't drive," I responded. "Your son drives you, and you live in Lincoln, so it's about the same distance. I doubt your son will mind." "Well, it's too complicated, just too much." "Have you ever been to Boston?" I asked. "Sure. My dad took me to see the Red Sox when I was 12."

Thirty years ago, the first study ever done to slow progression of a neurodegenerative disorder was initiated. This was a study to slow Parkinson's disease and I was the principal investigator for the Rhode Island site. A patient from Newport called, excited to be able to

participate in the trial. "You mean I'd have to travel to Providence? You won't come to Newport?"

One of the early acts of the Continental Congress in 1775 was to abolish passports and visas for travel between the colonies. This was widely accepted by the revolutionaries and even sup-

ported by the Loyalists, but the various colonies' governors, appointed by the king, were not agreeable, as the passports were a source of income. Of course, after the colonies won independence and the country was unified, the notion of passports made no sense and was abolished.

However, in a little known response to a highly contentious law restricting trade between colonies, the Legislature of the State of Rhode Island enacted a law requiring notarized inter-state traveler documents to travel outside the state. These were obtained in the department of Public Affairs, a bureau that was absorbed by other state departments in 1952. However, many people in Rhode Island were, and remain unaware, that this occurred. As part of the law, these travel documents for "routine travel" and commercial travel were withdrawn. However, a proviso in the bill developed the so-called "medical passports" for

Rhode Islanders to use medical facilities outside the state. Later laws stopped the use of these documents as well. As a result of the original law and the lack of publicity attendant on the withdrawal of the laws, many in Rhode Island failed to appreciate that these passports were no longer required. This led to the current situation in which many people who were born in Rhode Island find themselves either unable to cross state lines or to travel distances beyond 10 miles. They learned this from their parents and

teachers and simply passed on this out-of-date information.

There are other theories, however, of why people born in Rhode

Island won't travel. Two are genetic. Epidemiological studies have shown that the resistance to travel clearly runs in families. While this is partly explained by the previous theory, that is, nurture rather than nature, several tantalizing clues have been found with genome-wide association studies, employing anti-logarithmic epicritical fusion functional analysis. The implicated genes have been linked to particular speech patterns (eg, "cod" for "card" as well as use of the word "bubbler") and an insatiable appetite for quahogs.

A third theory, which is also genetic, is based on the observation that the self-imposed travel restriction in Rhode Island is north-south only. People who won't travel north will travel west, or

There are other theories, however, of why people born in Rhode Island won't travel. Two are genetic.

east, even across the ocean. This theory, which has little actual data to support it, is based on a subtle difference in melatonin secretion that occurs as people travel on longitudinal meridians. Those who avoid travel have higher than normal melatonin increases with going north and larger decreases when going south during the appropriate seasons. This increase in melatonin is thought to de-regulate a trans-ketolase involved in the synthesis of gene regulator phytochrome type b *flat minor*, found primarily in neuronal cells in the hypothalamus, linked to circadian rhythm and dopamine reuptake. It is hypothesized that

longitudinal travel alters the sleep-wake cycle, while simultaneously reducing pleasurable responses and increasing the likelihood of an addictive response, which in this case would be a negative, or aversive response.

An interesting observation was made by anthropologists who have found a similar reluctance to travel on north-south lines in one aboriginal group in Australia but not in others. This appears to be unrelated to level of education, supporting a physiological explanation rather than a learned response.

Undoubtedly more hypotheses exist to explain this Rhode Island phenomenon.

You are invited to submit your own for possible publication.

Happy April Fool's day! ❖

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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Pain management: Considering the medical, legal aspects in patient care

HERBERT RAKATANSKY, MD

PAIN RELIEF IS ONE OF the oldest and most imperative moral obligations of physicians. Hippocrates taught: "Cure sometimes, treat often, comfort always." Pain relief, however, is fraught with difficulties due to conflicting medical, legal and social incentives. Standards that define best practices may help resolve these conflicts.

Since there is no objective measure of pain, we depend only on the reports from patients. Given the subjectivity of pain, the doctor is placed in a difficult position.

Our efforts at pain control may result in over prescription. The opioid epidemic is partially the result of over enthusiastic prescription of these effective medications. Recently a particularly egregious doctor was convicted of murder following patient deaths from overdosing. And the fear of consequences from prescribing too much medication may result in under treatment and suffering from inadequate relief of pain.

Patient satisfaction is increasingly a factor in evaluating doctors and may affect their compensation. Addicted patients who visit their doctors and, properly, do not receive the drugs they request may report dissatisfaction, stating that their pain was not relieved.



"Standards of care" describe appropriate clinical care protocols but also generate the possibility of consequences from violating them. A doctor who under or over treats pain may be accused of malpractice just as he would for violating any standard of care.

In 2000 the Joint Commission required that hospitals have policies that mandate formal assessment of pain and assess its relief. Patients

terminal prostate cancer and intractable pain that allegedly was treated inadequately. His family was awarded \$15 million in a judgment against a nursing home and its staff.

A more significant precedent was established in California in 1998. William Bergman had advanced lung cancer and was treated initially in a hospital and then by hospice, where he died. His family felt he had been inadequately treated for pain in the hospital. They complained to the California Medical Licensure Board but no action was taken. The family then sued both the

"Standards of care" describe appropriate clinical care protocols but also generate the possibility of consequences from violating them. A doctor who under or over treats pain may be accused of malpractice just as he would for violating any standard of care.

are asked routinely and repetitively to quantify their pain.

Detailed guidelines for chronic opioid use were endorsed by the American Pain Society and the American Academy of Pain Medicine in 2008. (1) Recent guidelines issued by the RI Board of Medical Licensure for the use of opioids in non-cancer chronic pain are yet another standard of care. Even the American Bar Association (for its own reasons) believes that "Adequate pain and symptom relief be considered a basic legal right and clinical duty."

In 1991 a North Carolina jury considered the case of Henry James who had

hospital and the attending physician, Dr. Wing Chin. They were accused not of malpractice; rather they were accused of elder abuse. The hospital settled. Dr. Chin was found guilty at trial and the family was awarded \$1.5 million.

Elder abuse is a state issue and the laws vary.

In California the law defines "failure to provide health care for medical needs" as elder abuse. California law now requires doctors who do not wish to provide opioids for severe, intractable pain to inform patients that there are other doctors who will.

RI elder abuse law (42-66-4.1) defines

abuse as “willful failure by a caregiver with a duty of care to provide goods or services necessary to avoid physical harm, mental harm....” “Willful” is defined as “intentional, conscious and directed toward a purpose.” It seems reasonable to conclude that conscious decisions not to prescribe medication to relieve pain could be interpreted as “willful.”

Massachusetts Law (19C, 1) defines abuse as “an act or omission which results in serious physical or emotional injury....” The law in Connecticut is very similar.

The precedent for considering inadequate pain relief as elder abuse cannot be ignored. Critical is the fact that elder abuse damages generally are not covered by malpractice insurance.

There is yet another smaller but vulnerable population. Several years ago an elderly patient with chronic, severe dementia was admitted to the Miriam Hospital for treatment of an infection. She had decubiti and though she was nonverbal, she demonstrated evidence of severe pain when she was moved and had her decubiti treated. This pain appeared to be relieved by 1 mg of morphine, a dose that had no other

perceptible effect. Her only relative (and proxy) was her son. When he heard of the use of morphine he absolutely denied permission. Pastoral, social service, case management and multiple medical consultations did not change his decision. The case was presented to the ethics committee.

The ethics committee considered the principles of beneficence and autonomy. It was clear that a competent adult with the capacity to make medical decisions may refuse any and all treatments including pain medication. It was felt, though, that the refusal of pain medication by a proxy was not in this patient’s best interest and that such an order (not to give pain medication) need not be honored. The hospital had a written policy about pain relief but it did not address this unusual situation. That patient was afforded proper pain relief. More importantly, the pain policy was amended to include a process to address future similar situations. A stepwise protocol now protects, in a timely way, these vulnerable patients who are unable to speak for themselves.

The continued failure to relieve this patient’s pain might have been

considered a transgression of a standard of care and the doctor and hospital might have been subject to a malpractice suit. Even more significantly, failure to relieve the pain might have been considered to be elder abuse with its attendant civil and criminal consequences.

Medically appropriate institutional and governmental policies that protect patients of all ages by ensuring adequate pain relief also protect the doctors and other caregivers who provide relief of suffering in accordance with these policies. Therefore it is essential that doctors, both individually and collectively through the Rhode Island Medical Society (RIMS), participate actively in the formulation of these policies and standards of care, both at their institutions and at the governmental level. ❖

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Author

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



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LISBON, PORTUGAL

Jessica Y. Wang, an attorney at Hinckley Allen in Providence, views the March issue's "RIMJ Around the World" within the *Ruínas do Convento do Carmo*, the ruins of a medieval convent founded in 1389. The Gothic style church and residential buildings were constructed from 1393 through 1423, but earthquakes in 1755 and 1969 caused major damage, including the collapse of the nave's stone roof which was never rebuilt.



PHOTOS: JONATHAN MIGLIORI

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HONOLULU, HAWAII

RIMJ managing editor **Mary Korr** and **Kenneth S. Korr, MD**, visited the USS *Missouri* at Pearl Harbor in Honolulu, Hawaii, recently. The “Mighty Mo,” was the site of the formal Japanese surrender to end World War II; it took place on Sept. 2, 1945 in Tokyo Bay.



Today, the Mighty Mo stands in powerful tribute to her fallen sister ship, the USS *Arizona*, which is on eternal patrol off her bow. The white Arizona Memorial marks the final resting place of 1,102 sailors and Marines killed during the attack on Pearl Harbor by Japan, Dec. 7, 1941.



Dr. Korr reviews replicas of the surrender papers on the Surrender Deck of the “Mighty Mo.”

U.S. General of the Army Douglas MacArthur, Commander in the Southwest Pacific and Supreme Commander for the Allied Powers, accepted the surrender on behalf of the Allied Powers and signed the papers in this capacity.

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

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THE MIGHTY MO, 1944

Commander Louis E. Gilge, Medical Corps, makes his "rounds" in the battleship's sick bay as Pharmacist's Mate Second Class Frank Mancini stands by at left. Photographed during *Missouri* (BB-63) shake-down cruise, circa August 1944.

The dental department of the battleship, shown here in 1944, can be seen on tour today.



PHOTOS: U.S. NATIONAL ARCHIVES

Cancer and Obesity in Rhode Island

ELIZABETH PRŠIĆ, MD; MEEKA GANDHI, BA; SOPHIA RIZK, MD; KENNETH BISHOP, MD, PhD; MATTHEW SANTOS, BS

ABSTRACT

There is growing evidence that obesity increases the risk of certain cancers and cancer mortality. As obesity rates are projected to rise over the next decade, associated cancer morbidity and mortality present a significant public health concern. This is particularly striking in the state of Rhode Island, where nearly a third of the population is obese. Interventions such as taxation of obesity-associated foods or insurance incentive programs promoting positive health behaviors could decrease obesity-associated cancer incidence and mortality over time. Public health programs could be deployed at both the local and national levels. We provide a background on obesity-related cancer, discuss existing evidence to support these ideas, and make recommendations regarding individual and societal factors when considering public policy, health-care delivery, taxation structure, and insurance.

KEYWORDS: cancer, obesity, Rhode Island, public health policy, epidemiology

INTRODUCTION

Obesity and associated diseases such as diabetes, cardiovascular disease, and cancer exert enormous individual and societal costs in the United States.¹ In Rhode Island, nearly 30% of adults were obese in 2013.² Obesity may be the second-most avoidable cause of cancer in the developed world.³ While cancer is the second leading cause of death in the United States, policies and public health interventions have lagged behind research on the relationship between cancer and obesity. This report presents the importance of obesity in cancer prevalence and mortality both from a national public health perspective and reviews important policy considerations of obesity-related cancers as a public health problem in Rhode Island.

BACKGROUND

Obesity and Cancer

Globally, diet-associated cancers rival tobacco-associated cancers.⁴ For adults 50 and older, up to 14% of cancers in men and 20% of cancers in women may be attributable to obesity.⁵ While increased body mass index (BMI) has been

associated with increased cancer incidence, weight loss has been associated with a protective effect on obesity-related cancers, especially in females. Weight loss associated with bariatric surgery has also been associated with decreased risk of cancer.^{6,7}

Obesity has also been associated with increased cancer mortality.⁵ Increased mortality was demonstrated in both nonsmokers and smokers, although to a greater degree in the latter. Conversely, weight loss has been shown to decrease mortality from cancer.^{6,7}

Associated Malignancies and Proposed Mechanisms of Oncogenesis

A recent study of over 5 million adults in the United Kingdom demonstrated a near-linear positive correlation between BMI and cancers of the uterus, kidney, cervix, thyroid and blood.⁸ Obesity has been also linked to an increased risk of adenocarcinoma of the esophagus and colon, postmenopausal breast cancer, endometrial cancer, and renal cell carcinoma, with increasing risk associated with increased adiposity.³

More specifically, increased incidence of several cancers is likely related to increased estrogen conversion by adipocytes.³ Up to 40% of endometrial cancer cases may be attributable to obesity.⁹ In fact, obesity may increase breast cancer risk in post-menopausal women by 50%.¹⁰

Esophageal adenocarcinomas are frequently associated with gastroesophageal reflux, which is prevalent in the obese population.¹¹ An estimated 40% of esophageal cancer cases in obese patients may be attributed to obesity.⁹ Obesity is the most firmly established dietary risk factor for colon cancer, a leading cause of cancer mortality in the United States.¹² Overall, an estimated 5.8% of all cancers diagnosed in 2007 could be attributed to obesity.⁹

Epidemiology

Adult obesity is defined as body mass index (BMI) ≥ 30 , and over a third of adults in the United States are obese.¹ In Rhode Island, 27.7% of adults were obese in 2013.² Associated costs are substantial with approximately \$378 per adult spent on obesity-related medical costs in Rhode Island in 2013, projected to increase to \$864 per adult by 2018.¹³ The influence of obesity on public health is rivaled and compounded by cancer.

In Rhode Island, 40% of the population will develop cancer during their lifetime, and 20% will die from cancer.¹⁴

State annual cancer expenditures total nearly a billion dollars through direct and indirect costs.¹⁴ With high rates of both obesity and cancer in Rhode Island, it is important to understand the relationship between them in order to develop necessary public health interventions.

An estimated 17,094 obesity-related cancer cases were reported in Rhode Island in 2010. Over 40,000 cases of obesity-related cancer are projected for 2030.² Increasing prevalence of obesity in Rhode Island should cause concern regarding the increased risk of cancer incidence and mortality, particularly among specific cancers such as esophageal, postmenopausal breast, endometrial, colorectal, and renal cell cancer.³

POLICY ANALYSIS

Overall, health policy regarding obesity and its relationship to cancer has been limited in scope given the paucity of supportive research on obesity-related cancers. As prospective studies showed stronger, more consistent relationships between obesity and cancer, the impetus for policy generation was established. While research has supported weight loss in decreasing cancer incidence and mortality, public health efforts are lacking. Currently, despite recognition of this relationship, there remains a gap between empirical scientific evidence and broad public health policy efforts to decrease obesity-related cancers on both state and national levels.

Rhode Island

In Rhode Island, the Partnership to Reduce Cancer prevention objectives outlined numerous goals addressing obesity including increasing fruit and vegetable consumption, decreasing fast food and sugar-sweetened drinks and increasing physical activity.¹⁵ However, the relationship between obesity and cancer was not directly addressed.¹⁵

Alternatively, the Rhode Island Department of Health has formally recognized the challenge of obesity in cancer control, including the maintenance of a healthy weight as a major area of preventative focus.¹⁶ With the projected increase in national obesity-related cancer diagnoses, the need for timely public health efforts becomes more pressing. Overall, health policy leaders should clearly and consistently educate the public about the relationship between obesity and cancer incidence and mortality.

Health Care

Efforts to decrease the prevalence of obesity-related cancers should begin with addressing the obesity epidemic. While this is a formidable task, even small reductions can have widespread public health effects. In Rhode Island alone, a 5% reduction in BMI by 2030 would result in an estimated decrease of 2,092 obesity-related cancers with cumulative cost savings of approximately \$68,000,000.¹⁷

Physician and health care provider counseling is a key aspect of the management of obesity. Screening for BMI and

appropriate follow-up is a core quality measure for the Center for Medicare and Medicaid Services (2013). Furthermore, Medicaid and CHIP have set an important precedent by reimbursing physical activity counseling.¹⁸ Initiatives to promote physical activity could create substantial savings, as annual health care costs of sedentary patients are \$1500 more than those of physically active patients.¹⁹

Taxation and Insurance

Obesity-related cancers result in significant medical expenditures. Comprehensive federally funded studies have attributed over 35% of the increase in average annual medical spending to obesity, rivaling that of smoking, a significant burden to both public and private payers.²⁰

Taxation has been used to promote health behavior change as well as increase revenues to offset health care costs in efforts to decrease smoking and tobacco-related diseases. Rhode Island raised its cigarette tax per pack in 2012, the third highest tax per pack in the nation.²¹ Rhode Island ranks in the lowest third of states for adult smoking rate and has the second lowest youth smoking rate.²² A Harvard Center for Cancer Prevention report suggested that obesity could be addressed similarly to tobacco use.⁴ Taxation may be one of the most successful methods to change behavior and could thus decrease the consumption of unhealthy foods to promote weight loss.²³ However, substantial tax rate increases are necessary to affect change and are more likely to result in behavior change in certain demographic groups such as lower socioeconomic status, minorities, children and adolescents.²⁴

RECOMMENDATIONS

Policy

At state and national levels, government agencies should continue to promote the public dissemination of information regarding obesity-related cancers. Both state and national government organizations have acknowledged the contribution of obesity to the development of certain cancers and the rising prevalence of obesity-related malignancies, but continued efforts are imperative.^{15, 25} Public health campaigns should raise awareness of the association between obesity and cancer, mirroring successful efforts educating the public on the detrimental health effects of tobacco.

Health Care

There is a specific need for better studies on the risks and benefits of screening for obesity-related cancers. Cancer-screening guidelines for obese patients have not been defined. Although awareness of the increased risk of certain cancers is important for patients and providers, screening without adequate supporting research could lead to more risk than benefit. Primary care providers should continue to provide annual BMI screening consistent with United States Preventative Services Task Force (USPTF) recommendations as well as appropriate cancer screening. Most importantly,

health care providers and public health organizations should encourage physical activity and engage in effective nutrition counseling to reduce the prevalence of obesity and thereby decrease the incidence of obesity-related cancer.

Insurance

Given the significant costs associated with obesity and obesity-related cancers, insurance initiatives are necessary. There are insurance industry precedents for smoking penalties and smoking cessation support for health insurance subscribers. Similar initiatives for obesity could help offset obesity-related health costs and simultaneously help reduce the incidence of disease.

Under the Affordable Care Act, public and private insurers are required to cover obesity screening and counseling without cost sharing. Consistent with Centers for Medicare and Medicaid guidelines, insurers should cover annual primary care visits and nutrition assessments for individuals with BMI ≥ 30 .

Health membership subsidies may be cost-saving or cost-neutral as health care costs of sedentary patients are \$1500 more annually than those of physically active patients. As the primary source of health insurance in the United States, employer-sponsored health insurance providers should promote health incentives for employees including gym membership subsidies, coverage of annual primary care visit, annual nutritionist assessment, and the promotion of healthy eating choices at work. Given the significant indirect costs on employers related to obesity, employer-sponsored insurance would be motivated to partner with the health insurance companies to promote change.¹⁹

Finally, given significant obesity-related costs for private insurers, the industry should provide incentives for obese patients to adhere to recommended screening and health-promoting interventions. These could potentially decrease obesity-associated comorbidities. The insurance industry should not, however, discriminate based on weight or use obesity as a risk factor for determining eligibility or premiums for insurance coverage or treatment.

