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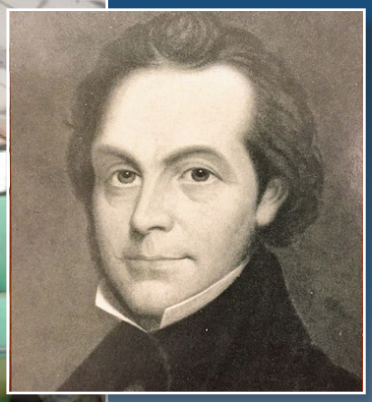

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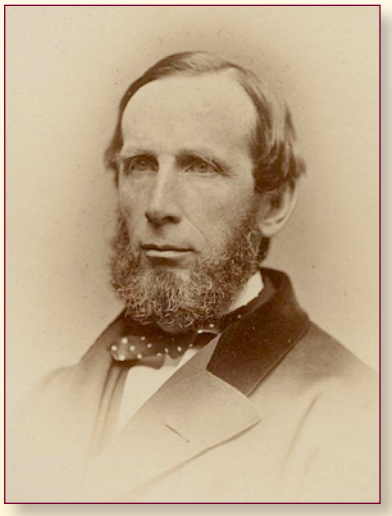

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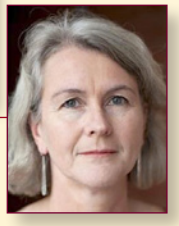

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No stone unturned?

JOSEPH H. FRIEDMAN, MD
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I PEER REVIEW ARTICLES submitted to a large number of medical journals. Since I publish a fair amount in peer-reviewed journals, I have a duty to provide evaluations for others. I am apparently an easy mark, since I get asked a lot. Recently I've been impressed with the time, effort and money investigators are spending performing high-quality research on low-quality questions. As a reviewer I get to help decide whether the article sees the light of day or not. At a competitive journal, one bad review probably kills the paper, unless the reviewer betrays a lack of understanding or a bias. My reviews on these articles informs the editors that I think the study was well done, the manuscript well written but that the time spent on the project and the time spent reading the result would have been more profitably spent elsewhere.

Most of these articles aim for low-hanging fruit. The term, "low-hanging fruit" usually refers to easy to obtain results for new problems. If no one recognized that people with a certain disorder have an unusual problem, then the first few papers describing this reap the reward of the early recognition of the problem, thus harvesting the low-hanging fruit.

For example, when gambling was first reported to be a substantial problem in Parkinson's disease patients treated with dopamine agonists, the first several papers were simply epidemiological studies, determining if this was, in fact, a problem, and then what the prevalence and risk factors were. These were important questions requiring answers, and the methodology was clear. All one needed was a few hundred patients with PD, which was readily available at any movement disorders clinic in the world, and the time to question the patients. The harder questions came later, trying to figure out what the pathophysiology was. That work continues.

I've recently discovered that there is another meaning to low-hanging fruit. First I read a paper reporting an inverse correlation between strength in a leg muscle and cognitive function in old people. While this may seem like hot stuff, there had already been inverse correlations between physical activity of various types and dementia, between strength in arm muscles and dementia and a variety of other physical factors, all of which indicated that the more active, the better in shape someone was, the less likely they were to be demented. One may want to posit a chicken-and-egg question, but the paper I read didn't bother to do that. It simply extended the known relationship between an arm muscle and dementia to a leg muscle and dementia. The study had been funded by a federal agency in another country, and the study had been well performed. The question I had was: Why would anyone care?

Then I was asked to review a paper which found a correlation between a blood lipid and one neuropsychological function in people with Parkinson's disease. The main reason I agreed to review the paper, other than the fact that I have difficulty saying no to reasonable requests, since, after all, someone has to do it, was that I wanted to see how the argument was made for undertaking the study.

Another recent paper was a study of movements during sleep of people with PD. This required overnight polysomnograms and videos to track movements and sleeping positions. It concluded that PD patients lie on their back more than age- matched controls, and moved less. Duh! The rationale for undertaking such a mattress-breaking study was that data from other studies had shown increased negative health measures in people who slept long periods of time on their back and didn't move much. The idea that a health problem, maybe something like PD, causes the health problem, or was the health problem, and that this disorder produced less movements during sleep was not discussed. The authors concluded that future health-related, quality-of-life measuring instruments should inquire about sleeping on one's back.