CONCLUSION

There are several limitations that should be addressed regarding obesity-related cancers. First, evidence-based cancer-screening recommendations for obese individuals are not yet defined and should avoid potential harms such as excess testing or unnecessary procedures. Second, taxation initiatives may generate controversy, as dietary behaviors are complex and personal. Third, while health provider, taxation, and insurance initiatives intend to improve public health, decrease obesity, and reduce the incidence of obesity-related cancers, precautions should be taken to avoid marginalizing obese individuals and discouraging involvement in health care decision-making. While obesity-related cancers have significant public health impact, commensurate

efforts to address this problem have been lacking. Initiatives targeting obesity-related cancers may improve as associated research grows in scope and significance.

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Disclaimers

The content of this paper does not necessarily reflect the views or policies of Brown University, nor does the mention of trade names, commercial products, or organizations imply endorsement by the authors. The authors assume full responsibility for the accuracy and completeness of the ideas presented.

Authors

Elizabeth Pršić, MD; Fellow, Brown University, Alpert Medical School, Department of Hematology Oncology, Rhode Island Hospital, Providence, RI.

Meeka Gandhi, BA; Brown University, Alpert Medical School, 222 Richmond Street, Providence, RI.

Sophia Rizk, MD; Brown University, Alpert Medical School, Department of Hematology Oncology, Rhode Island Hospital, Providence, RI.

Kenneth Bishop, MD, PhD; Brown University, Alpert Medical School, Department of Hematology Oncology, Rhode Island Hospital, Providence, RI.

Matthew Santos, BS; Brown University, Alpert Medical School, 222 Richmond Street, Providence, RI.

Correspondence

Elizabeth Pršić, MD

Rhode Island Hospital, George Building #312

593 Eddy Street

Providence, RI 02903

401-863-9424

Fax 401-863-3489

elizabeth_prsic@brown.edu

Palliative and End-of-Life Care Education Among Alpert Medical School Students

ELEANOR DIBIASIO, MPH

ABSTRACT

Doctors in almost every branch of medicine encounter patients who are dying or have serious illnesses. Numerous studies, however, indicate that the education of physicians does not adequately prepare them for such patients. We aimed to characterize the current training of Alpert Medical School (AMS) students on palliative and end-of-life care using a cross-sectional, web-administered survey. We discovered less than half of Alpert Medical School students have worked with dying patients, and almost a quarter of graduating medical students did not feel prepared to palliate common symptoms including pain, nausea, shortness of breath, and anxiety. We also found that exposure to dying individuals was significantly associated with many symptom management skills and more favorable attitudes toward palliative medicine. We therefore recommend that palliative care skills, which are relevant to all future physicians regardless of specialty, be incorporated throughout the AMS curriculum, and that more students be exposed to patients at end-of-life.

KEYWORDS: end-of-life care, palliative medicine, medical education

INTRODUCTION

"It's not enough. We all need a lot more. It would save the system a lot of money and lead to higher quality of life and patient/physician satisfaction."

A recently published Institute of Medicine (IOM) report finds that because the supply of hospice and palliative care specialists in the United States is small, many patients rely on other clinicians for palliative care and care at end-of-life (EOL).¹ They recommend that educational institutions establish appropriate training requirements to strengthen the knowledge of students in these areas. Regardless of specialty, nearly every future doctor will need to learn skills in pain control, symptom management, communicating difficult medical realities, and patient-centered decision-making. Moreover, doctors in almost every branch of medicine encounter patients who are dying or have serious illnesses.² Numerous studies, however, indicate that the education of physicians does not adequately prepare them for such patients.^{3,4}

We aimed to characterize the current training of Alpert Medical School students on palliative and EOL care. Our questions fell into three main categories. The first category we labelled attitudinal questions; these items assessed students' comfort communicating with patients and families, supporting psychosocial needs, and other skills that involve interaction between physician and patients. Next, we directly asked students to rate how prepared they felt to complete common symptom management tasks, such as treating pain. We referred to these items as symptom-management questions. Finally, we included factual questions to verify that if students did report preparedness, they also had the knowledge to properly provide care; we called these items our knowledge-based questions.

METHODS

"I think a major hole in the preclinical education is learning what death is. We never learn any of the physiology or science behind this fundamental part of life."

Survey Development

All adapted questions were from the Harvard Medical School Center for Palliative Care Program in Palliative Care Education and Practice Post-Program Inventory, November 2003.⁵ Other questions were developed by the author.

Data Collection

Our study was a cross-sectional, web-administered survey designed using DatStat Illume.⁶ The target population was current AMS students. A survey invitation was sent to the email listserv of all 457 students on April 8, 2014.⁷ Our Illume license agreement required that we cease collection after obtaining 50 complete surveys, therefore our sample size was 50.

Data Preparation

We downloaded raw data from the Illume Web Server to Microsoft Excel,⁸ and imported into STATA 13.0.⁹ For each of the knowledge-based questions a new variable was created (correct vs. incorrect), counting as incorrect those who chose the wrong answer or selected "don't know." We then created a variable containing each participant's total correct score on the knowledge questions (out of 5).

Data Analysis

Descriptive statistics characterized palliative and EOL knowledge in the sample. We utilized Fisher's exact test to

evaluate differences between individuals with and without experience with dying patients. Fisher's test was also used to test for a significant relationship between year in medical school and preparation to perform common palliative tasks. When one or more of the expected number of observations in a cross-tabulation cell is less than 5, Fisher's test is used to replace the chi-squared test of significance.¹⁰

RESULTS

"There was not enough patient interaction, or emphasis on realistic scenarios. Standardized patients often do not present realistic scenarios. Training should be much more experience-based and not overwhelmingly discussion-based."

Table 1 displays responses to attitudinal questions. Less than half of students had experience working with a dying patient, but among students who did have such experience (n=24), 87.5% found it very or somewhat rewarding. Ninety percent of respondents asserted that physician responsibility is to the family as well as the patient. Most respondents agreed or strongly agreed with the statement that a prognosis should always be shared with the patient (Table 1), demonstrating medical students may not be fully aware

of the limited accuracy of most prognoses, especially for non-cancer conditions. More than half (58%) of Alpert students feel at least somewhat prepared to discuss DNRs, with 18% reporting being very prepared. Only one student (2%) felt very prepared to discuss a transition to comfort-only measures with patients, and just 6% of respondents felt very prepared to break bad news. Half our respondents did not feel at all prepared to discuss common symptoms at the end-of-life, 34% are not at all prepared to assess psychosocial needs, and 38% are not at all prepared to assess caregiver needs. Only two respondents (4%) felt very prepared to help grieving persons.

Table 2 illustrates that few students reported being very prepared to carry out symptom management tasks, such as treating constipation (14%), shortness of breath (8%), anxiety (8%), nausea (6%), and pain (6%). The average number of correct answers to knowledge-based EOL questions was three out of five (see **Table 3**). Most students knew that asking about pain is the optimal method for assessment (84%), that neuropathic and somatic pain are treated differently (76%), and that increasing tolerance is not a sign of addiction to opioids in dying patients (72%). However, less than half (36%) knew that when attempts to control disease stop working, patients should be referred to hospice and that

Table 1. Frequencies of attitudinal items

Item	Not at all rewarding	A little rewarding	Somewhat rewarding	Very rewarding	Don't know
How rewarding do you find the experience of working with dying patients? (n=24)	0 (0.0%)	1 (4.2%)	9 (37.5%)	12 (50.0%)	2 (8.33%)
Item: Please indicate your agreement or disagreement with the following statements.	Strongly disagree	Disagree	Agree	Strongly agree	Don't know
Every doctor should know how to interact with dying patients. (n=50)	1 (2.0%)	1 (2.0%)	7 (14.0%)	40 (80.0%)	1 (2.0%)
To provide the best end-of-life care, a physician should be emotionally uninvolved with his/her patient. (n=50)	16 (32.0%)	27 (54.0%)	4 (8.0%)	1 (2.0%)	2 (4.0%)
There is little the physician can do to ease the suffering of grief. (n=50)	24 (48.0%)	24 (48.0%)	1 (2.0%)	0 (0.0%)	1 (2.0%)
Psychological suffering can be as painful as physical suffering. (n=50)	0 (0.0%)	1 (2.0%)	15 (30.0%)	33 (66.0%)	1 (2.0%)
The physician's responsibility is to the patient ONLY, not the family. (n=50)	16 (32.0%)	29 (58.0%)	2 (4.0%)	1 (2.0%)	2 (4.0%)
A prognosis is always important information to share with the patient. (n=49)	0 (0.0%)	10 (20.4%)	28 (57.1%)	9 (18.4%)	2 (4.1%)
Item: Based on medical coursework, clinical experiences, personal experiences, or any other relevant information, please describe how prepared you feel to do the following:	Not at all prepared	A little prepared	Somewhat prepared	Very prepared	Don't know
Discuss end-of-life care decisions, such as a DNR (do-not-resuscitate) decision, with a patient? (n=50)	7 (14.0%)	13 (26.0%)	20 (40.0%)	9 (18.0%)	1 (2.0%)
Break bad news to a patient about his or her illness? (n=50)	11 (22.0%)	20 (40.0%)	15 (30.0%)	3 (6.0%)	1 (2.0%)
Discuss the transition from curative treatments to comfort-only measures with patients or their families? (n=50)	18 (36.0%)	14 (28.0%)	15 (30.0%)	1 (2.0%)	2 (4.0%)
Assess the psychosocial needs of a dying patient? (n=50)	17 (34.0%)	16 (32.0%)	13 (26.0%)	2 (4.0%)	2 (4.0%)
Assess caregiver needs in end-of-life care? (n=50)	19 (38.0%)	16 (32.0%)	13 (26.0%)	1 (2.0%)	1 (2.0%)
Answer questions about what to expect at the end-of-life? (n=50)	25 (50.0%)	15 (30.0%)	7 (14.0%)	2 (4.0%)	1 (2.0%)
Help grieving family members through the bereavement process? (n=50)	15 (30.0%)	17 (34.0%)	14 (28.0%)	2 (4.0%)	2 (4.0%)

Table 2. Frequencies of symptom management items

Item: Based on your medical school coursework and medical school clinical experiences only, how prepared do you feel to manage the following common end-of-life symptoms?	Not at all prepared	A little prepared	Somewhat prepared	Very prepared	Don't know
Pain (n=50)	14 (28.0%)	17 (34.0%)	13 (26.0%)	3 (6.0%)	3 (6.0%)
Shortness of breath (n=50)	17 (34.0%)	18 (36.0%)	8 (16.0%)	4 (8.0%)	3 (6.0%)
Anxiety (n=50)	15 (30.0%)	17 (34.0%)	11 (22.0%)	4 (8.0%)	3 (6.0%)
Constipation (n=50)	16 (32.0%)	13 (26.0%)	10 (20.0%)	7 (14.0%)	4 (8.0%)
Nausea (n=50)	14 (28.0%)	11 (22.0%)	18 (36.0%)	3 (6.0%)	4 (8.0%)

Table 3. Frequencies of knowledge-based items

Item: Please describe the following statements as true or false to the best of your ability.	% Correct
The best way to obtain information about pain is to ask the patient. (n=50)	84.0
Neuropathic pain and somatic pain are treated the same way. (n=50)	76.0
Patients should be referred to hospice when they are no longer responding to curative treatments. (n=50)	36.0
Increasing tolerance to opioids is a sign of addiction among those who are dying. (n=50)	72.0
Symptoms of depression at the end-of-life are evaluated differently than in otherwise healthy adults. (n=50)	36.0
Average number of correct knowledge questions	3 (out of 5)

Table 4. Differences in responses to items among those with and without experience working with dying patients.

Item	Fisher's exact p-value
Attitudinal items	
How rewarding do you find the experience of working with dying patients? (n=24)	n/a
Every doctor should know how to interact with dying patients. (n=46)	0.48
To provide the best end-of-life care, a physician should be emotionally uninvolved with his/her patient. (n=50)	0.07
There is little the physician can do to ease the suffering of grief. (n=46)	0.94
Psychological suffering can be as painful as physical suffering. (n=46)	1.00
The physician's responsibility is to the patient ONLY, not the family. (n=46)	0.02
A prognosis is always important information to share with the patient. (n=46)	0.70
Preparation to discuss end-of-life care decisions, such as a DNR (do-not-resuscitate) decision, with a patient. (n=50)	0.01
Preparation to break bad news to a patient about his or her illness. (n=50)	0.01
Preparation to discuss the transition from curative treatments to comfort-only measures with patients or their families. (n=50)	0.02
Preparation to assess the psychosocial needs of a dying patient. (n=50)	0.01
Preparation to assess caregiver needs in end-of-life care. (n=50)	0.33
Preparation to answer questions about what to expect at the end-of-life. (n=50)	0.07
Preparation to help grieving family members through the bereavement process. (n=50)	0.17
Symptom management items	
Preparation to manage pain. (n=50)	0.01
Preparation to manage shortness of breath. (n=50)	0.05
Preparation to manage anxiety. (n=50)	0.00
Preparation to manage nausea. (n=50)	0.08
Preparation to manage constipation. (n=50)	0.38
Knowledge-based items	
Average # correct out of 5 (n=50)	0.73

Table 5. Item variation by year in medical school.

Item	Attitudinal items % Somewhat or very rewarding				Fisher's exact p-value
	First Year (n=21)	Second Year (n=10)	Third Year (n=6)	Fourth Year (n=13)	
How rewarding do you find the experience of working with dying patients? (n=24)	0.50	100.0	100.0	92.3	0.18
	Attitudinal items % Agree or strongly agree				Fisher's exact p-value
	First Year (n=21)	Second Year (n=10)	Third Year (n=6)	Fourth Year (n=13)	
Every doctor should know how to interact with dying patients. (n=50)	90.5	90.0	100.0	100.0	0.72
To provide the best end-of-life care, a physician should be emotionally uninvolved with his/her patient. (n=50)	14.3	10.0	16.7	0.0	0.52
There is little the physician can do to ease the suffering of grief. (n=50)	0.0	0.0	16.7	0.0	0.12
Psychological suffering can be as painful as physical suffering. (n=50)	4.8	0.0	0.0	0.0	0.23
The physician's responsibility is to the patient ONLY, not the family. (n=50)	100.0	100.0	100.0	84.6	0.45
A prognosis is always important information to share with the patient. (n=49)	14.3	0.0	0.0	0.0	0.07
	Attitudinal items % Somewhat or very prepared				Fisher's exact p-value
	First Year (n=21)	Second Year (n=10)	Third Year (n=6)	Fourth Year (n=13)	
Discuss end-of-life care decisions, such as a DNR (do-not-resuscitate) decision, with a patient	38.1	40.0	66.7	100.0	0.00
Break bad news to a patient about his or her illness	14.3	40.0	33.3	69.2	0.01
Discuss the transition from curative treatments to comfort-only measures with patients or their families	14.3	30.0	16.7	69.2	0.01
Assess the psychosocial needs of a dying patient	9.5	30.0	33.3	61.5	0.01
Assess caregiver needs in end-of-life care	19.1	10.0	50.0	46.2	0.10
Answer questions about what to expect at the end-of-life	4.8	10.0	16.7	46.2	0.02
Help grieving family members through the bereavement process	14.3	30.0	33.3	61.5	0.04
	Symptom management items % Somewhat or very prepared				Fisher's exact p-value
	First Year (n=21)	Second Year (n=10)	Third Year (n=6)	Fourth Year (n=13)	
Manage pain at the end- of-life	14.3	10.0	33.3	76.9	0.00
Manage shortness of breath at the end-of-life	9.5	0.0	16.7	69.2	0.00
Manage anxiety at the end-of-life	9.5	10.0	50.0	69.2	0.00
Manage constipation at the end-of-life	9.5	0.0	83.3	76.9	0.00
Manage nausea at the end-of-life	14.3	30.0	83.3	76.9	0.00
	Knowledge-based items % Correct				Fisher's exact p-value
	First Year (n=21)	Second Year (n=10)	Third Year (n=6)	Fourth Year (n=13)	
The best way to obtain information about pain is to ask the patient.	81.0	80.0	83.3	92.3	0.85
Neuropathic pain and somatic pain are treated the same way.	71.4	70.0	83.3	84.6	0.82
Patients should be referred to hospice when they are no longer responding to curative treatments.	42.9	30.0	16.7	38.5	0.76
Increasing tolerance to opioids is a sign of addiction among those who are dying.	52.4	70.0	83.3	100.0	0.01
Symptoms of depression at the end-of-life are evaluated differently than in otherwise healthy adults.	47.6	20.0	33.3	30.8	0.50

depression at the end-of-life needs to be evaluated differently than in non-dying persons.

Several items demonstrated significantly different responses depending on whether the respondent had experience with dying patients (Table 4). Those without experience were less likely to recognize obligation to family. In addition, those who had worked with the dying were more likely to report they were somewhat or very prepared to discuss DNRs, break bad news, discuss a transition to comfort measures, and assess psychosocial needs of dying patients. Individuals with experience with dying patients also reported being more prepared to treat anxiety, shortness of breath, and pain in dying patients.

Table 5 illustrates how palliative and EOL care competency varies by year in medical school. Year in medical school is significantly associated with ability to carry out all symptom management tasks. Symptom management preparedness ranged from 69.2–76.9% among graduating students. Year in medical school is also significantly related to preparedness to discuss DNRs, assess psychosocial needs, and discuss a transition to comfort-only measures. In fact, 100% of graduating AMS students surveyed felt somewhat or very prepared to discuss DNRs, 69.2% felt prepared to discuss a transition to comfort measures, and 61.5% felt ready to assess psychosocial needs. However, one area in which there is no significant difference between first- and fourth-year students is ability to assess caregiver needs, nor were there significant differences in any of our attitudinal questions by year of schooling.

DISCUSSION

“There is a portion of our Internal Medicine clerkship where we spend time with a hospice specialist. This was a helpful experience, but mostly shadowing. We also had some helpful readings; however, there is a void in actually recognizing clinical signs of end-of-life and appropriate clinical palliation of pain, anxiety, constipation, etc.”

“I did 2 weeks of a palliative care clinical elective here at Brown and found it incredibly valuable.”

The recent IOM publication on the status of EOL care, *Dying in America*, calls for sweeping change for the field to meet the needs of dying patients. One particular recommendation is for medical schools to increase training in palliative care so more clinicians know how to compassionately and effectively treat patients who want to be made comfortable but avoid extensive medical procedures.¹¹ With the aging of the US population, the increased prevalence of chronic disease, and the growing media and societal attention toward EOL care, it has become imperative that graduating physicians have basic skills in palliative and EOL medicine.

In this study, we aimed to assess the preparation and knowledge of Alpert Medical School students with regard to

palliative care and care for EOL patients. Based on our sample, we discovered less than half of Alpert Medical School students have worked with dying patients, and almost a quarter of graduating medical students did not feel prepared to palliate common symptoms including pain, nausea, shortness of breath, and anxiety.

Medical school curricula are already overstrained by an ever-expanding knowledge and skill base within all medical fields.¹² In their 2013 review of the subject, Horowitz et al¹² recommend that palliative skills be dispersed throughout the medical school curriculum. The Board of Hospice and Palliative Medicine Competencies Work Group¹³ defines palliative care competencies to include communication, pain and symptom management, quality-of-life focus, care coordination, and interdisciplinary team involvement. These are skills every physician should embody, and can easily be integrated into existing coursework on medical interviewing, ethics, pharmacology, and clinical teaching rounds. For AMS students specifically, based on our finding that only half of students had ever worked with a dying patient and that exposure to dying individuals was significantly associated with many symptom management skills and more favorable attitudes toward palliative medicine, we recommend an increase in clinical exposure to individuals at the end-of-life.