There are always justifications to be made for any study. After all, the more you learn, the more you know and who knows what interesting and useful discovery will be made when the next rock is turned over? When I mull these questions over I wonder about all the other self-evident truths that turned out to not be true when tested, or silly-sounding hypotheses that, when investigated, become pillars of contemporary medicine. For how many years was the H. pylori infectious theory of ulcers disparaged? I could not imagine why our major neurology journals published articles on olfactory disturbances in Parkinson's disease 15 years ago. I figured, "Who cares?" Of course, it turned out that this is a common "pre-motor" feature of the disease, and, while certainly not a cause for concern in older people developing olfactory impairment, it nevertheless is impaired in 70% of PD patients by the time they develop their first motor manifestation, and, when added to other non-defining, but common pre-motor features of the disease, like constipation, cardiac sympathetic denervation, depression and fatigue, can help identify a population at markedly increased risk of developing the illness. This will be important in developing trials and later treatments, for people at the earliest stages of the disease. It addition, the olfactory observation led immediately to the hypothesis that perhaps a substance, whether infectious or toxic, enters the brain via the nerves to the nose, as the olfactory tubercle is, in fact, an early site of disease pathology.

Speaking as a skeptic, though, I generally take the tack that if you ask a stupid question you're bound to get a stupid answer. A reviewer needs to be very smart or insightful to be able to distinguish stupid from innovative. Few of us are. I only hope that I have not squelched that seemingly idiotic waste-of-time study that turns out to be iconoclastic in one of my reviews. I think about the reviewers at the publishing houses which turned down the first Harry Potter book. ❖

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Downton Abbey's 'Medical' Finale

HERBERT RAKATANSKY, MD

The final season of Downton Abbey resolves most of the characters' personal problems but several medical issues remain challenging.

Lord Grantham, who had previous abdominal pain, had an episode of hematemesis during a formal dinner. He was taken to the local hospital, which was in the process of merging with a larger metropolitan institution. The merger was controversial with the local community afraid of distant control and an impersonal, lesser quality of care. Then, as now, the merger went through. And there he had an operation for his "ulcer."

In 1925 he would have had a partial gastrectomy with a (newly described) posterior gastrojejunostomy. A vagotomy would not have been done as that procedure was introduced by Lester Dragsted at the University of Chicago in 1943.

Subsequent complications including nutritional issues, weight loss, dumping syndrome and anastomotic ulcers were common. Lord Grantham, however, recovered uneventfully and developed none of these.

Additionally one wonders if he had transfusions. Although there were early sporadic reports of transfusion, it was not a useful tool until Landsteiner discovered the blood groups in 1901, winning him the Nobel Prize in 1930. Reuben Ottenberg administered the first transfusion using blood typing at Mt. Sinai Hospital in NY in 1907. The first "transfusion center" was established by Percy Oliver (associated with the British Red Cross) in London in 1921. That London center maintained a roster of persons, prescreened for syphilis, with known blood types. If a transfusion were needed, a donor would personally go to the hospital for direct transfusion. There were 428 such donations in 1925. London was a train ride away from Downton, so it is unlikely, but possible, that Lord Grantham received a transfusion.

The use of citrate to anticoagulate blood was reported in 1915 but was not adopted rapidly. In 1936 SS Yudin (Leningrad) reported almost 1,000 cases of transfusion of defibrinated cadaver blood stored for as long as 3 weeks, a technique not adopted by others. The first modern blood bank using bottled blood from living donors was established by Bernard Fantus at Cook County Hospital in Chicago in 1937. Blood was stored for up to 10 days.

Lord Merton's anemia

In the final episode Lord Merton felt weak, had some tingling and initially was diagnosed with pernicious anemia, at that time a fatal disease. He was later told that "tests" revealed iron deficiency anemia and that he would do well. Anemia was well known but poorly quantified in 1925. Manual RBC counts were routine. But colorimetric quantitative analyses of hemoglobin were inaccurate with no accepted normal standards. The hematocrit, introduced by Wintrobe in 1929, finally enabled an accurate measurement of anemia. Also, in 1929, Wintrobe conceived of calculating the RBC indexes, an idea that "came to me in the middle of the night."