There are several limitations to our study. First, we utilized a convenience sample out of necessity. Although all medical students were given the opportunity to complete the survey, it is possible that those with a previous interest in EOL care were more likely to complete the survey, artificially inflating reported preparedness to provide EOL care. Second, the Illume license agreement restricted us to a sample size of 50, limiting our ability to perform statistical analysis. A larger sample size would have more power to detect statistically significant differences among students in different years of medical school and among those with and without exposure to dying patients. Third, because of limited time and resources, we did not have the ability to use question assessment strategies such as focus groups, cognitive interviews, or pre-testing. Further research should aim to validate the questions used in this survey. Finally, only Alpert students were invited to complete the survey, negating the generalizability of our results to other schools.

In sum, nearly every physician encounters individuals with serious illnesses and those who are dying. Palliative care skills – including communication, symptom management, and interdisciplinary teamwork – are skills that can be applied universally in medicine. We found that among AMS students, only half had been exposed to a dying individual, and many did not feel prepared for basic EOL and palliative tasks, such as pain relief and difficult conversations with patients. We recommend that palliative care skills be incorporated throughout the AMS curriculum, and that more students be exposed to patients at the end-of-life.

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Author

Eleanor DiBiasio, MPH, MD'19, The Warren Alpert Medical School of Brown University.

Correspondence

Eleanor DiBiasio, MPH
Brown University School of Public Health
121 South Main St, 6th floor
Providence, RI 02912
401-935-2217
ellie.dibiasio@gmail.com

A Revised Simulation-Based Cataract Surgery Course for Ophthalmology Residents

EMILY LI, MD; ALFRED A. PAUL, MD; PAUL B. GREENBERG, MD

KEYWORDS: virtual simulation, ophthalmology resident education, cataract surgery

Since their introduction over a decade ago, virtual reality (VR) simulators have grown in use at many graduate medical education (GME) programs.¹ Simulation-based training in ophthalmic surgery is no exception. In 2015, 78 percent of United States (US) ophthalmic GME programs had access to virtual eye surgery training.² However, the paucity of published VR curricula has precluded the systematic analysis of simulation training outcomes.³ We present herein a revised simulation-based cataract surgery course, which we have made publically available on the Brown Digital Repository (see link below) to encourage feedback from other ophthalmic GME programs.

The course is divided into two main components: (1) a didactic section based on the American Academy of Ophthalmology (AAO) Basic and Clinical Science Course® (BCSC), “Lens and Cataract” and (2) a virtual reality (VR) section designed for use alongside the EyeSi® ophthalmosurgical simulator (VRMagic, Mannheim, Germany). This latter section is organized by post-graduate year (PGY). Each of the three required PGYs (II-IV) have specific modules that the resident must successfully complete before advancing to the next level. The original course was developed in 2013⁴; key revisions include an update of didactic materials to reflect the most recent edition of the BCSC and the incorporation of new VR cataract surgery modules.

The didactic section provides an introduction to lens pathophysiology and cataract surgery and serves as a reference for the simulation portion of the course. It is comprised of the following subsections: Lens Anatomy, Lens Pathophysiology, Preoperative Care, Procedure, Postoperative Care, and Complications of Cataract Surgery. It also includes instructions for more detailed reading in the BCSC text.

The VR component takes place at the simulator, which is comprised of an eye model with side holes for instrument insertion and a microscope that projects its images onto a side monitor. Users look into the microscope as they would in a real-life setting, and the hand-pieces they see through the scope are simulated to represent actual cataract surgery instruments. Users are also able to control the microscope, hand piece, and phaco machine settings through a foot

pedal as they would in live surgery. The residents learn microsurgical skills and eye-hand-foot coordination, which are integral to the key steps of cataract surgery. Basic skills programmed into the software include intraocular navigation, anti-tremor handling of instruments, bimanual coordination, forceps maneuvering, and phacoemulsification machine calibration. Subsequent modules incorporate these elements into advanced tasks and steps of cataract surgery—capsulorhexis, hydrodissection, nuclear rotation, irrigation, aspiration, emulsification, nuclear disassembly, intraocular lens insertion. Modules also prepare users for difficult cataract surgery cases, which may include soft nuclei, white cataracts, and capsular plaques.

This simulation-based course requires construct validation, a process of confirming VR model accuracy by comparing surgical performance on the simulator between novices (e.g., PGY2 ophthalmology residents) and experienced ophthalmologists.³ In addition, the VR training should be (a) integrated into a comprehensive surgical educational program that includes classroom and wet-lab based learning,⁵ and (b) linked to resident cataract surgery outcomes.³ Feedback and analysis of resident operating room performance after implementation of the course can guide future revisions and assist in providing meaningful educational outcomes data.

Course link: <http://dx.doi.org/10.7301/Z08913SK>

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Authors

Emily Li, MD, is a transitional year resident at Signature Healthcare Brockton Hospital, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA. Dr. Li '11, '15 is a graduate of the Program in Liberal Medical Education at Brown University.

Alfred A. Paul, MD, is a staff ophthalmologist at the Providence VA Medical Center and in private practice at Eye Specialists in Pawtucket, RI.

Paul B. Greenberg, MD, is a Professor of Surgery (Ophthalmology) at the Alpert Medical School and Chief of Ophthalmology at the Providence VA Medical Center in Providence, RI.

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Disclaimer

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Correspondence

Paul B. Greenberg, MD
Section of Ophthalmology
Providence Veterans Affairs Medical Center
830 Chalkstone Avenue
Providence, Rhode Island 02908-4799 USA
401-273-7100 x1506
Fax 401-751-1670
paul_greenberg@brown.edu

Persistence with Newly Initiated Antidepressant Medication in Rhode Island Medicaid: Analysis and Insights for Promoting Patient Adherence

STEPHEN KOGUT, PhD, MBA, RPH; BRIAN J. QUILLIAM, PhD, RPH; RITA MARCOUX, MBA, RPH; WILLIAM MCQUADE, DSC, MPH; CHERYL WOJCIECHOWSKI; CHARLES WENTWORTH III, MS; REBECCA PLONSKY, LICSW; NOELLE WOOD, PhD

ABSTRACT

OBJECTIVE: To describe persistence to newly prescribed antidepressant medications within the Rhode Island Medicaid population.

METHODS: This retrospective study analyzed antidepressant medication persistence in a cohort of new users for a period spanning 2013-2014, focusing on the acute treatment phase (first 12 weeks of treatment). Covariates assessed included patient gender, age, comorbidity status, and measures of health system utilization.

RESULTS: Only 53.8% of patients persisted with medication for at least 12 weeks. (Figure 1). Persistence was increased with age ≥ 35 , and lower among patients lacking a follow-up visit. Multivariable analyses revealed that patients having at least one office visit during the follow-up period were nearly 2.5 times more likely to persist as compared to patients lacking such visits (OR 2.44, 95% CI 1.77–3.35). Persistence was 22% more likely among patients receiving psychiatric services (OR 1.22; 95% CI 1.00–1.48).

CONCLUSIONS: Antidepressant treatment persistence within the R.I. Medicaid population is suboptimal, and lowest among patients lacking follow-up care.

KEYWORDS: depression, medication persistence, Medicaid, antidepressant

INTRODUCTION

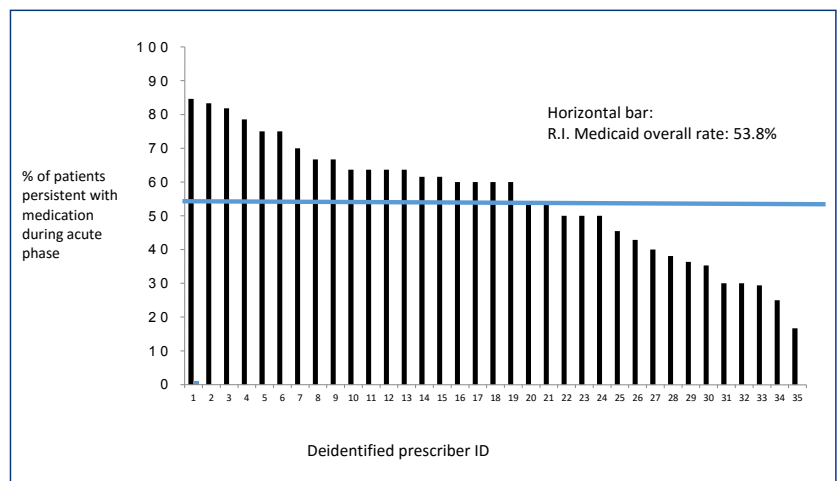
Depression is a significant cause of morbidity and disability. National survey results from 2009-2012 indicate that 7.6% of Americans report experiencing moderate or severe symptoms of depression within the past 2 weeks,¹ while nearly 1 in 5 adults will experience a major depressive disorder within their lifetime.² Antidepressant medications are prescribed for roughly 10% of U.S. adults, and approximately 20% of females 40 years of age or older.³ The prevalence of depression is significantly higher within Medicaid, as individuals living below the poverty level are more than twice as likely to have experienced an episode of depression as

compared to individuals with higher incomes.¹ The societal economic burden of major depression has been estimated at \$188 billion (2012 dollars); which exceeds societal cost estimates for cancer (\$131 billion) and diabetes (\$173 billion).⁴

Psychotherapy and medication are long-standing cornerstones of depression treatment. While medication should not necessarily be considered an alternative to depression-focused psychotherapy,⁵ U.S. practice guidelines recommend antidepressant medication during the acute phase of illness, and continuing for at least 4-9 months.⁶ However, even with good compliance, the effectiveness of antidepressant medications is limited, and evidence suggests that at least half of patients will fail to experience a meaningful response during the first months of medication therapy.⁷ Yet treatment success can be enhanced by medication augmentation and other regimen adjustments such that nearly 70% of patients can ultimately experience a favorable treatment response within one year.⁸

Patient adherence to prescribed antidepressant medication is perhaps the most important predictor of treatment success. A performance measure evaluating antidepressant medication persistence has been reported by the National Committee for Quality Assurance for more than a decade.⁹ Within Medicaid managed care nationally, persistence with antidepressant medication during the acute phase in 2013 was 50.5%, indicating a substantial opportunity for

Figure 1. Acute Phase Persistence with Antidepressant Medication: Provider-Specific Rates among R.I. Prescribers having 10 or more Cases Qualifying for the Measure (n = 35).



improving this critical aspect of depression care.¹⁰

Within this context, researchers from the University of Rhode Island College of Pharmacy and the R.I. Executive Office of Health and Human Services (R.I. Medicaid) partnered to implement a quality improvement project addressing antidepressant medication persistence. This effort included examining antidepressant medication persistence across a range of patient and health system factors. These results are presented in this report, supplemented by insights from our review of the published literature. We believe that this information will be of value to practitioners as they strive to partner with patients to increase persistence with antidepressant medications.

METHODS

We conducted a retrospective analysis of antidepressant medication dispensings among Rhode Island Medicaid beneficiaries during a period spanning March to November 2014. The study population included all R.I. Medicaid program enrollees in both managed care and fee-for-service arrangements. Patients who were dually enrolled in Medicaid and Medicare were not included, as these patients receive pharmacy benefits through Medicare Part D drug plans. The study does not include individuals with commercial (employer-based) insurance, or those receiving health insurance coverage through the state health exchange.

Persistence was measured according to the antidepressant medication management measure developed by the National Committee for Quality Assurance, focusing on medication use during the acute phase of therapy (first 12 weeks). This measure requires patients to be new users of antidepressant medication, defined as being without an antidepressant medication prescription during the previous 105 days, and having a diagnosis of depression documented within 60 days of the initial antidepressant prescription. The measure considers patients to be persistent during the acute treatment phase if they continued antidepressant medication for at least 84 days during the initial 114 days of treatment, measured by analysis of medication dispensings using pharmacy claims data. Various antidepressant medication classes and types qualify for the measure (e.g. selective serotonin reuptake inhibitors (SSRI), serotonin and norepinephrine reuptake inhibitors (SNRI), tricyclic antidepressants (TCA), bupropion, mirtazapine, trazodone, etc), and a patient does not need to persist with the same particular medication during the measurement period to be classified as persistent (i.e. patients may switch medications).

Using the 84-day threshold for medication continuation during the acute phase, persistence with antidepressant medication was classified as the dichotomous dependent variable. We examined a range of factors in relationship with acute-phase antidepressant persistence. These independent variables included patient gender and age group, plan type (fee-for-service Medicaid versus managed care plan

enrollment), and the type of antidepressant medication prescribed. We evaluated the influence of concomitant diseases separately, and in aggregate using the Charlson comorbidity index.¹¹ We also assessed health system characteristics, including the occurrence of follow-up office visits, hospitalizations, and visits for psychiatric services.

In bivariate analyses we evaluated each of these factors in relation to antidepressant medication continuation (dichotomized as <84 days versus \geq 84 days). The statistical significance of differences in persistence across these categorical variables was assessed using Pearson's chi-square test. We next conducted a multivariable logistic regression analysis to assess these variables as predictors of acute-phase antidepressant persistence. The initial model included variables associated with medication persistence at the level of significance where $p < 0.2$ in bivariate analyses. Using a backward elimination process, we removed variables from the model in order of least significance, with model fit assessed at each iteration according to changes in Akaike information criterion and by the Hosmer-Lemeshow test. We assessed 2-way variable interactions by comparing differences in the -2log statistics between full and reduced models using a hierarchical approach. Analyses were completed using SAS 9.3. This study was approved by the University of Rhode Island Institutional Review Board.

RESULTS

We identified 1,983 R.I. Medicaid beneficiaries who were newly treated with antidepressant medication during the study time frame, with a documented diagnosis of depression. Our analyses revealed that 53.8% of these patients were persistent during the acute phase of therapy. Persistence was lower among beneficiaries in managed care as compared with patients in fee-for-service Medicaid (53.2% versus 59.7%, respectively; $p < 0.001$). Persistence was also lower among younger patients (age 18-35 years) as compared with patients age 35 years or older (45.3% versus 54.7%, respectively). Only 11 patients were age 65 years or older (0.6%), as most older adults in Medicaid receive their prescription benefit through Medicare Part D plans.

Higher persistence rates were observed among patients having diabetes (61.0%) and among patients receiving 2 or more different classes of antidepressants (78.8%). Follow-up care was also associated with increased medication persistence: patients having at least 1 subsequent office visit during the period were more frequently classified as persistent (56.5% versus 34.5%, $P < 0.001$); and patients having visits specifically for psychiatric services also persisted with their antidepressant medication more frequently (56.9% versus 51.1%, $P = 0.009$).

Patients who were hospitalized within the 30 days preceding their index antidepressant medication persisted with medication less frequently as compared with patients without a hospitalization during the period of diagnosis,

although this difference did not reach statistical significance (45.7% versus 54.7%, respectively, $p = 0.053$). Statistically significant differences in persistence rates were not observed for comparisons by gender, by the type of antidepressant medication prescribed, or by patient comorbidity (other than diabetes). These results are summarized in **Table 1**.

Table 2 presents the results of a multivariable logistic regression analysis of predictors of acute phase antidepressant medication persistence, which included patient age category, plan type, regimen type (monotherapy versus poly-therapy), hospitalization during the index period, subsequent office visits, and visits specifically for psychiatric services during the follow up period. We retained patient gender in the final model. Receiving more than 1 type of antidepressant (i.e. users of poly-therapy) was the most significant predictor (adjusted Odds Ratio 5.31, 95% CI 4.24–6.34). Patients having at least one office visit during the follow-up period were nearly 2.5 times as likely to persist as compared with patients lacking a follow-up visit (adjusted OR 2.44, 95% CI 1.77–3.35), while patients with visits for psychiatric services specifically were approximately 22% more likely to have persisted with medication as compared to patients lacking such visits (adjusted OR 1.22, 95% CI 1.00–1.48). Older patients were 57% more likely to persist than patients under the age of 35 years (adjusted OR 1.57, 95% CI 1.29–1.91).

DISCUSSION

Approximately half (53.8%) of R.I. Medicaid patients who were newly started on a medication for a new episode of depression did not continue the medication for at least 12 weeks. This finding is consistent with other published results. In its State of Healthcare Quality report, the National Committee for Quality Assistance reports a national rate of performance on this measure of 50.5% for Medicaid managed care in 2013.¹⁰ Despite substantial efforts by commercial health plans and managed Medicaid organizations to improve rates on this measure during the past decade, improving persistence with antidepressant medication has proven to be a formidable challenge.

Table 1. Acute-Phase Persistence with Antidepressant Medication in R.I. Medicaid in 2014 (N = 1,983)

Characteristic		Persisted with Medication		
		%	N	p-value
		53.8	1067	-
Age (years)	18 – 34	45.3	898	<0.001
	35 +	54.7	1,085	
Gender	Male	52.6	481	0.492
	Female	54.4	1,502	
Plan type	Fee for service	59.7	243	<0.001
	Managed care	53.2	1,740	
Index Antidepressant	SSRI	54.2	1,285	0.804
	Other class of antidepressant	53.6	698	
Regimen type	Monotherapy	41.6	1,326	<0.001
	Poly-therapy	78.8	657	
Comorbidity*	Cardiovascular disease	47.6	63	0.305
	Respiratory disease	52.2	314	0.503
	Diabetes mellitus	61.0	195	0.037
	Anxiety	55.4	634	0.390
	Bipolar disorder	52.1	144	0.639
	Schizophrenia	46.2	39	0.323
Charlson comorbidity score	0	53.0	1,374	0.191
	1+	56.2	609	
Office visits in follow-up	0	34.5	229	<0.001
	1+	56.5	1,754	
Hospitalizations	0 during 30-day baseline	54.7	1,781	0.053
	1+ during 30-day baseline	47.5	202	
	0 during follow-up period	53.8	1,742	0.787
	1 during follow-up period	54.8	241	
Visits for psychiatric services	0	51.1	995	0.009
	1+	56.9	988	

* p values for comparison of the presence/absence of the comorbidity

Table 2. Multivariable Analysis of Selected Patient Characteristics Associated with Acute Phase Antidepressant Medication Persistence (n = 1,983)

Characteristic		Adjusted Odds Ratio	95% CI
Age Group	younger (18-34)	ref	
	older (35+ years)	1.57	1.286 – 1.907
Gender	male	ref	
	female	1.18	0.936 -1.484
Plan type	managed care	ref	
	fee for service	1.273	0.934 – 1.734
Regimen type	monotherapy	ref	
	poly-therapy	5.31	4.244-6.338
Hospitalization at baseline	yes	0.624	0.448 – 0.868
	no	ref	
Office visits during follow up	0	ref	
	1+	2.436	1.774 – 3.346
Visits for psychiatric services	0	ref	
	1+	1.218	1.001 – 1.483

Table 3. Patient and Health System Themes for Promoting Antidepressant Medication Persistence

Patient	Adherence improves when patients are told:	<ul style="list-style-type: none"> • How long to expect to take the medication • How to manage minor side effects • Whom to contact if there are questions about the medication
	These groups are at greater risk for non-adherence:	<ul style="list-style-type: none"> • Younger patients (age under 35 years) • Patients of lower socioeconomic status • Patients who were recently hospitalized
Health-system	The intensity of follow-up care after a new diagnosis of depression affects treatment adherence	<ul style="list-style-type: none"> • Symptom assessment using an instrument such as the PHQ-9 repeated at each visit helps guide medication dosing and the need for regimen change
	Integrate primary care and behavioral health	<ul style="list-style-type: none"> • The collaborative management of depression is superior to usual care

Our analyses revealed that persistence was increased with age > 35, and lower among patients lacking a follow-up visit. Additionally, patients receiving care from mental health providers were 22% more likely to have persisted with treatment. In an analysis of data from the MarketScan Commercial Claims and Encounter database, Robinson et al¹² also identified the use of mental health specialist care as a significant predictor of acute phase treatment persistence (OR 1.38, 95% CI 1.33-1.43). Yet while their study identified dissimilarities in persistence for various antidepressant medication classes, we did not find differences in persistence according to the type of antidepressant medication prescribed.