The discovery of Carl Weigert and Paul Ehrlich in 1877 that tissues and blood cells could be stained enabled microscopic examinations of the marrow and peripheral smear. Macrocytosis could be identified, but only by examination of smears. Reticulocytes were recognized as early RBC's. Megaloblasts in the marrow were first described in 1921 and hypersegmented WBC in1923. Perhaps these were the "tests" that excluded the diagnosis of pernicious anemia in Lord Merton.

In 1926 George Minot and William Murphy reported the successful treatment of 45 pernicious anemia patients with a diet including ¼ to ½ pound of liver and ¼ pound of red meat daily for two years. The response to liver therapy was monitored by reticulocyte and RBC counts. Injectable liver extracts followed quickly but B12 was not isolated till 1948. In retrospect that quantity of liver contained enough B12 to allow passive

diffusion. Minot and Murphy shared the Nobel Prize in 1934.

In 1925 anemia characterized by small RBC was known as "simple anemia." The RBC count in iron deficiency may not be very low, though the cells are small and lack adequate hemoglobin. The concept of iron deficiency due to "nutritional" issues was recognized, but anemia as a distinct entity due to iron deficiency was not suggested until DT Davies and LJ Witts separately suggested the association of hypochromic anemia and a lack of iron in 1931. Thus it was not possible in 1925 that Lord Merton could be diagnosed specifically with iron deficiency anemia.

But we know now that if a man of Merton's age developed iron deficiency anemia it likely would have been no less dangerous (in 1925) than pernicious anemia. GI cancer, celiac disease, H pylori, etc. were either unknown or untreatable. In this scenario there would be no happy ending for Lord Merton. A diagnosis of pernicious anemia might have been more hopeful. If he had survived into 1926 and had the opportunity to receive liver therapy he might have done well. But Merton might have had anemia of chronic disease, though there was no allusion to an underlying illness. With no more episodes of Downton Abbey forthcoming, we will never know his fate.

Mr. Carson's tremor

And then there is the estimable Mr. Carson, the paradigm of properness. It was sad indeed to see him embarrassed by a tremor so severe that he could not pour the wine at dinner. It appeared to be an intention tremor that, in the "happy ending," would be diagnosed as an "essential tremor." While bothersome, it would not be fatal.

Mr. Carson subsequently admits, however, that he had been afraid of developing this problem since his father and grandfather had similar symptoms. Carson's observation that "I am done for!" also suggests that his father and grandfather had more than a mild disability. Parkinson's rarely may be due to a monogenic autosomal dominant mutation. These mutations may be accompanied by dementia and other CNS degenerative processes, producing a progressive downhill course. More details about the clinical course of Carson's father and grandfather would have helped predict his prognosis. As with Lord Merton, Carson's fate remained uncertain.

An understanding of the medical issues of those times, even if occasionally erroneously described, enhances the narrative that has captivated so many viewers. ❖