While our study did identify several factors that were associated with treatment continuance, a wide range of factors can influence patient persistence, most of which cannot be measured by an analysis of health care utilization. Lack of treatment persistence is a well-known problem, with as many as half of patients failing to adhere with medication therapies for chronic diseases.¹³ While the cost of medication may be considered a barrier to adherence, most individuals in state Medicaid programs are not required to provide a co-payment for prescription drugs. What else might explain the high rate of non-adherence revealed by this measure?

A framework developed by the World Health Organization identifies relevant dimensions of medication adherence that can be instructive in considering barriers to antidepressant medication persistence.¹⁴

Social and Economic: Family and community support systems are integral to depression care.

Health Care System: The collaborative management of depression is superior to usual care. Improving coordination among primary care providers, care managers, and mental health providers, in addition to other core elements of chronic care, improves the effectiveness of depression treatment.¹⁵

Condition Related: Lack of motivation is associated with both medication nonadherence and depression. The American Psychiatric Association recommends that practitioners collaborate with the patient's family (if possible) to help overcome this important barrier to depression care.⁶

Therapy Related: Antidepressant treatment persistence is enhanced when patients are told how long to expect to take the medication and whom to contact if there are questions

about the medication.¹⁶ Patients should also be informed that medication regimen changes may be necessary before symptoms improve.

Patient Related: Such factors are varied yet critical to identify. Alcohol use and other substance abuse are particularly important barriers to adherence.¹⁷

Key findings from our analyses and evidence review are presented in **Table 3**, which identifies health-system and patient-directed themes for promoting antidepressant medication persistence.

Our study had several limitations. First, the performance measure we applied does not have a specification to identify patients who have discontinued their antidepressant medication for a valid reason (e.g. adverse reaction, change in diagnosis). An additional bias of this measure has been reported by Hong et al,¹⁸ who note that while the measure aims to include only newly treated cases, patients with ongoing depression may be inadvertently captured, thus channeling non-adherent patients into the denominator. Lastly, actual persistence rates may be lower than reported by this measure, as it is not known if the patient actually consumed the medication dispensed by the pharmacy.

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Authors

Stephen Kogut, PhD, MBA, RPh, Professor of Pharmacy Practice, Program in Pharmacoepidemiology and Pharmacoeconomics, College of Pharmacy, University of Rhode Island, Kingston, RI.

Brian J. Quilliam, PhD, RPh, Professor and Associate Dean, URI College of Pharmacy, Kingston, RI.

Rita Marcoux, MBA, RPh, Clinical Associate Professor, URI College of Pharmacy, Kingston, RI.

William McQuade, DSc, MPH, Sr. Healthcare Policy Analyst, RI Executive Office of Health and Human Services, Providence, RI.

Cheryl Wojciechowski, Program Specialist, R.I. Executive Office of Health and Human Services, Providence, RI.

Charles Wentworth III, MS, Research Associate, URI College of Pharmacy, Kingston, RI.

Rebecca Plonsky, LICSW, Vice President of Integrated Behavioral Health, Prospect CharterCare, LLC, Providence, RI.

Noelle Wood, PhD, Administrator for Medical Services, RI Executive Office of Health and Human Services, Providence, RI.

Correspondence

Stephen Kogut, PhD
 Program in Pharmacoepidemiology and Pharmacoeconomics
 College of Pharmacy
 University of Rhode Island
 7 Greenhouse Road
 Kingston, RI 02881
 401-874-5370
 Fax 401-874-2741
 SKogut@URI.edu

Migraine with unilateral mydriasis

JOSEPH H. FRIEDMAN, MD

A 54-year-old, post-menopausal woman has had migraine headaches since the age of 40, occurring about once per month, responding well to sumatriptan. She experiences a stabbing pain in the left eye and left side of head, associated with nausea and vomiting. The pain has only affected her left side but a brain MRI was normal. She has an aura of blurred vision in the left eye alone, seeing images as if through a broken glass, with shimmering lights but no scotoma. She experienced a headache at work and a co-worker noticed her left pupil to be markedly dilated (see photo). Her medical history was otherwise unremarkable. She does not know if she'd had a dilated pupil previously. Her neurological and funduscopy exam, after the episode resolved, were normal. She takes thyroid supplement as her only medication.

Benign episodic unilateral mydriasis (1) is due either to sympathetic overactivity, causing increased dilatation, or parasympathetic underactivity, causing decreased contraction. No other third-nerve symptoms had been present (ptosis or eye movement limitations that would cause diplopia). The association with recurrent migraines, previous normal brain MRI, absence of other neurological symptoms and complete



resolution limit the diagnosis to a benign process.

Probably the most common cause for episodic unilateral mydriasis is due to handling a scopolamine patch then touching one eye.

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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Submission information for Images/Videos in Clinical Medicine section

Original, high-resolution images and videos, which have not been published elsewhere, will be considered.

In a separate Word document please include a brief title, and legend (150 words or less) providing relevant clinical information, findings, clinical course, and response to treatment if initiated.

Any information that might identify the patient or hospital, including the date, should be removed from the image unless a patient release is obtained by the physician.

Please include authors' names (limited to two authors), academic positions, address, e-mail address and telephone number.

Submissions should be sent to Dr. Joseph H. Friedman, editor-in-chief, at joseph_friedman@brown.edu and Mary Korr, managing editor, at mkorr@rimed.org.

A Case of Hypothermia

LAURA RUHLAND, MD; JONATHAN AMELI, MD; WILLIAM BINDER, MD

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

DR. LAURA RUHLAND: The patient is a 48-year-old woman who was brought to the hospital by EMS this past February. By report, the patient had expressed suicidal thoughts to her family and then went missing at noon today. Police were notified at around 3 pm, and search and rescue became involved shortly thereafter. The patient was found with the lower half of her body submerged in brackish water and with an empty bottle of vodka cradled next to her. Per EMS, the patient had recently been diagnosed with leukemia and was despondent. At the scene, the patient was noted to be cold and obtunded. Access was difficult to obtain and an intraosseous catheter was placed in the left proximal tibia and the patient received .9 normal saline (NS) fluid. She was given 2 mg of naloxone with no effect and was brought to the emergency department.

Upon arrival, vital signs revealed her blood pressure to be 84/52 mm Hg, pulse of 72, irregular rhythm and oxygen saturation of 92% on 100% oxygen face mask. A rectal probe revealed a temperature of 83.6 degrees F (28.7 C). The patient was unresponsive to verbal or noxious stimuli, and was moving very little air with minimal chest rise. She had weak pulses in the radial, femoral, and carotid locations.

There was no outward evidence of any deformity or trauma to her body. Her pupils were 5 mm and minimally reactive, her heart exam revealed an irregular S1S2 with no murmurs. Her abdomen was soft, and her upper extremities were initially found to be rigid in flexion. Her Glasgow Coma Score (GCS) was 3.

DR. BRUCE BECKER: What were your initial concerns and next steps?

DR. RUHLAND: Our initial concern was for the patient's airway, as she was comatose. Intravenous access was obtained and simultaneously the patient was placed on a monitor. An ECG revealed atrial fibrillation with a rate in the 70s, without peaked T waves, suggesting that the patient was not significantly hyperkalemic, a complication often noted in hypothermia. One caveat is that hypothermia can obscure classic ECG changes in a range of conditions, including hyperkalemia. (1) The patient was intubated, without incident, using etomidate and succinylcholine, a

Table 1.

	Initial	Repeat 2 hours later
Venous pH	7.21	7.29
WBC	7.2	15.0
Hb	16.3 g/dl	13.6 g/dl
Potassium	4.9 meq/L	3.8 meq/L
creatinine	.49 mg/dl	.53 mg/dl
CPK	634 mg/dl	
troponin	<.006 ng/ml	
alcohol	369 mg/dl	

depolarizing agent that can exacerbate hyperkalemia. (2) Laboratory studies are noted in **Table 1**.

DR. NATHAN HUDEPOHL: Can you discuss the severity and implications of this patient's decreased temperature.

DR. RUHLAND: Accidental hypothermia is defined as an involuntary drop in core body temperature to below 35 degrees C (95 F). (3) Up to 1500 patients in the United States are estimated to succumb annually to hypothermia, with about 50% of these noted to be accidental, but the true incidence and morbidity and mortality is unknown. (3, 4) The Swiss hypothermia (HT) classification system provides an estimate of the severity of the patient's hypothermia in comparison to clinical signs. (**Table 2**) (3, 5) Previous systems described hypothermia as either mild, moderate, or profound (<28 C). (5, 6) One of the limitations of both the Swiss model, as well as other systems, is that clinical findings may not correspond to classification. (7)

Our patient was unconscious, did not demonstrate any shivering, and had a core temperature hovering near 28 C, and was consequently HT2/HT3. Her altered consciousness may have also been affected by ingestion of alcohol.

Table 2.

Stage	Clinical Signs	Temperature
HT1	Unimpaired consciousness; shivering	35 C to 32 C
HT2	Altered consciousness; no shivering	<32 C to 28 C
HT3	Unconscious	<28 C to 24 C
HT4	No vital signs	< 24 to 13.7 C
HT5	Death	<13.7 C (may be lower)

DR. MARK GREVE: What is the physiologic response to hypothermia?

DR. WILLIAM BINDER: The initial response to cooling is peripheral vasoconstriction and increased metabolism due to thermogenesis from shivering, which can increase metabolic heat production 2-5 times above resting levels. (8) Respiratory effort, oxygen consumption, cardiac output, and mean arterial pressure initially increase. However, when core temperature drops to approximately 32 C, metabolism begins to decrease. Bradycardia and diminished myocardial contractility occur, and hypoventilation with concomitant carbon dioxide retention, hypoxia, and respiratory acidosis are noted in hypothermia below 32 C. (8) As temperature drops below 30 C, dysrhythmias are frequently observed. Central nervous system physiology is altered as well, with abnormalities on electroencephalogram (EEG) noted below 34 C, and decreased EEG activity seen below 28 C. (9) Correspondingly, mental status is affected and patients develop irritability, confusion, apathy, lethargy, and proceed to somnolence and coma. (5) Other systems are impacted as well. Coagulopathy, renal dysfunction and cold diuresis occur, and endocrine and immunologic changes are seen in hypothermic patients. (8,9)

DR. JESSICA SMITH: What are the usual mechanisms for warming a patient and what steps were taken for your patient?

DR. RUHLAND: In mildly hypothermic patients, passive rewarming using a forced air warming blanket can raise the core temperature 1-2 degrees C/hour. (9) Heating pads, warm water bottles, and warmed intravenous fluids in conjunction with a warming blanket can increase the core temperature up to 3 C/hour. (3) Additional modalities used in more severe hypothermia include body cavity lavage. Warm fluids exchanged through a foley catheter and nasogastric tube can transfer heat and in patients with profound hypothermia, pleural and peritoneal lavage can warm patients up to 3 degrees C/hour. (3) The use of warm, humidified air during mechanical ventilation can contribute to rewarming, as well. In profound hypothermia, extracorporeal assisted rewarming (ECAR) techniques are currently standard of care in trauma centers.

ECAR techniques were first successfully utilized in the 1960s. Data suggests that in patients who have not had a cardiac arrest, ECAR can be used in the setting of arrhythmias, hypotension, respiratory distress and failure, refractory acidosis, core temperatures < 28 C, and failure to respond to non-invasive warming methods. (10) ECAR is less successful in patients with hypoxic cardiac arrest (suffocated avalanche victims, prolonged submerged drowning victims) as neurologic outcomes are poor. (10)

Our patient did not require extra corporeal membrane oxygenation (ECMO). We were able to perform both passive

and active rewarming using a forced air warming blanket, a heated room, warm intravenous fluids, warm humidified air in the ventilation circuit, as well as gastric and bladder lavage. The patient's core temperature rose approximately 1.5-2 degrees C during the first hour of resuscitation, and her temperature increased 2.5 degrees C hourly for the next two hours. At 32 C her risk for arrhythmia was diminished and a CT of her brain was performed and was normal and without hemorrhage.

DR. BECKER: This patient was rather fortunate in that she was found early enough and did not suffer profound hypothermia. We recently encountered a patient who was frozen solid and succumbed to hypothermia. How does one determine whether a patient is truly dead from hypothermia?

DR. JONATHAN AMELI: Stage 4 hypothermia is noted when the core temperature is below 24 C. Vital signs are frequently absent in such a profound state. However, while some people may be cold and without vital signs, numerous case reports describe prolonged cardiopulmonary resuscitation (CPR) in severely hypothermic patients who make partial and full recoveries with active core rewarming. (10-14)

Standard advanced cardiac life support may not be effective below 30 C. Body rigidity and fixed dilated pupils can occur with hypothermia, and may be reversible. Consequently, these exam findings should not be used to guide resuscitation prior to warming. Core temperature should be > 32 C prior to terminating CPR in patients without vital signs – no one should be pronounced dead until warm and dead. (3) However, patients who suffer cardiac arrest prior to hypothermia or who are frozen solid and have a non-compressible chest, have very poor outcomes and can be considered dead if they are without vital signs. In patient's with vital signs, a core temperature of > 36 C should be maintained prior to initiating brain death evaluation.

While core temperature is not necessarily predictive of outcome, poor prognostic signs include potassium levels greater than 10 mmol/L in adults, and > 12 mmol/L in children, severe acidosis (pH< 6.5), coagulopathy, as well as severe traumatic injury. (10, 15)

DR. SETH GEMME: What was the patient's outcome?

DR. RUHLAND: The patient was transferred to the medical intensive care unit, and she was extubated on hospital day 1. On hospital day 2 she divulged that she had gotten into an argument with her best friend, and decided to drink and hurt herself. She also revealed that she had been diagnosed with chronic myelogenous leukemia, and was being treated with imatinib. She was evaluated by the psychiatry service and agreed to a transfer to an in-patient psychiatric facility on hospital day 3.

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Authors

Dr. Laura Ruhland is a PGY-3 at the Alpert Medical School of Brown University.

Dr. Jonathan Ameli is a PGY-3 at the Alpert Medical School of Brown University.

Dr. William Binder is Associate Professor in Emergency Medicine, Alpert Medical School of Brown University.

Correspondence

William Binder, MD

Emergency Medicine Foundation

593 Eddy St

Providence, RI 02903

401-444-5411

Fax 401-444-4307

William_Binder@brown.edu

Active and Direct Active Monitoring of Travelers Returning from Countries that Experienced Widespread Transmission of Ebola Virus Disease, Rhode Island, October 2014–December 2015

JACLYN SKIDMORE, MSc; MICHAEL GOSCIMINSKI, MT, MPH; UTPALA BANDY, MD, MPH

BACKGROUND

Ebola Virus Disease (Ebola) is a viral hemorrhagic fever that causes severe illness and can be fatal. Symptoms present 2 to 21 days after exposure to the Ebola virus and include: sudden onset of fever, severe headache, muscle pain, weakness, and fatigue, followed by vomiting, diarrhea, abdominal pain and unexplained bleeding or bruising.¹

In December 2013, an outbreak of Ebola began in Guinea and by March 2014 cases were reported in neighboring Liberia and Sierra Leone.^{2,3} Within months, this outbreak rapidly progressed to become the largest in the history of the disease. Though the outbreak was concentrated in Liberia, Guinea, and Sierra Leone, cases were imported into seven other countries, including the United States.⁴ An imported case of Ebola in a traveler from Liberia was reported in Dallas, Texas in September 2014. Subsequently, two healthcare workers who cared for this individual developed Ebola. In October 2014, the New York City Department of Health and Mental Hygiene reported an imported case of Ebola in a physician who had recently returned from Guinea.⁵

In response to the threat of imported Ebola cases, the Centers for Disease Control and Prevention (CDC) implemented a number of control measures through the Division of Global Migration and Quarantine.⁶ The CDC and the U.S. Customs and Border Protection began enhanced entry screening for individuals entering the U.S. from Liberia, Guinea, and Sierra Leone in mid-October 2014 (Mali was briefly added from November 2014 to January 2015).^{7,8} The Department of Homeland Security subsequently required all passengers flying from an Ebola-affected country to arrive in the U.S. at one of five designated airports for entry screening.

On October 27, 2014, the CDC released the *Interim U.S. Guidance for Monitoring and Movement of Persons with Potential Ebola Virus Exposure* for the post-arrival monitoring of travelers from Ebola-affected countries by state and local public health departments.^{9,10} This document recommended that these travelers be monitored for 21 days after their last potential exposure to Ebola virus (21 days being the longest incubation period). The Rhode Island Department of Health (RIDOH) immediately incorporated these guidelines into its traveler monitoring program.

METHODS

Upon arrival in the U.S., travelers from Ebola-affected countries received a CARE (Check and Report Ebola) kit

developed by the CDC.⁹ It contained a digital thermometer with instructions, a health advisory, a symptom card and log, a wallet card, and phone numbers for state and local health departments. Later, a cell phone was added to facilitate contact with public health officials. At the arrival airport, travelers underwent an initial screening consisting of a temperature check, observation for Ebola symptoms, and the administration of a questionnaire regarding symptoms and potential risk factors.⁶ If a traveler was symptomatic and/or had any risk factors, he/she was further evaluated by a health official at the airport.

Based on the results of the screening, a traveler was assigned to one of three risk categories: low (but not zero) risk, some risk, or high risk.⁶ Low (but not zero) risk individuals were in a country of widespread transmission in the past 21 days and had either limited or no exposure to an Ebola case. Some risk individuals either had contact with an Ebola case while wearing appropriate personal protective equipment (PPE) or were in close proximity to an Ebola case while not wearing PPE. High risk individuals had direct contact with the body fluids of an Ebola case.¹¹ The traveler's risk category, screening results, demographics, and contact information were communicated to the health department of the traveler's final destination through the CDC's Epidemic Information Exchange (Epi-X), a secure electronic notification system. For travelers categorized as some risk or high risk, CDC staff contacted a public health official in the state of the traveler's final destination to transfer information and ensure the traveler's safe transportation.

Public health epidemiologists at RIDOH's Center for Acute Infectious Disease Epidemiology (CAIDE) received the information through Epi-X. A public health nurse then conducted a phone interview using a standard questionnaire, during which he/she verified information received from the CDC, explained RIDOH's monitoring program, provided education on Ebola symptoms, and developed an action plan for the traveler to use if he/she became symptomatic.

Two methods of monitoring travelers for Ebola symptoms were utilized: active monitoring (AM) and direct active monitoring (DAM). AM was conducted for travelers classified as low (but not zero) risk and required them to call RIDOH once per day for the 21-day monitoring period. Each day, the traveler provided his/her temperature for that morning and the previous evening and was asked if he/she had any Ebola symptoms. The traveler was also asked about any plans for

overnight travel outside Rhode Island and if he/she was taking any antipyretics (which could affect temperature readings). If the traveler did not make contact by 12 p.m. staff would call and/or send a text message to the individual. If all contact attempts failed by the end of the work day, a public health nurse would visit the traveler in person.

The second method, DAM, was conducted for travelers in the some risk category and consisted of a once-daily home visit by a public health nurse who recorded the traveler's temperature and any presence of symptoms. The traveler was required to contact RIDOH a second time each day to report that evening's temperature and any symptoms. For both AM and DAM, travelers were instructed to immediately notify RIDOH of any Ebola symptoms that developed for further evaluation and coordination of care.