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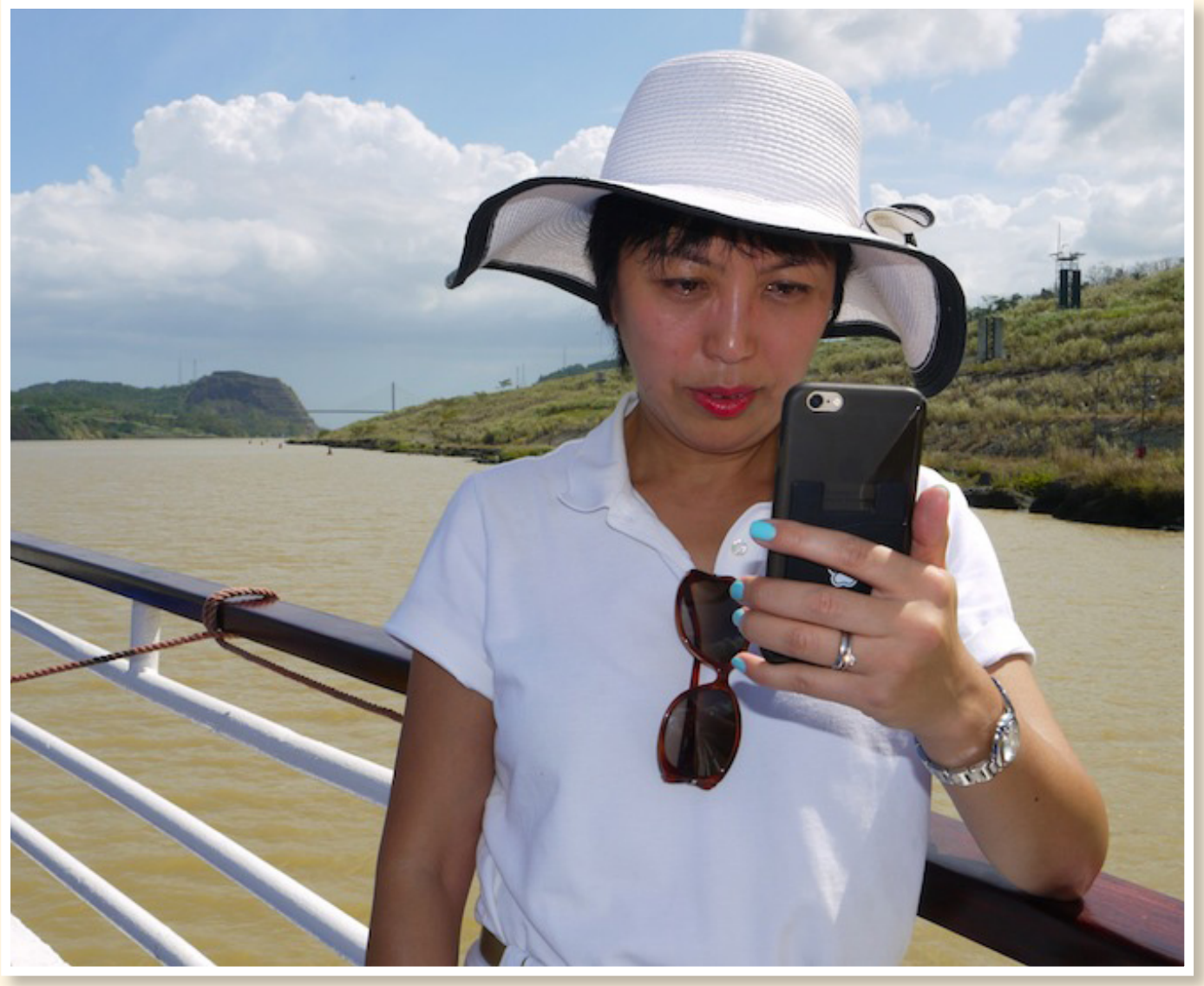

PANAMA CANAL

Dr. Crystal Jiang, Associate Professor of Management in Bryant University's College of Business, checks the *Rhode Island Medical Journal* during a transit of the Panama Canal. In the background is the Canal's famous Culebra Cut and the Continental Divide.

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.**

Dystonic Gait Developing After Elective, Unremarkable Hip Surgery

UMER AKBAR, MD; JOSEPH H. FRIEDMAN, MD

Click to watch video

KEYWORDS: dystonic gait; peripherally induced dystonia; dystonia; surgical complications

A 63-year-old man presented for the evaluation of abnormal gait which began two years before. It developed sub-acutely starting about four weeks after his second unremarkable hip replacement surgery, the first having taken place 8 months earlier. His neurological exam was normal except for the gait (see video). His standing posture was normal but he exhibited hyper-flexion of the knees during ambulation, external rotation of the right leg, abduction of the left leg, excess elevation of the left foot and slightly greater extension of the right lower leg causing a mildly longer stride and asymmetry.

Focal and segmental dystonia following peripheral injury or limb immobilization[1,2] is a rare phenomenon, and the very existence of this entity is debated[3]. Many cases are associated with litigation and other secondary gain, unlike this case, and are thought to possibly represent psychogenic or malingering disorders. The proposed mechanism for "organic" peripheral injury dystonia is aberrant reorganization within the central nervous system secondary to the injury.