Each traveler on AM was required to sign a legally-binding active monitoring agreement. This agreement detailed the conditions of the monitoring program and noted that non-compliance would lead to involuntary quarantine. Travelers on DAM were required to sign a similar legally-binding direct active monitoring agreement, given to them during the first in-person visit by a public health nurse. This agreement included additional movement restrictions and more stringent notification requirements in line with CDC guidance. All travelers who had a primary healthcare provider in Rhode Island were also asked to complete a medical information release authorization form with their provider's information. Once the form was received, a public health nurse called the provider's office and informed them of their patient's recent travel and monitoring status.

Two Microsoft Excel spreadsheets were used to track travelers' monitoring information and generate custom reports quickly and accurately. The first was a program management spreadsheet that included a summary of each traveler's monitoring history, including information on travel plans and coordination of care. This spreadsheet was often used as a "quick reference" for staff who were not involved in the daily monitoring process but required information for high-level briefings. The second spreadsheet contained an individual worksheet for each traveler where detailed temperature readings and symptom information were recorded for each day the traveler was monitored by RIDOH. This spreadsheet was used to create internal dashboard reports and collect information that was submitted electronically to the CDC each week.

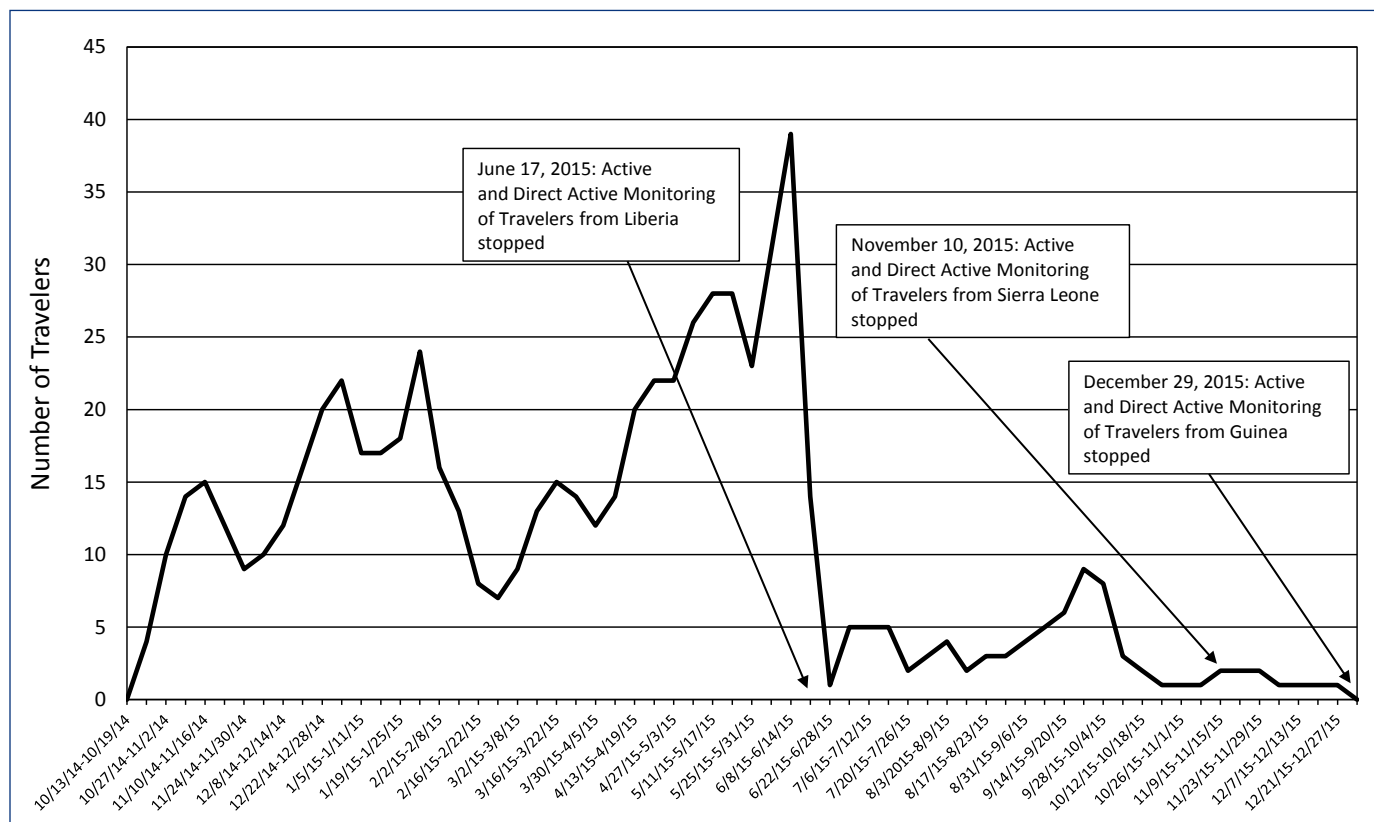
If an individual under either AM or DAM intended to travel outside Rhode Island for one night or more, steps were taken to notify public health officials in the destination state or country. Travelers under AM required an interstate movement notification be submitted to the destination state through Epi-X. For travelers under DAM, an epidemiologist called the public health department in the destination state to notify them of the person's travel and ensure continuity of monitoring. For individuals under monitoring traveling internationally, an international movement notification was sent by RIDOH to the CDC for further distribution.

RESULTS

From October 22, 2014 to December 29, 2015, a total of 261 travelers were referred to RIDOH and met criteria for the state's monitoring program. Of the 261 travelers, 257 (98.5%) were low (but not zero) risk and were placed on AM and four (1.5%) were some risk and placed on DAM. There were no high risk travelers. The majority of individuals had a history of travel to Liberia (197, 75.5%), while 32 (12.3%) travelers had been in Guinea, 21 (8.0%) travelers had been in Sierra Leone, and 7 (2.7%) travelers had been in Mali. Four (1.5%) travelers visited two or more affected countries in the 21 days prior to arrival in the U.S. (Table 1). The high number of individuals traveling from Liberia was as expected due to the existence of a large Liberian community in Rhode Island.¹²

Table 1. Selected characteristics of travelers from Ebola-affected countries monitored by RIDOH, October 22, 2014-December 29, 2015

Characteristic	No.	%
Travelers monitored by RIDOH	261	100
Travelers requiring active monitoring	257	98.5
Travelers requiring direct active monitoring	4	1.5
Ebola-affected country visited by travelers		
Liberia	197	75.5
Guinea	32	12.3
Sierra Leone	21	8.0
Mali	7	2.7
More than one country	4	1.5
County of residence while in RI		
Bristol	1	0.4
Kent	3	1.1
Newport	2	0.8
Providence	241	92.3
Washington	14	5.4
Age (Years)		
0-4	10	3.8
5-9	12	4.6
10-19	17	6.5
20-29	43	16.5
30-39	62	23.8
40-49	60	23.0
50-59	32	12.3
60-69	21	8.0
70+	4	1.5
Sex		
Female	124	47.5
Male	137	52.5
Final outcome of monitoring		
Completed monitoring within RI	226	86.6
Transferred out of RI during monitoring period	35	13.4
Interstate notification conducted	17 of 35	--
International notification conducted	18 of 35	--
Lost to follow-up	0	0

Figure 1. Average Number of Travelers Monitored by RIDOH per Week, October 13, 2014 to December 29, 2015

The majority of travelers were English-speaking (220, 84.3%). Seven (2.7%) travelers spoke French, 2 (<1%) travelers spoke a tribal language, and 1 (<1%) traveler spoke Mandarin. Primary language was unavailable for 31 (11.9%) travelers. If travelers could not communicate in English, a family member, household member, or RIDOH staff member was asked to translate daily monitoring information for the individual.

While in Rhode Island, most travelers resided in Providence County (241, 92.3%), in the city of Providence (113, 43.3%). The majority of travelers were between 30 and 39 years of age (62, 23.8%) and male (137, 52.5%) (Table 1). The number of travelers who made contact with RIDOH each day of their 21-day monitoring period was high, with 232 (88.9%) travelers adhering to daily monitoring for each of the 21 days they were under RIDOH's jurisdiction. The remaining 29 (11.1%) travelers required active follow-up and all were re-engaged within 48 hours, leaving no travelers lost to follow-up.

From October 22, 2014 to December 29, 2015, an average of 11 (range: 4 to 39) travelers were being monitored by RIDOH each week. From the week of October 20, 2014 to the week of June 15, 2015 an average of 17 (range: 2 to 39) travelers were being monitored each week. On June 17, 2015 the CDC re-classified Liberia as a country with former widespread transmission, allowing states to cease monitoring of travelers from Liberia. Following this week, the average

number of travelers monitored each week decreased to three (range: 0 to 11) (Figure 1).

Of the 261 travelers monitored, 10 (3.8%) reported one or more symptoms consistent with Ebola (temperature, stomach pain, diarrhea, muscle pain, headache, or feeling weak/tired). Two of these travelers required medical care and evaluation and were briefly identified as Persons Under Investigation before being ruled out for Ebola. No cases of Ebola were identified in Rhode Island.

DISCUSSION

Though no cases of Ebola occurred in Rhode Island, RIDOH invested a great deal of time and effort into monitoring travelers from Ebola-affected countries. Existing CAIDE staff created, implemented, and maintained the monitoring program while continuing to perform their other duties. At the peak of the response, an average of 39 travelers per week were being monitored daily, requiring a significant amount of time to establish daily contact in order to obtain temperature readings and symptom history. Additional activities such as creating and sending interstate and international movement notifications, coordinating care when travelers reported symptoms, and arranging staff coverage on week-ends and holidays proved challenging, but not impossible.

The success of RIDOH's monitoring program was due to the development and constant improvement of a simple

yet functional monitoring system, as well as the ability of RIDOH staff to build relationships with travelers during the 21-day monitoring period. Though many states chose to automate their systems, RIDOH conducted monitoring primarily through phone calls. This was not only due to technical constraints, but also because conversations with the travelers were seen as a unique opportunity to assess their well-being and to build trust and familiarity. In addition to obtaining daily monitoring information through these conversations, RIDOH staff connected travelers to community resources to obtain care for non-Ebola medical concerns, receive influenza vaccinations, and reduce stigma in schools and workplaces.

The RIDOH response to the Ebola outbreak in West Africa was swift and organized due to ongoing federal funding through Public Health Emergency Preparedness and Epidemiology and Laboratory Capacity grants, which sustain a flexible and competent public health workforce. As emerging infections continue to present challenges, it is important for the public health community to continuously plan and prepare responses for future outbreaks.

Acknowledgments

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Authors

Jaclyn Skidmore, MSc, is a Public Health Epidemiologist in the Division of Preparedness, Response, Infectious Disease, and Emergency Medical Services at the Rhode Island Department of Health.

Michael Gosciminski, MT, MPH, is a Senior Public Health Epidemiologist in the Division of Preparedness, Response, Infectious Disease, and Emergency Medical Services at the Rhode Island Department of Health.

Utpala Bandy, MD, MPH, is the State Epidemiologist and Medical/Division Director of the Division of Preparedness, Response, Infectious Disease, and Emergency Medical Services at the Rhode Island Department of Health and Clinical Assistant Professor of Health Services, Policy and Practice at the Warren Alpert Medical School of Brown University.



VITAL STATISTICS

NICOLE E. ALEXANDER-SCOTT, MD, MPH
DIRECTOR, RHODE ISLAND DEPARTMENT OF HEALTH
COMPILED BY ROSEANN GIORGIANNI, DEPUTY STATE REGISTRAR

PUBLIC HEALTH

Rhode Island Monthly Vital Statistics Report Provisional Occurrence Data from the Division of Vital Records

VITAL EVENTS	REPORTING PERIOD		
	OCTOBER 2015	12 MONTHS ENDING WITH OCTOBER 2015	
	Number	Number	Rates
Live Births	1,033	11,578	11.0*
Deaths	902	10,468	9.9*
Infant Deaths	7	74	6.4#
Neonatal Deaths	5	61	5.3#
Marriages	830	6,674	6.3*
Divorces	268	2,992	2.8*
Induced Terminations	194	2,597	224.3#
Spontaneous Fetal Deaths	48	614	53.0#
Under 20 weeks gestation	42	566	54.1#
20+ weeks gestation	6	48	4.1#

* Rates per 1,000 estimated population

Rates per 1,000 live births

Underlying Cause of Death Category	REPORTING PERIOD			
	April 2015	12 MONTHS ENDING WITH APRIL 2015		
	Number (a)	Number (a)	Rates (b)	YPLL (c)
Diseases of the Heart	185	2,381	226.1	3,659.0
Malignant Neoplasms	185	2,245	213.2	5,312.0
Cerebrovascular Disease	35	430	40.8	552.5
Injuries (Accident/Suicide/Homicide)	65	794	75.4	11,964.0
COPD	61	550	52.2	647.5

(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 1,055,173 (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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Working for You: RIMS advocacy activities

March 1, Tuesday

RIMS Physician Health Committee:
Herbert Rakatansky, MD, Chair
Meeting with Medical Malpractice Joint
Underwriting Association, MMJUA,
regarding Stabilization Reserve Fund
Conference call with 3Won regarding
credentialing
Legislative hearings
Sen. Lynch fundraiser
Rep. McEntee fundraiser
Rep. Carnevale fundraiser

March 2, 2016, Wednesday

Meeting with Jay Amrien, PA-C,
Bryant University PA Program
Meeting with Brown medical
and Salve Regina nursing faculty
Legislative hearings

March 3, Thursday

Meeting with Dr. George Bottomley,
Johnson & Wales PA program
Meeting Neta Taylor, Vice President
Health Living, YMCA of Greater
Providence
Meeting with House HEW Committee
Chair Joseph McNamara regarding
legislation
Legislative hearings

March 4, Friday

Meeting with Ana Novais, MA, Executive
Director of Health, RI Health, regarding
weight and wellness initiative

March 7, Monday

Thundermist Health Centers' Annual
Breakfast and Awards; RIMS member
Josiah Rich, MD, Honoree
SIM Measurement Alignment
Subcommittee, Peter Hollmann, MD
Meeting with Dean Wetle, Brown
University School of Public Health,
regarding healthy weight initiative
Meeting with RI Psychiatric Society
Legislation Committee
RIMS Board of Directors meeting

March 8, Tuesday

Legislative Hearings; Peter Hollmann,
MD, made a House Call

March 9, Wednesday

Board of Medical Licensure and Discipline
Governor's Opioid Taskforce, Gary
Bubly, MD, Past President, member
Interview with freelance reporter
regarding opioid-related activities in
Rhode Island.
Legislative Hearings
Attorney General Kilmartin fundraiser
Rep. Aaron Regunberg fundraiser
Rep. Samuel Azzinaro fundraisers

March 10, Thursday

Meeting with RI Quality Institute and
Office of Health and Human Services
regarding Provider Directory Legislation
SIM Steering Committee Meeting,
Peter Hollmann, MD
Legislative Hearings
Senator Felag fundraiser
Rep. Ruggiero fundraiser
Meeting at RIMS with interested parties
regarding laser surgery safety legislation

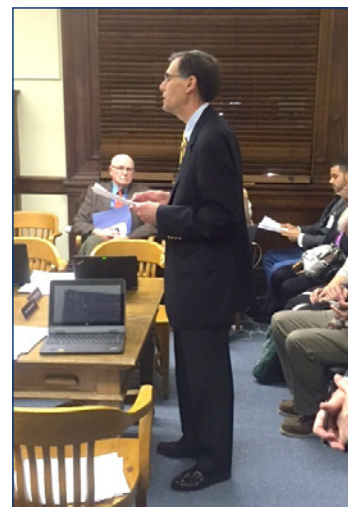
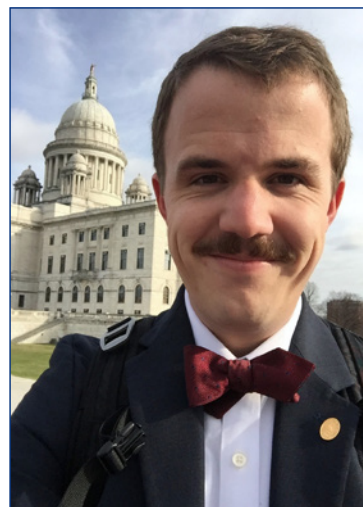
March 11, Friday

Meeting with Governor's office
regarding legislation

March 14, Monday

DOH Health Professional Loan
Repayment Board
Meeting with RI Kids Count regarding
healthy weight grant application
Meeting with RIPS Council
regarding legislation

RIMS leadership testified at
a number of hearings at the
State House in March: *[top to
bottom] Michael E. Migliori,
MD, Chair of RIMS Public
Laws Committee; Steve DeToy,
RIMS Director of Government
and Public Affairs; and Peter
A. Hollmann, MD. Brown
Alpert Medical School student
Jason Bowman represented
the AMA-Medical Student
Section in the hearings.*







AFFINITY PROGRAM

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 health-care and related business to work with our membership.

RIMS thanks these participants for their support of our membership.

*Contact Megan Turcotte for more information:
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Doctor's Choice provides no cost Medicare consultations. Doctor's Choice was founded by Dr. John Luo, a graduate of the Alpert Medical School at Brown University to provide patient education and guidance

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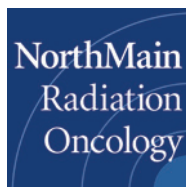
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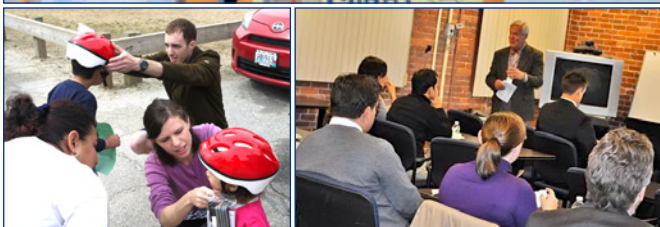
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Dana-Farber Cancer Institute and Lifespan Seek To Partner in Rhode Island

PROVIDENCE – The Dana-Farber Cancer Institute (Dana-Farber) and Lifespan Health System have signed a letter of intent to enter into a partnership in Rhode Island. The goal of this innovative arrangement is to elevate the level of cancer treatment for patients seeking care at Lifespan-affiliated institutions, and to benefit both organizations' clinical, teaching and research missions.

As envisioned, the partnership will provide a seamless system of care for patients needing treatment for rare and complex cancers. It will also facilitate access for Lifespan cancer patients to a broader array of clinical trials, and to emerging and novel cancer therapies.

"In addition to the specific benefits for appropriate patients, making clinical trials more widely available will also help hasten the development of new therapies," said **EDWARD J. BENZ, JR, MD**, president of Dana-Farber. "We are excited to begin developing a thoughtful and unique partnership with the superb system of caregivers and researchers at Lifespan."

"We share a deep interest in developing a top notch, patient-centered, cost effective and seamless cancer care delivery system for the region," said **TIMOTHY BABINEAU, MD**, president and CEO of Lifespan. "I can't think of a better partner to collaborate with than Dana-Farber."

As cancer treatment advances and patient outcomes improve, the institutions will gain considerable expertise in treating cancer as a chronic condition, with a focus on the special circumstances associated with cancer survivorship.

The Dana-Farber/Lifespan partnership will be supported, in part, by a similar electronic health record system (Epic platform) that will enhance the use of cancer care pathways, reduce clinical redundancies and facilitate patients' participation in their care. ❖

Home & Hospice Care of Rhode Island, Visiting Nurse Home Care Rebrand as HopeHealth

Home Care & Hospice of New England, HopeHealth in Massachusetts Complete Affiliation

PROVIDENCE – Home Care & Hospice of New England and Massachusetts-based HopeHealth announced today that their affiliation is complete and both entities will now operate under the HopeHealth name. **DIANA FRANCHITTO** will lead the expanded HopeHealth organization.