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Cost and Selection of Ophthalmic Anti-Vascular Endothelial Growth Factor Agents

EMILY LI, MD; PAUL B. GREENBERG, MD; INDU VORUGANTI, MS; MAGDALENA G. KRZYSTOLIK, MD

ABSTRACT

Anti-vascular endothelial growth factor (anti-VEGF) drugs – ranibizumab, aflibercept, and off-label bevacizumab – are vital to the treatment of common retinal diseases, including exudative age-related macular degeneration (AMD), diabetic macular edema (DME), and macular edema (ME) associated with retinal vein occlusion (RVO). Given the high prevalence of AMD and retinal vascular diseases, anti-VEGF agents represent a large cost burden to the United States (US) healthcare system. Although ranibizumab and aflibercept are 30-fold more expensive per injection than bevacizumab, the two more costly medications are commonly used in the US, even though all three have been shown to be effective and safe for treatment of these retinal diseases. We investigated the availability and content of professional ophthalmic guidelines on cost consideration in the selection of anti-VEGF agents. We found that current professional guidelines were limited in availability and lacked specific guidance on cost-based anti-VEGF drug selection. This represents a missed opportunity to encourage the practice of value-based medicine.

KEYWORDS: ophthalmology, pharmacoeconomics, off-label drugs, value-based medicine

INTRODUCTION

Age-related macular degeneration (AMD), diabetic retinopathy (DR), and retinal vein occlusion (RVO) are leading causes of visual loss in the United States (US).[1-2] Anti-vascular endothelial growth factor (anti-VEGF) drugs such as bevacizumab, ranibizumab, and aflibercept have become the mainstay of treatment in patients with these retinal diseases. The two medications approved by the Federal Drug Administration – ranibizumab and aflibercept – are significantly more expensive than bevacizumab, which is used off-label for ophthalmic disease; Medicare reimbursements are $50, $1,903, and $1,850 for bevacizumab, ranibizumab, and aflibercept, respectively.[3] Although multiple studies have deemed the three agents to be effective and safe for treatment of AMD, DR, and ME secondary to RVO,[2,4-8] ranibizumab and aflibercept are commonly used in the US. Ranibizumab accounted for the second highest Medicare Part B drug expenditure ($1,278 million) in 2012, constituting one-sixth of the drug budget.[9] Specific medical society-sanctioned guidelines that weigh anti-VEGF cost-utility analysis could help ophthalmologists practice value-based medicine. In light of the rising cost burden of anti-VEGF therapy, we investigated published guidelines for drug selection.

MATERIALS AND METHODS

We searched publications from the American Academy of Ophthalmology (AAO), the American Society of Retina Specialists (ASRS), the New England Ophthalmology Society, the American Medical Association, the American Society for Bioethics and Humanities, the American Society of Law, Medicine, and Ethics, and the public-domain section of each state ophthalmological society website (if existent) under the terms, "medication cost selection," "medication cost guideline," "Lucentis," "ranibizumab," "Avastin," "bevacizumab," "Eylea," and "aflibercept." Using the same terms, we also searched PubMed, Web of Science, Google Scholar, the Cochrane Library, and the National Guidelines Clearinghouse between 2009 and 2015. Inclusion criterion included a published direct statement on cost consideration in ophthalmic anti-VEGF selection. We excluded non-English articles and articles that targeted non-U.S. audiences.

RESULTS

Two ophthalmology societies published statements on cost consideration in the selection of anti-VEGF agents. The AAO recommended that ophthalmologists observe cost efficacy without compromising care.[10-11] The ASRS advocated against a price-based guideline that mandates a trial of bevacizumab before the use of ranibizumab and/or aflibercept, rationalizing physician medical judgment should not have cost guideline constraints.[12] Forty-two state ophthalmological societies had websites: only one, the Florida Society of Ophthalmology, published a report on the price differences between bevacizumab and ranibizumab, stating "…we should use the best medicine we can use for our patients regardless of cost."[13]

DISCUSSION

We found limited guidance from professional societies on how to account for cost in selecting ophthalmic anti-VEGF agents. This poses a unique challenge for ophthalmologists. Given that ophthalmic anti-VEGF medications are comparable in efficacy and adverse event risk for most retinal neovascular disease, one would choose bevacizumab in a cost-conscious healthcare environment. However, data from Medicare Part B drug expenditure suggests this is not the case for a sizable number of ophthalmologists.[9] Approximately one-third of patients receiving intravitreal anti-VEGF in 2010 were administered ranibizumab while roughly two-thirds of patients received bevacizumab.[14]