Under the new structure, the following name changes will occur:

- Home & Hospice Care of Rhode Island becomes Hope Hospice & Palliative Care Rhode Island
- Visiting Nurse Home Care becomes Visiting Nurse of HopeHealth

The new parent organization will serve Rhode Island and eastern Massachusetts and be the largest non-profit hospice and palliative care provider in New England. The move allows the organizations to advance their shared mission of enhancing the quality of life for the patients and families they serve. It will also create a \$75 million regional organization that can thrive in an increasingly competitive and complex healthcare environment. The combined organization's headquarters will be based in Providence, RI.

"We are thrilled to announce the completion of this affiliation and the benefits it will mean for Rhode Islanders," said Diana Franchitto, president & CEO of HopeHealth. "We have a strong tradition of providing outstanding, high quality care for our patients and families, and this partnership allows us to become a stronger, better organization."

"As part of this new partnership, all of our organizations now have the word 'hope' in their names," Franchitto added. "It's a word that reflects our deeply meaningful and compassionate work, and one that most Rhode Islanders will recognize as our state motto."

Hope Hospice & Palliative Care Rhode Island is the second oldest hospice in the nation and a national leader in hospice and palliative care. Its academic affiliation with Brown University's Warren Alpert Medical School for hospice and palliative medicine is the only one of its kind in the country. HopeHealth, which delivers a wide range of medical care and support services addressing chronic care through end of life in eastern Massachusetts, is recognized as one of the premier hospice providers in the region.

Visiting Nurse of HopeHealth is a community-based home health care provider located in Lincoln, Rhode Island. Founded in 1908, the organization's tradition continues to be rooted in providing high-quality care to residents of Rhode Island and southern Massachusetts. They offer coordinated care to meet the full range of home care and palliative care services.

In addition to the three main entities, the affiliation includes the Philip Hultar Hospice Center and the Hope Palliative Care Center, both located in Providence, R.I. The Hope Palliative Care Center is the first free-standing palliative care outpatient clinic in Rhode Island. The Center provides people living with serious illness access to a palliative care specialist, even if they are not in a hospital or long-term care facility.

As part of the new affiliation, the subsidiaries of each entity will retain their local Boards of Directors, ensuring their continued community engagement, support and guidance. The parent organization will have a Board of Directors with two co-chairs and equal representation from each entity.

"In the days and weeks ahead, HopeHealth will be spreading the word about the new names of each entity through a public awareness campaign," said Franchitto. ❖



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Hasbro study finds nearly half of all teens visiting ED report peer violence and cyberbullying, many showing signs of PTSD

Research highlights need for improved screenings and early treatment

PROVIDENCE – A study from Hasbro Children's Hospital has found that nearly 50 percent of teens seen in the emergency department for any reason report peer violence and nearly 50 percent also report being the victims of cyberbullying. Almost one-quarter of teens in the emergency department also report symptoms consistent with post-traumatic stress disorder (PTSD). The study, led by **MEGAN RANNEY, MD, MPH**, shows that cyberbullying, physical peer violence and PTSD are common and inter-related, and that early identification and treatment are crucial.

Currently published online in *General Hospital Psychiatry*, the study examined 353 adolescents in the Hasbro Children's Hospital emergency department. Regardless of chief reason for emergency room visit, 23.2 percent of the teens reported current symptoms consistent with PTSD, 13.9 percent had moderate or higher depressive symptoms and 11.3 percent reported suicidal thoughts within the past year. The adolescents commonly reported physical peer violence (46.5 percent), cyberbullying (46.7 percent) and exposure to community violence (58.9 percent).

"PTSD in adolescents has been associated with long-term functional impairment, including poor physical health, academic failure and increased need for medical services," said Dr. Ranney. "But, despite the availability of effective treatment, PTSD is currently underdiagnosed, underreported, and undertreated, especially among children and adolescents."

The study found that the PTSD symptoms strongly correlated with a variety of co-occurring risk exposures, such as being a victim of cyberbullying or physical peer violence, exposure to community violence and alcohol or drug use. Few of the teens with PTSD reported receiving any mental health care in the past year.

"These results should serve as a reminder to parents,

schools and physicians that these problems are prevalent in our community," said Dr. Ranney. "This study also highlights that teens with a history of cyberbullying or peer violence are more likely to have PTSD, which is a very treatable disease if properly identified and addressed."

Previous studies have suggested that emergency departments should screen adolescents for psychiatric disorders, given the large number of high-risk adolescents seen in the emergency department and its role as a liaison to community mental health services. "The problem is that there has been a lack of knowledge about the prevalence and impact of PTSD in adolescent emergency patients, particularly among patients who are not presenting in the aftermath of an obviously traumatic event," said Dr. Ranney.

"Existing literature on PTSD in adolescent emergency patients describes its development after an acute assault or motor vehicle crash," said Dr. Ranney. "But, this study highlights the need for improved efforts at more standardized mental health evaluation, possibly even screening for PTSD regardless of the reason for a teen's visit to the emergency department." ♦

Rhode Island Medical Imaging Expands Vein Institute

EAST PROVIDENCE – Rhode Island Medical Imaging recently announced the expansion of its varicose vein therapy service line.

"We believe our current patients will continue to benefit greatly from the state-of-the-art care offered at The Vein Institute at RIMI and that our expansion will make it more convenient and comfortable for patients receiving the very best care in the treatment of venous disease," said **DR. JOHN PEZZULLO**, president of Rhode Island Medical Imaging.

With current locations in Providence and East Greenwich, and new locations opening this spring in Pawtucket and Barrington, The Vein Institute at RIMI will be staffed by six board certified interventional radiologists. ♦



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Medical Screening, Special Testing Team from Women & Infants publishes in *Public Library of Science* on gestational diabetes findings

PROVIDENCE — **JAMES E. HADDOW, MD**, co-director of the Division of Medical Screening and Special Testing at Women & Infants Hospital and professor in the Department of Pathology and Laboratory Medicine at The Warren Alpert Medical School of Brown University; **GERALYN M. MESSERLIAN, PhD**, director of the Division of Medical Screening and Special Testing and a professor in the Department of Pathology and Laboratory Medicine at the Alpert Medical

thyroid hormone production. The thyroid gland itself functions normally among women with gestational diabetes. Altered thyroid hormone production takes place elsewhere in the body, where the inactive form of the hormone [thyroxine (T4)] is converted to the active form of the hormone [triiodothyronine (T3)].

The team identified obesity-induced deiodinase enzymes in the liver and muscles as the agent responsible for activating T3. Primary elements of this discovery emerged from analyses performed as an extension of a large observational study sponsored by the National Institutes of Health. Insights gathered from other published sources then supplemented the primary discovery.

“Previously, nobody has connected the dots of triiodothyronine (T3) being a factor in gestational diabetes,” said Dr. Haddow. “The publication describes our finding that higher caloric intake leading to obesity, can trigger an increase in the active form of thyroid hormone, thereby contributing to gestational diabetes.”

“At present, accumulation of fat in the liver and muscles associated with over-nutrition is the best understood cause of insulin-resistance and type 2 diabetes,” said Dr. Haddow. “Our discovery identifies T3 as an additional causal agent, again driven by calories. While there is no immediate, obvious solution to modify the T3 hormonal balance associated with gestational diabetes other than weight reduction, our discovery is certainly a next step in allowing research questions to be designed aimed at improving management.” ♦



Glenn E. Palomaki, PhD



Geralyn M. Messerlian, PhD



James E. Haddow, MD

School; **GLENN E. PALOMAKI, PhD**, associate director of the division and associate professor in the Department of Pathology and Laboratory Medicine at the Alpert Medical School, in collaboration with investigators in Dublin, New York, and Maine, have published their study “Free Thyroxine During Early Pregnancy and Risk for Gestational Diabetes” in the *Public Library of Science* (PLOS) ONE.

According to Dr. Haddow, their findings are the first to show that the well-known connection between obesity and gestational diabetes can be partially explained by altered

Hasbro study shows incidence of inflammatory bowel disease in RI among highest in US *Study highlights need for more research into causes and treatments for IBD*

PROVIDENCE — A study led by the Hasbro Children’s Hospital Division of Pediatric Gastroenterology, Nutrition and Liver Diseases found that the incidence of inflammatory bowel disease (IBD) in Rhode Island is one of the highest ever reported in the United States and that IBD rates nationally are much higher than previously reported. The increased prevalence of IBD cases points to a need for more research into the causes of IBD and development of more targeted treatments.

IBD, which includes Crohn’s disease

and ulcerative colitis, is a chronic, debilitating condition characterized by inflammation of the gastrointestinal tract. Studies have shown the incidence of IBD is increasing worldwide.

The study, recently published in the journal *Inflammatory Bowel Diseases* by **JASON M. SHAPIRO, MD**, a pediatric gastroenterologist at Hasbro Children’s Hospital, examined the statewide incidence of IBD through his work with The Ocean State Crohn’s and Colitis Area Registry, a Centers for Disease Control and Prevention-funded

registry of patients with IBD in Rhode Island. The study team reviewed medical records from all practicing adult and pediatric gastroenterologists in Rhode Island, as well as practices in Connecticut and Massachusetts that may care for RI residents, to determine the true incidence of IBD in Rhode Island between the years 2008–2010.

A total of 971 Rhode Islanders were identified as having IBD by the study team. This is an average incidence of approximately 30 cases of IBD per 100,000 persons in this three-year time

frame with 15.1 and 13.9 per 100,000 diagnosed with ulcerative colitis and Crohn's disease, respectively. The incidence of IBD in Rhode Island was found to be among the highest in the world and higher than that previously reported from US populations in Minnesota and Northern California. In comparison, Minnesota previously reported an incidence of 8.8 and 7.9 per 100,000 for ulcerative colitis and Crohn's disease between 1990-2000, while the Northern California group reported incidences of 12 and 6.3 for ulcerative colitis and Crohn's disease between 1996-2002.

"Our findings show that the incidence of IBD in the United States is increasing and highlights the importance of further research into IBD, so

we can better help this growing population," said Dr. Shapiro. "We still have so many unanswered questions, such as what causes IBD, how can we predict which patients will have a more complicated case and how can we identify which patients will benefit from more aggressive medical treatments early in their disease course? Most importantly, we need to focus on identifying and developing better treatments."

Dr. Shapiro stressed that further research is critical to addressing the rising prevalence of IBD and providing better treatments to the growing patient population, especially when it comes to pediatric patients. "One-third of IBD patients are diagnosed during childhood and adolescence," explained Dr. Shapiro. "Earlier intervention and

identifying better, targeted treatments is especially important for this vulnerable patient population facing years of possible disease-related complications. Optimizing growth potential and ensuring normal pubertal progression in the face of IBD is a priority."

This study was funded in part by the Crohn's and Colitis Foundation of America through a grant from the Centers for Disease Control and Prevention (5U01DP004785-02). In addition to Dr. Shapiro's primary affiliation in the Hasbro Children's Hospital Division of Pediatric Gastroenterology, Nutrition and Liver Diseases, he is an assistant professor of pediatrics and medicine at The Warren Alpert Medical School of Brown University. ❖

Research shows use of steroids in women at risk for late preterm delivery reduces rate of neonatal respiratory complications

PROVIDENCE – Current recommendations are for all women who go into labor prior to 34 weeks gestation to be given antenatal corticosteroids (betamethasone) to help mature the baby's lungs. However, many babies born in the late preterm period – between 34 and 36 weeks gestation – require respiratory support at birth. A recently completed study asked the question, "Would neonates born at these later gestational ages also benefit from antenatal corticosteroids?"

The answer is "yes" and is detailed in "Antenatal Betamethasone for Women at Risk for Late Preterm Delivery," a study from the Eunice Kennedy Shriver National Institute of Child and Human Development Maternal Fetal Medicine Units Network (MFMU) with co-sponsorship from the National Heart, Lung and Blood Institute. The research was recently published in the New England Journal of Medicine.

DWIGHT ROUSE, MD, of the Division of Maternal-Fetal Medicine at Women & Infants Hospital, a professor of obstetrics and gynecology at The Warren Alpert Medical School of Brown University, and the Brown/Women & Infants principal investigator for the MFMU, said, "For many years, obstetric and pediatric providers have known that steroids administered in preterm labor help speed the development of the preterm baby's lungs at 34 weeks gestation or earlier. This new research has shown that these same steroids when given to women who are at risk for late preterm delivery can significantly reduce the rate of neonatal respiratory complications."

The multicenter, randomized trial involved approximately



2,800 women who were pregnant with one baby at 34 weeks to 36 weeks five days gestation and at high risk for late preterm delivery. The participants were randomly assigned to either receive two injections of betamethasone or placebo 24 hours apart. Researchers then looked at whether the infants needed respiratory treatment during the first 72 hours after delivery. 14.4 percent of babies in the placebo group

required respiratory treatment as compared to 11.6 percent of the babies in the betamethasone group. Further, severe respiratory complications, including prolonged oxygen supplementation, surfactant use, mechanical ventilation, and a form of chronic lung disease in newborns called bronchopulmonary dysplasia also occurred significantly less frequently in the betamethasone group.

"This research supports the use of known medications that will allow us to help even more babies get the healthiest start at life," explained Dr. Rouse. "I am proud of our hardworking MFMU Network research team for their dedication to this project. I am also very grateful for the contribution of Women & Infants' obstetricians and midwives, who gave their ongoing support to this study and encouraged their patients – to whom I am also profoundly grateful – to participate. As a result, Women & Infants contributed more than ten percent of the patients enrolled in this large trial, more than any other participating hospital." ❖



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URI launches Academic Health Collaborative

New College of Health Sciences to be linked to Colleges of Nursing, Pharmacy under plan

KINGSTON – The University of Rhode Island is putting in place a sweeping reorganization of its health programs to maximize cross-disciplinary teaching, research, and outreach and to place the University in a position of strength as health care undergoes rapid change in the United States.

URI has established The Academic Health Collaborative to spur cooperation and innovation in the areas of research, inter-professional education, population health, health promotion and recognition and elimination of health disparities.

Under the new collaborative, a new College of Health Sciences will join the colleges of Nursing and Pharmacy as the lead academic units. Programs in kinesiology, physical therapy, health studies, nutrition and food science, psychology, communicative disorders, and human development and family studies will be among those housed in the College of Health Sciences. In addition, an Institute for Integrated Health and Innovation will be established to foster multidisciplinary collaboration among faculty, students and professionals in the community from a broad spectrum

of health disciplines. The institute can also serve as a hub for health services research and outreach that can serve the state of Rhode Island and its people.

Implementation began in the fall with task forces charged with developing the plans and actions to create a College of Health Sciences, the Institute for Integrated Health and Innovation, the Office of Shared Services, and the integrative policies and infrastructure of the collaborative as a whole. These task forces consist of faculty, staff, and administrators from the health areas, and the goal is to have the new Collaborative in place and functioning by fall 2016.

The Institute for Integrated Health and Innovation, a central piece of the new organization, is designed to facilitate collaboration among faculty, students and professionals in the community through teams of multidisciplinary health experts.

Among some of the major initiatives under the Collaborative are:

- Creation of faculty-run health clinics that integrate research, teaching and outreach activities

and involve undergraduate and graduate students in treatment.

- Development of new interdisciplinary academic health programs, such as health policy, public health, health literacy, and data and health informatics and “big data”;
- Disease-based interdisciplinary hubs (cancer, diabetes, obesity) that integrate basic and applied sciences, including work from the molecular to the holistic levels;
- Development of worksite employee health programs and other public/private partnerships;
- Drug studies that integrate basic and clinical research or trials and focus areas for drug research that includes basic and applied science;
- Consultant teams for school settings to address illness prevention, healthy lifestyle changes and violence prevention;
- Creation of a campus retirement community that provides health services; and collaboration with the state of Rhode Island on Medicare and Medicaid research and policy. ❖

Miriam Hospital Recognized for Lowest Heart Attack Deaths Nationwide

PROVIDENCE – The Miriam Hospital has been named by Becker's Hospital Review as one of 53 hospitals across the country with the lowest heart attack mortality rates. It is the only hospital in Rhode Island to have a 30-day post-MI (myocardial infarction or heart attack) mortality rate significantly lower than the national average, placing it among a total of 30 hospitals in the U.S. with the lowest post-MI mortality. The rankings are based on The Centers for Medicare & Medicaid Services (CMS) data on Medicare patients from July 2011 through June 2014.

“The Miriam Hospital is a patient-centric hospital that cares,” said Douglas Burt, MD, FACC, inpatient director, The Cardiovascular Institute (CVI) at Rhode Island, The Miriam and Newport hospitals, and director, Coronary Care

Units, Rhode Island and The Miriam hospitals. “It is our team's level of experience and compassion that helps to keep us in the lowest 10 percent of U.S. hospitals for post PCI and MI mortality rates. Time is muscle.”

According to Becker's, a leading business publication for the health care industry, all the hospitals recognized have a 30-day mortality rate from heart attack of 11.7 percent or less – with the national average at 14.2 percent. The Miriam Hospital's rate is 11.4 percent, which is just about 20% lower than the national average. The data used for the rankings is the most recent available from the CMS Hospital Compare registry, part of the CMS Hospital Quality Initiative which uses tools to help support quality-of-care improvements in hospitals. ❖

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Appointments

Lifespan names Lisa Abbott, MBA, senior vice president for human resources

PROVIDENCE – **LISA ABBOTT, MBA**, has been appointed senior vice president for human resources for Lifespan, the state's largest health system and largest private employer. Abbott started on March 1.

Abbott joins Lifespan from Penn State Hershey Medical Center, in Hershey, Pennsylvania, where she served as associate vice president for health affairs for human resources and chief human resources officer. Penn State Hershey has approximately 10,000 employees, including 1,100 clinicians and scientists, and consists of a 550-bed adult and children's hospital, rehabilitation hospital and psychiatric hospital.

"Lisa is a dynamic, energetic executive leader who possesses the drive and relevant experience so critical to meeting the needs of Lifespan and our workforce," said **TIMOTHY J. BABINEAU, MD**, president and CEO of Lifespan. "We strongly believe that under Lisa's direction, HR will continue to support Lifespan's integrated health care delivery system by further incorporating contemporary, value-added HR practices."

Abbott, whose previous experience includes serving as senior director for human resources at Weill Cornell Medical College in New York, said she thrives on the demands of the ever-evolving health care industry.

"We have the opportunity to leverage human capital talent to significantly impact our patients by providing quality health care. What we do directly impacts our community," said Abbott, who holds an MBA in international business from Binghamton University, Binghamton, New York.

Abbott noted the extremely competitive health care jobs market within Rhode Island and to the north.

"In such a competitive market, it is critical that we create an employee experience that attracts and retains the best talent for every role in this organization," Abbott explained. "We need to be actively sourcing talent to grow this organization and be in constant competition for the very best." ♦



Barbara E. Wolfe named dean of URI College of Nursing



KINGSTON – The University of Rhode Island has named **BARBARA E. WOLFE**, associate dean for research and professor at the Connell School of Nursing at Boston College, its new dean of the College of Nursing.

In addition to her work at Boston College, the Wayland, Mass. resident has also held faculty positions in psychiatry at Harvard Medical

School. She begins her duties at URI in early summer and will succeed Professor Mary Sullivan, who has served as interim dean of nursing since 2012.

"Dean Wolfe's extensive experience and leadership in research and administration will enhance the University's profile and prospects for the future with regard to nursing education, research and outreach," said Donald H. DeHayes, provost and vice president for Academic Affairs at URI, in making the announcement after a national search.

Prior to her work as associate dean, Wolfe served as the director of the Center for Nursing Research at the Connell School at BC. From 2004 to the present, she has lectured in psychiatry at Harvard Medical School and served as a research associate at Beth Israel Deaconess Medical Center. From 1997 to 2004, she was assistant professor of psychiatry at Harvard Medical School.

Wolfe holds Adult Psychiatric and Mental Health Clinical Nurse Specialist Board Certification from the American Nurses Credentialing Center.

Her psychiatric/mental health nursing research, and specifically her work on eating disorders, has been published in numerous academic and medical journals. She is a past president of the American Psychiatric Nurses Association and has served on numerous national committees, including scientific review panels for NIH.

She earned her bachelor of science degree in nursing from Syracuse University, her master's degree in psychiatric mental health nursing from Yale University and her doctorate in nursing from Boston College. ♦

PHOTO COURTESY OF CHERYL CLEGG PHOTOGRAPHY, BOSTON, MASS.

Appointments



Rafael Padilla, MD, elected president of the Rhode Island Society of Anesthesiologists

PAWTUCKET – **RAFAEL PADILLA, MD**, an anesthesiologist at Memorial Hospital, was recently elected president of the Rhode Island Society of Anesthesiologists (RISA) for a two-year term and will also serve on the Rhode Island Medical Society (RIMS) council. Dr. Padilla is the first to serve in this capacity from Memorial Hospital since 1986.

"I am humbled by this appointment and look forward to continue serving the citizens of the State of Rhode Island," said Dr. Padilla, who has been a member of Memorial's team for 16 years. He is past president of the Fall River Medical Society and the Pawtucket Medical Association.

RISA serves the Rhode Island community as an advocate for the delivery of competent and safe care to all patients requiring anesthesia and pain relief. ❖

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Kent Women's Care Center Nurse Leaders Present at Annual Conference

WARWICK – Kent Hospital nurse leaders recently took part in a national perinatal leadership forum in Dallas, Texas. **JEAN SALERA-VIEIRA**, advanced nurse clinician/perinatal CNS, presented the topic, Improving Safety Through Collaboration: The Interdisciplinary Perinatal Practice Committee (IPPC). The IPPC at Kent Hospital, co-chaired by nursing and medical providers, is held throughout the year to engage multiple disciplines in collaborative discussion about best practices in the care of the perinatal patient and her family.



Margaret Allaire, nurse manager of the Women's Care Center at Kent Hospital, and Jean Salera-Vieira, advanced nurse clinician/perinatal CNS, at Kent recently spoke on best practices and staff education at a national perinatal leadership forum.

Salera-Vieira also presented with **MARGARET ALLAIRE**, nurse manager of the Women's Care Center at Kent Hospital on another topic, Baby Friendly Carnival: Using Creativity to Educate. The Baby Friendly Carnival was an interactive staff education program that utilized a fun carnival theme to highlight the 10 steps of successful breastfeeding.

"Kent Hospital is honored to have two nurse leaders participate in this conference on such a critically important topic," said **REBECCA BURKE, RN, MS, NEA-BC**, sr. vice president patient care services, chief nursing officer at Kent Hospital. ❖



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Recognition

Women & Infants Hospital receives 2016 Women's Choice Award®

PROVIDENCE – Women & Infants Hospital has received the 2016 Women's Choice Award® as one of America's Best Hospitals for Cancer Care for the second consecutive year. This evidence-based designation is the only cancer care award that identifies the country's best health care institutions based on robust criteria that consider female patient satisfaction, clinical excellence, and what women say they want from a hospital.

Last month, Women & Infants was also named one of America's Best Hospitals for Obstetrics.

The 366 award winners represent hospitals that have been accredited by the American College of Surgeons' Commission on Cancer, signifying Women & Infants' commitment to meeting the highest standards in cancer care.

"We are so proud of this honor and to be recognized again among some of the best hospitals in our country for cancer care," said **MARK R. MARCANTANO**, president and chief operating officer at Women & Infants Hospital. "Our Program in Women's Oncology is one of the nation's leading services for the diagnosis, treatment and research of women's cancers. We are very proud that this excellence is being recognized."

The 2016 America's Best Hospitals for Cancer Care must have received accreditation from the American College of Surgeons Commission on Cancer as well as any of the following: a National Cancer Institute (NCI) Designated Comprehensive Cancer program, a Comprehensive Community Cancer Program, an Integrated Network Cancer Program, or an Academic Comprehensive Cancer Program. Selected hospitals were then given a score based on their patient recommendation rating from the Centers for Medicare and Medicaid Services' (CMS) Hospital Consumer Assessment for Healthcare Providers and Systems (HCAHPS) survey.

Additional criteria considered if a hospital offered on site chemotherapy, radiation or hospice, and cancer research activities. Hospitals were penalized for having high infection rates. ❖

Breast Health Center at Kent Receives Three-Year Accreditation

WARWICK – The Breast Health Center at Kent Hospital has been granted a three-year, full accreditation designation by the National Accreditation Program for Breast Centers (NAPBC), a program administered by the American College of Surgeons. Accreditation by the NAPBC is only given to those centers that have voluntarily committed to provide the highest level of quality breast care and that undergo a rigorous evaluation process and review of their performance.

During the survey process, the center must demonstrate compliance with standards established by the NAPBC for treating women who are diagnosed with the full spectrum of breast disease. The standards include proficiency in the areas of: center leadership, clinical management, research, community outreach, professional education, and quality improvement. A breast center that achieves NAPBC accreditation has demonstrated a firm commitment to offer its patients every significant advantage in their battle against breast disease.

"We are extremely proud of the commitment to the quality care that we provide day-in and day-out at The Breast Health Center at Kent, and this accreditation is a reflection of the dedication that is consistently delivered to the patients and families of our local community," said **CANDACE DYER, MD**, physician director of The Breast Health Center at Kent. ❖

Women & Infants Designated as a Breast Imaging Center of Excellence

PROVIDENCE – Women & Infants Hospital has again earned a three-year accreditation as a Breast Imaging Center of Excellence from the American College of Radiology (ACR). The designation came after a survey of the hospital's diagnostic imaging facilities.

Women & Infants first achieved this designation in 2009 based on the hospital's accreditation in three areas of breast imaging – mammography, stereotactic breast biopsy and breast ultrasound. Since then, the hospital has maintained this designation. This year, with the advancements in breast imaging technology, the ACR further refined the qualifications for designation with the addition of accreditation in breast MRI.

"We are so delighted to continue our designation as a Breast Imaging Center of Excellence. This is a true testament not only to the skill and expertise of our staff, but also to our commitment to ensuring that we are on the cutting edge, offering the most advanced imaging technologies for the women and newborns of our region," said **SUSAN KOELLIKER, MD**, chief of the Department of Diagnostic Imaging.

ACR awards accreditation to facilities that have achieved high practice standards. The evaluations are conducted by board-certified radiologists and medical physicists who are experts in the field. They assess the qualification of a facility's personnel and the adequacy of its equipment.

Women & Infants is one of only a few sites in the region to achieve accreditation in all four modalities of breast imaging and was the first facility in Rhode Island to offer digital breast tomosynthesis, an advanced breast imaging technology that gives radiologists a three-dimensional look at breast tissue and a clearer and more comprehensive review. The result has been a 15 percent increase in early detection of breast cancer and a reduction in false positives. ❖

Recognition

Maternal-fetal medicine specialists present at SMFM meeting

PROVIDENCE – Several maternal-fetal medicine specialists from Women & Infants Hospital presented research studies at the Society for Maternal-Fetal Medicine's (SMFM) annual meeting (The Pregnancy Meeting) in Atlanta, GA.

Those presenting included:

CATHERINE ALBRIGHT, MD

- "Development of a prediction model for cesarean-associated blood transfusion." Authors: Catherine Albright, MD; Timothy Spillane, MD; Brenna Hughes, MD; and Dwight Rouse, MD.
- "Group B streptococcus screening in women planning repeat cesarean deliveries: a cost-effectiveness analysis." Authors: Catherine Albright, MD; Caitlin MacGregor, MD; Desmond Sutton, MD; Meena Theva, and Erika Werner, MD.
- "Association between preconception counseling and vitamin intake among reproductive-aged women in the United States."

ROSEMARY FROELICH, MD, on behalf of the Maternal Fetal Medicine Units Network

- "The association of estimated fetal weight and cesarean delivery in women attempting vaginal delivery at term."

BRENNA HUGHES, MD

- Infectious disease CME course co-director and lecture "CMV- the most common congenital infection you never think about." Course Directors: Carey Eppes, MD and Brenna Hughes MD, MSc.
- Presenter at joint SMFM/CDC presentation: "Pregnant women and Zika virus exposure": An ad-hoc session was held at the Society for Maternal-Fetal Medicine (SMFM) 36th Annual Pregnancy Meeting to share knowledge and discuss clinical best practices for optimizing maternal and perinatal health in the face of the recent Zika virus epidemic. Dr. Laura Riley, SMFM's immediate past president, Director of Labor and Delivery at the Massachusetts General Hospital, and an obstetrical infectious diseases expert, organized a panel of leaders, including William Callaghan, MD, MPH, chief of the Maternal and Infant Health Branch of CDC's Division of Reproductive Health; Brenna Hughes, MD, MSCR, associate professor at The Warren Alpert Medical School of Brown University; and R. Phillips Heine,

MD, professor and division chief of maternal-fetal medicine at Duke University. This panel was tasked with relaying the released interim guidelines on the management of pregnant women with possible Zika virus exposure.

- Oral research presentation: "Randomized trial of behavioral change for cytomegalovirus risk reduction." Authors: Brenna Hughes, MD; Christina Raker, MD; Kim Gans, MD; Evelyn Hipolito, MD; and Dwight Rouse, MD.

LINDSAY MAGGIO, MD, former MFM fellow of Women & Infants Hospital.

- "The association of BMI and wound infection after cesarean delivery." Authors: Lindsay Maggio, MD; Rosemary Froehlich, MD; Joshua Dahlke, MD; Phinnara Has, Erika Werner, MD; Brenna Hughes, MD; and Dwight Rouse, MD.
- "The association of Montevideo units and uterine rupture during trial of labor after cesarean delivery." Authors: Lindsay Maggio, MD; Rosemary Froehlich, MD; Joshua Dahlke, MD; Phinnara Has; Dwight Rouse, MD; and Christina Davidson, MD.
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JEFFERY SPERLING, MD

- "Association between insulin delivery method and admission for glycemic control among pregnant women with type 1 diabetes mellitus." Authors: Jeffrey D. Sperling, MD; Lindsay Maggio, MD; Phinnara Has; Julie Daley; and Erika Werner, MD.

ERIKA WERNER, MD

- "Is neonatal hypoglycemia association with childhood obesity in pregnancies complicated by gestational diabetes mellitus?" Authors: Erika Werner, MD; Beth Elston; Valery Danilack, MD; and David Savitz. ❖



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Recognition

Hospital Association of Rhode Island Honors 'Hospital Heroes'

Providence VA, Westerly Hospital recognized for excellence in patient safety

WARWICK – March 28, 2016 – Individuals from throughout the state were recently honored at “Celebration of Excellence in Hospital Care,” an annual awards ceremony held by the Hospital Association of Rhode Island (HARI). Employees of the year from HARI’s member hospitals were recognized by the HARI Board of Trustees for exemplary performance and dedication to health care. In addition, recipients of the Edward J. Quinlan Award for Patient Safety Excellence were honored.

Recipients of the Award for Excellence in Hospital Care include:

- Geralyn Gabriel, Executive Secretary, Butler Hospital (*resident of Warwick*)
- Keri Kinniburgh, Occupational Therapy Assistant, Fatima Hospital (*resident of Cumberland*)
- Diane Ardito, Registered Nurse, Kent Hospital (*resident of Warwick*)
- Christopher Wethey, Programmer/Analyst, Landmark Medical Center (*resident of Blackstone*)
- Patricia Masse, Cook, Memorial Hospital of Rhode Island (*resident of Pawtucket*)
- Jeannie Ursillo, Nurse Practitioner, Providence VA Medical Center (*resident of Smithfield*)
- Daniel Albuquerque, HVAC Mechanic, Roger Williams Medical Center (*resident of North Smithfield*)
- Diane Benson, Case Manager, Social Worker, South County Hospital (*resident of East Greenwich*)
- Carol Desillier, Supervisor, Lobby Shop, Westerly Hospital (*resident of Mystic*)
- Sheila Enderby, Oncology Nurse Navigator, Women and Infants Hospital (*resident of Providence*)

Providence VA Medical Center, Westerly Hospital Recognized

The Providence VA Medical Center and Westerly Hospital were the recipients of the Edward J. Quinlan Award for Patient Safety Excellence. The team at the Providence VA Medical Center was honored for successfully reducing the occurrence of health care-associated infections. They successfully implemented a bundle of infection control strategies including environmental management, hand hygiene, contact precautions, and cultural transformation. The Providence VA Medical Center also implemented an antimicrobial stewardship that has resulted in shorter lengths of stays, fewer adverse drug events, and significant decrease in the use of broad-spectrum antibiotics.

The team at Westerly Hospital was honored for being the first hospital in Rhode Island to embark on a journey toward high reliability, a proven science involving specific safety behaviors and techniques designed to make hospitals safer for patients, staff and visitors.

The award is a tribute to Edward Quinlan who championed quality improvement and patient safety initiatives while he served as president of HARI for two decades. ❖



Those honored by the Hospital Association of Rhode Island this year are, front row (L to R): Jeannie Ursillo (Providence VA), Geralyn Gabriel (Butler Hospital), Keri Kinniburgh (Fatima Hospital), Patricia Masse (Memorial Hospital of RI), Daniel Albuquerque (Roger Williams Medical Center).

Back row, (L to R): Carol Desillier (Westerly Hospital), Sheila Enderby (Women & Infants), Diane Benson (South County Hospital), Diane Ardito (Kent Hospital), Christopher Wethey (Landmark Medical Center).

Recognition

CharterCARE's Employees of the Year recognized at statewide event

NORTH PROVIDENCE – CharterCARE's hospital Employees of the Year were recognized on March 22 at the Hospital Association of Rhode Island's 2016 "Celebration of Excellence" ceremony. The event, which featured Employees of the Year from hospitals throughout Rhode Island, took place at the Crowne Plaza in Warwick.

Keri Kinniburgh, COTA, from Southern New England Rehabilitation Center, is the Fatima Hospital Employee of the Year. She is an occupational therapy assistant who is among a select group of clinicians who are Certified Rehab Stroke Specialists. Keri leads the stroke support group at Fatima, organizes fundraisers, and is known for her hands-on, compassionate manner delivery of care.

Dan Albuquerque, an HVAC mechanic, is this year's honoree from Roger Williams. He is responsible for the heating and cooling systems for Roger Williams' two main campuses. Dan has been with the Maintenance & Engineering Department at Roger Williams for 34 years, making him the longest serving member of that team. ❖



Pictured from left to right are Fatima Hospital President Tom Hughes, Keri Kinniburgh, an occupational therapist; Dan Albuquerque, an HVAC mechanic at Roger Williams, and Kimberly O'Connell, Roger Williams President.

CharterCARE hospitals awarded Blue Distinction Center status for hip, knee & spine surgery programs

NORTH PROVIDENCE – The hip, knee, and spine surgery programs at both Roger Williams Medical Center and Our Lady of Fatima Hospital have been awarded Blue Distinction Center status by Blue Cross and Blue Shield of Rhode Island for demonstrating better overall quality of care and patient results in these specialties.

The two CharterCARE hospitals were chosen for the designations following a comprehensive review of each facility's spine surgery and knee and hip replacement programs.

"Patients need to know that their surgery is performed in a hospital focused on the highest quality outcomes," said Lester P. Schindel, CEO of CharterCARE Health Partners. "This important designation from Blue Cross Blue Shield recognizes the quality care provided through our hip, knee and spine surgery programs. This distinction was made possible because of our extraordinary team of orthopaedic surgeons, physicians, nurses and support staff."

Roger Williams received initial designation in these specialties in 2011 and was re-designated in 2013. Fatima was designated as a Blue Distinction Center for Spine Surgery in 2013 and is receiving the hip and knee designation for the first time.

Since 2006, the Blue Distinction program has recognized

facilities that meet objective, evidence-based thresholds for clinical quality, developed in collaboration with expert physicians and medical organizations. The program provides BCBSRI members with a credible means of identifying hospitals that meet their individual healthcare needs for select procedures and conditions.

To be designated as a Blue Distinction Center for Spine Surgery or a Blue Distinction Center for Knee and Hip Replacement, hospitals are evaluated on the following criteria:

- Established acute care inpatient facility, including intensive care, emergency care, and a full range of patient support services with full accreditation by a CMS-deemed national accreditation organization
- Experience and training of program surgeons, including case volume.
- Quality management programs, including surgical checklists as well as tracking and evaluation of clinical outcomes and process of care.
- Multi-disciplinary clinical pathways and teams to coordinate and streamline care, including transitions of care.
- Shared decision-making and preoperative patient education. ❖

Volunteers at Samuels Sinclair Dental Center Gives Kids a Smile

Annual event provides dental care to low-income children

PROVIDENCE – On Friday, March 25, the Samuels Sinclair Dental Center celebrated the 14th annual “Give Kids a Smile Day” (GKAS) with underserved, uninsured and underinsured children throughout Rhode Island. Children received dental care in clinics and private dental offices statewide, and 75 children received dental care at Rhode Island Hospital’s event.

“As the centerpiece to National Children’s Dental Health Month, and sponsored by the Rhode Island Dental Association and the American Dental Association, GKAS was designed to provide dental care to low-income children who would not otherwise have access to care,” said **ELIZABETH BENZ, DMD**, director of the Samuels Sinclair Dental Center at Rhode Island Hospital. “The event also raises awareness of the importance of

dental coverage for children’s overall health.”

Children received dental screenings, oral examinations, radiographs, cleanings, fillings and educational materials at Rhode Island Hospital’s Samuels Sinclair Dental Center. The event included visits from Mr. Potato Head from Hasbro, Inc., Paws, the PawSox mascot, a group of superheroes, pet therapy dogs and the Tooth Fairy.

Members of Team Hasbro, Hasbro, Inc.’s employee volunteer program, brought toys and games to entertain the children while they waited to see their dentist and dental hygienist, many for the very first time. Dental supplies for the day were donated by national sponsor Henry Schein and Patterson Dental.

Amos House provided breakfast for the event,

while Texas Roadhouse supplied lunch. Other refreshments were provided by East Side Marketplace, Stop & Shop and Shaw’s Supermarkets. Hasbro, Inc. also provided a toy for each child to take home.

The Samuels Sinclair Dental Center has been providing dental services to underprivileged children and individuals with special needs for over 80 years. It is the site that launched the first “Give Kids a Smile” program in Rhode Island, and annually organizes statewide events. ♦



The smiles were not just for the children as Peter Hakan Durudogan, DDS, shows as he talks to a youngster.



George Dupont, DDS, tends to young patient at the March “Give Kids a Smile Day” held at the Samuels Sinclair Dental Center on the Rhode Island Hospital campus.



CREDIT: SAMUELS SINCLAIR DENTAL CENTER/RHODE ISLAND HOSPITAL

About 75 children received dental care at the event.

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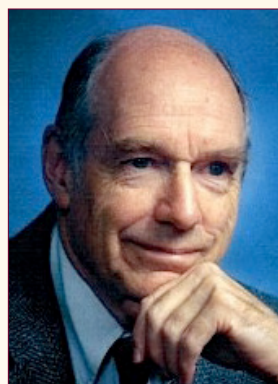
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Obituaries



ROBERT WEST HOPKINS, MD, Professor Emeritus of Medical Science at Brown University and former surgeon and Acting Chief-of-Surgery at Miriam Hospital in Providence, Rhode Island, passed away peacefully on February 22 in his home in Milton, Massachusetts, with his devoted wife



and daughters at his side. Born and raised in Longmeadow, MA, he was the son of the late Dr. Frederick Sherman Hopkins and Mary West Hopkins. A graduate of Classical High School in Longmeadow, he went on to attend both Harvard College (Class of 1945) and Harvard Medical School (Class of 1947).