The reasons for these anti-VEGF therapy practice patterns remain to be determined. One may be the potential drawbacks associated with bevacizumab, which is not FDA-approved for ophthalmic use. The lack of regulation has enabled the circulation of foreign counterfeit bevacizumab in US medical practices. Additionally, systemic bevacizumab must be converted into ophthalmic form through a compounding process performed by local pharmacies; contamination introduced during the compounding of bevacizumab for ophthalmic use also increases the risk of post-injection endophthalmitis. Bevacizumab from compounding pharmacies may contain drug concentrations lower than those used in clinical trials supporting bevacizumab efficacy.[15] These bevacizumab-specific concerns may deter physicians from choosing bevacizumab despite its proven clinical efficacy and financial advantage for patients and raise the potential for malpractice lawsuits.

In addition, only two randomized controlled trials (RCTs) directly compare bevacizumab to one or both of the FDA-approved agents.[4-5] Indirect validation in the setting of few direct comparison RCTs may not bear enough weight against bevacizumab-specific concerns to affect ophthalmologists to choose bevacizumab despite its cost value. Newer studies – such as those from the Diabetic Retinopathy Clinical Research Network outlining the role of aflibercept in DME[4] and ranibizumab in proliferative diabetic retinopathy[16] – may also guide the use of more expensive anti-VEGF agents over bevacizumab.

A limitation of the present study is that it was based on publically available information only; the members of the medical societies examined herein may have had access to additional information.

Ultimately, by supporting ophthalmologists wrestling with cost versus safety, medical society-sanctioned guidelines could help promote value-based medicine by encouraging more widespread use of cost-effective anti-VEGF therapy.

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Adolescent Perspectives on Addressing Youth Violence in the Primary Care Setting

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ABSTRACT

BACKGROUND: Youth violence is one of the leading causes of morbidity and mortality among adolescents, yet rarely discussed during preventative care visits. The aim of this study was to understand the perspectives of adolescents on youth violence and health, and to determine facilitators and barriers to discussion in the primary care setting.

METHODS: We conducted 5 structured focus groups with adolescents from a local community organization. Each focus group was made up of 3–10 male and female participants ranging from ages 12–24. Transcripts were analyzed for recurrent themes.

RESULTS: All participants had personal experience with violence or close contacts affected by violence, though few had discussed violence with their primary care physician. Themes included (1) violence plays a large role in youth's health, well-being, and behavior choices; (2) youth do not inherently trust physicians; (3) physicians do not ask about violence; and (4) youth have mixed feelings on how physicians could help them with the violence in their lives.

CONCLUSIONS: Barriers to youth violence discussions include youths' discomfort, mistrust, and discordant expectations of their providers, and lack of physician inquiry about violence in the primary care setting.

KEYWORDS: youth violence, focus groups, community pediatrics, physician-patient communication

INTRODUCTION

Youth violence represents a critical health issue disproportionately affecting young people in the US.[1] Homicide is the third leading cause of death for individuals ages 10-24.[2] In 2013, 4,481 youth aged 10–24 years were homicide victims and more than 500,000 were treated in U.S Emergency Departments for non-fatal assault injuries.[2] Rhode Island is similar to national statistics, with 23% of male high school seniors reporting a physical fight in the past year and over 12% carrying a gun in the past 30 days.[3] In 2011, nearly 1,000 adolescents and young adults presented to the Emergency Departments of Rhode Island Hospital and Hasbro Children's Hospital with an assault-related injury.[4]

Numerous medical organizations, including the American Academy of Pediatrics (AAP), have adopted policy statements declaring youth violence to be not just a social or judicial concern, rather a public health issue that should be addressed by physicians.[5-8] Additonally, a task force which included representatives from the Centers for Disease Control and Prevention (CDC), the American Medical Association (AMA), and youth violence experts established core competencies for health professionals in addressing youth violence, including expertise in history-taking, risk assessments, and effective counseling and referral.[9] Despite the support of prominent, national public health and medical organizations and the high prevalence of violence in the lives of adolescents, violence screening and counseling by pediatricians remain low.[10] A small body of literature of youth violence interventions in primary care clinics has demonstrated success,[11-14] such interventions have not been widely studied or implemented, and brief interventions to reduce violence have been successful in the emergency department.