Dr. Hopkins became a surgeon, like his father and grandfather before him, completing his internship and surgical residency at the Massachusetts General Hospital before being called to serve as a lieutenant in the U.S. Navy in Korea. His duties as a surgeon on the hospital ship U.S.S. Repose earned him a Medal of Commendation from the United States Navy.

He began his medical career at the Pennsylvania Hospital as assistant surgeon and instructor in surgery at the University of Pennsylvania Medical School. He moved to the Cleveland Metropolitan General Hospital in 1959, where he served as an associate surgeon from 1959–1970. While there, Dr. Hopkins served as Director of Graduate Education for the Department of Surgery and Chief of Trauma and Emergency Services. He was also an associate professor of surgery at Case Western Reserve University School of Medicine in Cleveland.

In 1970, Dr. Hopkins moved to Providence, Rhode Island, where he was recruited by Dr. Fiorindo Simeone to play an instrumental role in developing Brown University's new medical program. Brown graduated its first class of physicians in 1975. Dr. Hopkins was Surgeon-in-Chief at the Miriam Hospital in Providence, Rhode Island, and joined the faculty of Brown University as Professor of Medical Science. In 1980, he became the medical director of the Miriam's Non-Invasive Vascular Laboratory, which was renamed the Robert W. Hopkins Non-Invasive Vascular Laboratory upon his retirement in 1996. While at the Miriam, he also served as a surgical consultant at Rhode Island Medical Center and Roger Williams General Hospital. Notably, Dr. Hopkins performed the first kidney transplant in Rhode Island in 1973 while at the Miriam.

He was an active member of numerous medical societies, serving in leadership positions of several. He authored numerous professional publications. He was President of the American Cancer Society, Rhode Island Division from 1973–1977. He was Vice-President (1982–1983), President-Elect (1988–1989), and President (1989–1990) of the New England Society for Vascular

Surgery. He was Vice-President and then President of the Society of Medical Consultants to the Armed Forces (1982–1984). He was Vice-President of the New England Surgical Society from 1984–1985. Other medical societies in which he was active include: the American Surgical Association; the American Association for the Advancement of Science; the American Association for the Surgery of Trauma; the American College of Surgeons (both nationally and in the local chapter); the American Heart Association (Trustee of the Northeast Ohio Chapter, 1969–1971); the American Medical Association; the American Trauma Society; and the Society for Vascular Surgery (Distinguished Fellow). Even in his 90s, Dr. Hopkins continued to attend professional conferences and remained interested in the ever-evolving field of medicine.

He is survived by his beloved wife of 56 years, Ann (Deme-treou) Hopkins, two daughters, Mary Ann Hopkins, MD, also a surgeon of New York City, and Elizabeth Hopkins Dunn and her husband Randall of Chicago, 2 granddaughters, Hunter and Chase Dunn, brother Frank Hopkins and his wife Belva of Andover, sister, Martha Booth of CO, sister-in-law Patricia Hopkins of IA, and late brother Frederick.

In lieu of flowers, memorial contributions may be sent to Doctors Without Borders, 333 7th Avenue, NY, NY 10001-5004 www.doctorswithoutborders.org/donate or to Harvard Medical School, Landmark Center, 401 Park Drive, Suite 22W, Boston, MA 02215. ♦



ANTHONY J. MIGLIACCIO, MD, 83, of Tiverton, Rhode Island, passed away peacefully surrounded by his loving family on March 13, 2016, following a courageous battle with several long illnesses. Dr. Migliaccio, known as Tony to his friends and family, and more affectionately as Dr. Mig to his patients, was the beloved husband of Paula (Biagi) Migliaccio. They had been married for 60 years. He

was the son of the late Anthony V. Migliaccio, MD, and the late Mary (Rozen) Migliaccio.

Tony graduated from Classical High School in 1950, from Dartmouth College in 1954, and from New York Medical College, with distinction, in 1959. He completed his internship and surgical residency at Rhode Island Hospital, and was elected in 1968 as a Fellow of the American College of Surgeons.

Tony loved the practice of medicine and will be remembered most for the extraordinary care he provided his patients. His commitment to ensuring better outcomes led him to write and publish a book focused on better health entitled, "Fitness and

Expectations.” One of his greatest traits was that he often provided medical care wherever and whenever it was needed. Many will remember that his kitchen table was the central location for various minor surgical procedures. He was affiliated with six local hospitals, including Rhode Island Hospital, Miriam Hospital, Roger Williams Hospital, and St. Joseph’s Hospital, as well as several outpatient clinics. Tony was a Clinical Assistant Professor of Surgery at the Brown University School of Medicine. He was a partner with Northeast Health Care helping pioneer a cost effective alternative to Emergency Room services.

Tony was an accomplished coastal and offshore sailor, having competed in several Annapolis to Newport and Newport to Bermuda races, including a Marion to Bermuda race on his cherished Pearson 43, Demitasse. A highlight to the trip was the return journey home with his daughter, Susan. Tony founded the Rhode Island International Sailing Association (RIISA), and was a past member of the Narragansett Bay Yachting Association, Twenty Hundred Club and Off Soundings Club. He was a longtime member of Barrington Yacht Club and a past member of the Rhode Island Country Club. As a staunch environmentalist, he was a past President of Save the Bay.

When Tony wasn’t utilizing his hands in surgery, he had extensive artistic interests in woodworking as a builder of fine furniture. A fond creative activity was his use of scraps of wood from 12 Meter America’s Cup racing yachts and transforming them into unique custom gifts. He was an accomplished photographer who excelled both behind the lens and in the darkroom. His photographs were featured in many art shows, and one in particular earned a position on the cover of the Providence Sunday Journal’s Magazine. His favorite medium was black and white. More recently, Tony built remote controlled model airplanes and sailboats, and he helped found the Mount Hope Bay Model Yacht Club. Tony could often be seen at the water’s edge sailing or racing one of his many radio controlled model sailboats.

For those who knew him, Tony will be most remembered for his attention to detail in all that he accomplished. His overall goal in life was to challenge his abilities, feed his intellect, and support his family in every way that a devoted loving father could.

Besides his wife, he leaves his four children, Robert Migliaccio and his wife, Brenda, of Barrington; Susan Marszalek, and her husband Stephen, of Barrington; Leslie Mitchell, and her husband David, of Great Barrington, Massachusetts; and Stephen Migliaccio, and his wife Lisa, of Hingham, Massachusetts. He was a loving grandfather to Kathryn, Elizabeth and Emily Migliaccio, Stefan and Scott Marszalek, Eliza, Isabel and Samie Kate Mitchell, and Andreas, Kalle and Thea Migliaccio, step-grandfather to Sam and Jack Hunter, and great-grandfather to Jackson Marszalek. He was the brother of Sandra Gasbarro, John Migliaccio and the late Loretta DiLuglio.

In lieu of flowers, donations to Save the Bay would be greatly appreciated. The funeral will be private with a celebration of his life to be held at a later date. ❖



JOSEPH L. MIGLIORI, MD, 71, passed away on March 17, 2016, at Kent Hospital surrounded by family and friends. Joe was the son of the late Giuseppe and Anna (Cardi) Migliori, and brother of the late Julius C. Migliori, MD. He is survived by his beloved sister Anna M. Ferri, and 10 nephews and 3 nieces and their spouses: Richard J. Migliori, MD, and his wife Joan; Michael E. Migliori, MD, and his wife Marianne; Jill Marie Migliori;

Stephen J. Migliori, MD, and his wife Sidney; Mark R. Migliori, MD, and his wife Sara; Donald A. Migliori and his wife Joanne; Annette M. Ferri; William A. Ferri, MD; David J. Ferri; Kenneth R. Ferri; Raymond T. Ferri, MD, and his wife Stephanie; Maryann E. Crudale and her husband Anthony; and Paul E. Ferri and his wife Beth. He was the proud great-uncle of 23 grandnieces and grandnephews, and two great-grandnieces. He is also survived by many cherished relatives and friends. “Uncle Joey” had a special place in his heart for the late Theresa (Corr) Ferri and Joseph Anthony Crudale, both of whom left us too soon.

Joe was a graduate of Cranston High School, Boston University, and the University of Bologna School of Medicine. After working for a year as a general practitioner, he then completed his residency in ophthalmology at Sinai Hospital of Detroit in Michigan. Joe practiced ophthalmology for 28 years with offices in Cranston and was a member of the medical staff of St. Joseph/Fatima Hospital until his retirement in 2005.

Joe was an avid patron of the arts and generous through his philanthropy and volunteerism. He was a parishioner of St. Gregory Church in Warwick and a lifelong parishioner of St. Mary Church in Cranston.

In lieu of flowers, donations can be made in his memory to the Providence Performing Arts Center, The Rhode Island Community Foundation and Providence Animal Rescue League. Visit nardolillo.com for online condolences. ❖



FREDERICK G. MURPHY, MD, passed away at his home in Orleans on March 21, 2016 after a two-year

battle with Acute Myeloid Leukemia. He was 69. Born and raised in Dorchester, MA, he was proud of his attendance at the Boston Latin School from the 6th grade to graduation, followed by a degree in languages (French and Russian) from Assumption College.

Graduating in 1969 with Vietnam in full swing, he enlisted in the Navy, attending OCS in Newport Rhode Island followed by a year on an LST in the Makong River as a line officer. Remaining in the reserves after his tour of duty, he obtained a master’s degree in biochemistry from Boston University and



then his MD from UMass Medical School. After an internship at the Faulkner Hospital, he pursued the specialty of anesthesia at Tufts New England Medical Center. It was there where he met his wife Barbara, who changed his life forever.

Fred's career was spent at Rhode Island Hospital as Director of Neuro-Surgical Anesthesia, and Assistant Professor of Medicine at Brown University and UMass Medical School. Language remained his intellectual passion.

Fred is survived by his wife, Barbara, and their dogs Katy and Oliver; his brother William Murphy of Milton, 8 nieces and nephews, 7 grand nieces and nephews. Proud of his service to our country in Vietnam, Fred requested donations in his memory go to Homes for Our Troops, 6 Main Street, Taunton, MA 02780. A celebration of Fred's life will take place in June. ❖



LASZLO SOMLO, MD, died peacefully on March 25th. He was born in Budapest, and attended Berzsenyi Daniel Gimnazium and Semmelweis Medical School in Budapest. In 1956 he left Hungary and completed medical school at the University of Western Ontario, Canada and did postgraduate work at McGill University in Montreal. He moved with his family to Rhode Island where he worked as a pathologist at St. Joseph Hospital until retiring.

He was a beloved husband, father and grandfather whose intelligence, kindness and wonderful sense of humor will be sorely missed.

He leaves his wife of over 59 years, Dr. Agnes Somlo, two daughters: Barbara (Alex) and Victoria (David) and three grandchildren, Stephen, Pia and Billy.

Services will be private. Donations in his memory may be made to the Rochambeau Library, 708 Hope St., Providence RI 02906. ❖



MARSHALL ADAMS TAYLOR, MD, 90, of Barrington, RI and Vero Beach, FL, died March 20th at the Philip Hulitar Hospice Center in Providence.

He was a graduate of the Choate School, Harvard College, and New York Medical College, and was a Navy veteran of World War II, serving aboard the escort aircraft carrier USS *Solomons*. He obtained his postgraduate training at the Henry Ford Hospital in Detroit and the University Hospitals of Cleveland.

In 1960 Dr. Taylor moved to Providence and opened an office for the practice of obstetrics and gynecology; he remained in private practice until 2003. He was on the medical staffs of Women & Infants Hospital, Rhode Island Hospital, Miriam Hospital, Butler Hospital and Roger Williams Hospital for many years and served as president of the medical staff at Women & Infants Hospital from 1986 to 1987; in 1996 he received that hospital's Medical Staff Distinguished Service Award.

He was active in Planned Parenthood of Rhode Island (PPRI) and served as chairman of its Medical Advisory Committee. In 1985 he received PPRI's Dr. Charles Potter Award.

Dr. Taylor is survived by his daughters, Victoria Taylor of Winchester, MA and Courtney Taylor of Providence; his granddaughters, Helena and Lela Castro of Providence; a stepdaughter, Elizabeth Wood of Vail, CO; his former wives, Nancy Taylor of Providence and Nancy Wood of Warwick; and a sister, Anne Barrett of Dedham, MA.

Aside from his dedication to his medical practice, Dr. Taylor was an avid sailor and lover of the sea. He regularly attended the Rhode Island Philharmonic and had an appreciation for music and theater all of his life. In lieu of flowers, please send contributions to the Rhode Island Philharmonic Orchestra, 667 Waterman Ave., East Providence, RI 02914. ❖





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Haines State Park: The Fresh-Air Legacy of Dr. George B. Haines

MARY KORR
RIMJ MANAGING EDITOR

The legacy of **DR. GEORGE B. HAINES** (1843–1910) continues to this day in a hundred-acre park that bears his name on the Barrington/Riverside border.

It was here he lived on a farm during the final year of his life, seeking respite from years of tending to the mill families and French Canadian immigrants who flooded the Valley Falls section of Cumberland, along the Blackstone River.



The wooden entrance sign on Washington Road in West Barrington greets visitors to Haines Memorial State Park, one of the first state parks in Rhode Island, which was donated by the estate of Dr. George B. Haines in 1911.

The *Providence Medical Journal* and *Transactions* of the Rhode Island Medical Society report that Dr. Haines began his medical training as a surgeon's assistant on the receiving ships and floating hospitals, the USS *Sabine* and USS *Vandalia*, docked at the Portsmouth (NH) Navy Yard in the Civil War era. He then attended Dartmouth College, graduating with a degree in medicine in 1871.

The following year he came to Rhode



Valley Falls, Cumberland, as seen on a postcard from 1906, and where Dr. George B. Haines lived and practiced medicine from 1872 until 1909.

Island. In 1876, Dr. Haines married, but was left a widower at age 34 after his wife died from complications of childbirth. Seven years later his daughter died. He never remarried, and immersed himself in his profession.

In addition to his practice, he served as a public health officer for Valley Falls, and worked closely with Dr. Lucius Garvin (later Governor of RI), of nearby Lonsdale. Perhaps as a result of his frequent bouts with severe asthma, Dr. Haines held a firm belief in the healing power of fresh air and open space, as did many general practitioners of the day.

It is no surprise, then, that at the age of 66, decades into his profession, and after extensive travel, he bought the Humphrey farm overlooking Bull-ock's Cove in Barrington. It was a

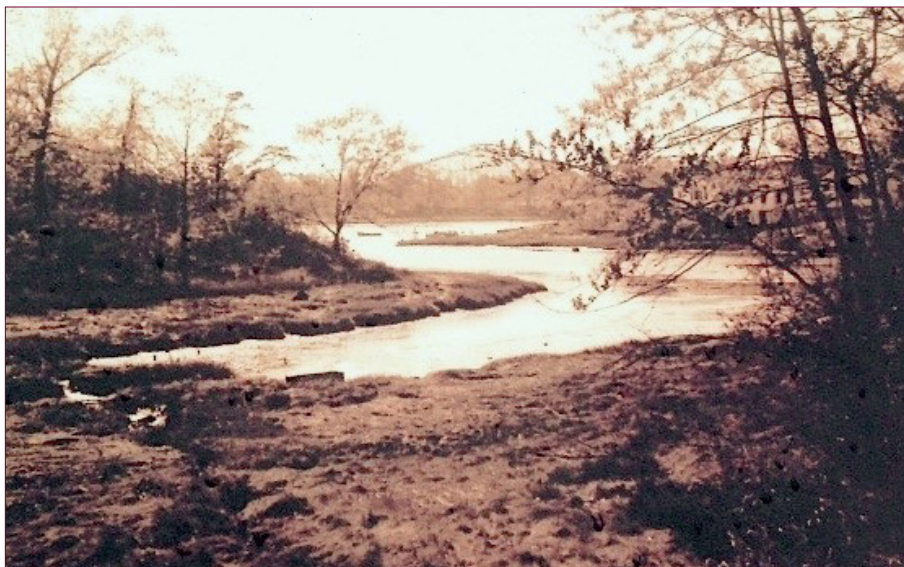
wooded retreat of 83 acres. No doubt he enjoyed the view – it was directly opposite Crescent Park, billed as the “Coney Island of New England.” At one point, there was a footbridge, now a boat ramp, that connected the farm to the back of Crescent Park, and which was destroyed in the 1938 hurricane.

By train, trolley and steamship, throngs came to eat at Crescent Park's renowned shore dinners, stroll the Midway, and ride the rollercoaster or slide down the thrilling chutes into the Providence River.

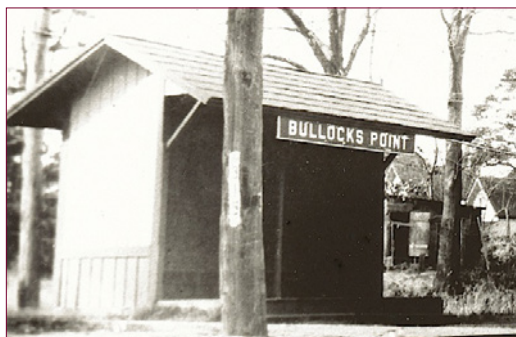
The most famous park attraction was the Charles I. D. Loeff Carousell, originally built at the head of the 400-foot pier facing Dr. Haines' property. Later on, a more elaborate one was built on the Midway; its horse, chariots and lone camel still spin their magic today.



A close-up from the informational placard on the East Bay Bike Bath shows a vintage postcard of Crescent Park as seen from West Barrington, where Dr. Haines purchased a farm in 1909 for fresh air and relaxation. The pier in the postcard was destroyed in the Hurricane of 1938.



A vintage photograph shows the view west from Bullock's Cove to Crescent Park, with the park's large wooden rollercoaster in the background.



The Bullock's Point railroad station where Dr. Haines collapsed and died in 1910.



Dr. Haines did not have long to enjoy the farmstead, which he had settled into permanently in 1909. On October 11, 1910, he collapsed and died unexpectedly at the Bullock's Point train station near his property. The medical journals attribute his passing to severe asthmatic "apoplexy."

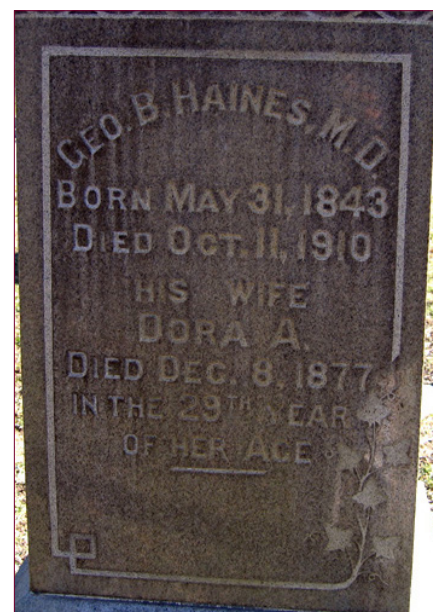
The following year, his sister, Ida M. Haines, sold the farm to the Metropolitan Park Commission in Rhode Island for \$1, fulfilling her brother's wish that his land be used for "parks, parkway, or boulevard uses only, or purposes in strict harmony therewith." The Park Commission expanded the memorial to more than one hundred acres in the ensuing years.

Today, the East Bay Bike Path, built over the old railroad tracks, whisks riders through Haines Park, where Dr. Haines spent the last year of his life and where he died on an autumn day as he waited for the train to pull into the station. ♦

During the Great Depression in the 1930s, the Civilian Conservation Corps, which was at work in other parks across Rhode Island, built stone fireplaces in Haines Park. They could be rented for \$.15 cents a day and are still in use today.



The horses, chariots and lone camel on the Loeff Carousel still spin their magic. Built in 1895, it is among thirteen Loeffs remaining in operation in the USA, and one of two in Rhode Island.



Grave of Dr. Haines in Swan Point Cemetery, Providence.