A paucity of research exists examining adolescent perspectives of youth violence as a health issue.[15,16] A better understanding of patient perspectives could improve screening and inform intervention design. In this study, we aimed to describe adolescent perspectives on youth violence as a health issue, and to understand adolescents' perceived barriers and facilitators to discussing violence in the primary care setting.

METHODS

Participant Recruitment

Participants were recruited by word of mouth with the assistance of youth coordinators from the Institute for the Study and Practice of Nonviolence (ISPN), a non-profit violence prevention organization in Providence. Focus groups were held at "Rec Night," a weekly open gym session led by ISPN staff, or at the ISPN organization building. These venues were chosen as convenient community locations known to prospective participants. Participants received $20 gift cards. Youth under 18 required written parental consent and signed assent, and those 18 years and older gave informed consent prior to participation. The study was approved by the Lifespan Institutional Review Board.

Data Collection

We conducted five focus groups ranging in size from 3-10 youth between the ages of 12-24. Focus groups were led by 3 of the study investigators (AR, AGF, and NF). Focus group leaders underwent training with a cultural anthropologist (BO) experienced in focus group methodology and

qualitative research. Confidentiality was discussed at the start of each focus group and verbal acknowledgment of understanding and agreement was obtained. Participant safety was addressed in the following ways: the ISPN staff members, with explicit knowledge of gang activity and conflict, observed the group composition and could intervene if necessary, and a clinical social worker was on call for each session in the event of acute participant distress or disclosure of mandated reportable events. Focus groups followed an open-ended question format and lasted approximately one hour. The number of focus groups was determined by feasibility and repetition of themes.

Data Analysis

Participant responses were audiotaped and hand-annotated by investigators. Audiotapes were transcribed verbatim, and field notes were used for comparison and supplementation of thematic analysis. Transcripts were iteratively reviewed by all five investigators to identify recurrent narrative themes. Coding by identified narrative themes was checked and approved for concordance by each investigator.

RESULTS

Participant Characteristics

A total of 28 adolescents and young adults between the ages of 12-24 participated in the study, with 33% (n=9) of participants under age 18. The study population was 33% female (n=9). Breakdown by participant self-identified race/ethnicity was 86% Hispanic or African-American (n=24), 7% Laotian (n=2), and 7% Non-Hispanic white (n=2). All participants had personal experience with violence or close contacts affected by violence. Many had visited emergency rooms for shootings, stabbings, or assaults.

Violence plays a large role in youth's health, well-being, and behavior choices

Violence was described as commonplace in the daily lives of focus group participants. Many youth shared stories about witnessing, participating in, or being the victim of assault. Often they described violence escalating beyond verbal and physical fighting to the use of firearms with the intent to injure or kill. Throughout the discussions, participants expressed a common theme of the inevitability of violence in their community; simply avoiding or walking away was not a realistic possibility. Consequences on psychological wellbeing were expressed by a shared sentiment of worry. Youth described a need for constant vigilance to avoid violent situations, in areas including their neighborhoods, schools, and even their homes and backyards. Constant fear of victimization limited social interaction for many youth, fostering isolation in an effort to avoid conflict. Despite the ubiquity of violence in our participants' lives and its effects on their lifestyle, mental and physical health, participants all agree that they rarely discuss this part of their lives with their primary care providers. [**See Table 1**]

Table 1. Common themes and quotes from focus group participants

Violence plays a large role in youth's health, well-being, and behavior choices
When you think nothing's going to happen, that's when stuff happens. Me and my cousin walk here and back…just to play ball. We were playing around the whole way, but at the same time we're alert.
You shoot at me, …my mind's just flipping over. I'm going to stop going to church, and stop going to these houses.
You can't go nowhere.
Youth do not inherently trust physicians
I don't trust nobody, so I definitely don't trust my doctor, because everything I say my mom seems to know.
When you only have a couple bruises I don't think you should tell them because they'll just make a little joke about it with their other doctors, and I don't think you want them to do that because that makes you feel like you're a joke to them.
I wouldn't even tell them I got beat up or jumped or whatever. I'd just be like, yeah I fell….I don't ask you about your personal life, don't ask me.
I don't really, like, know him like that, so I don't know if I could trust him with certain things….He's like my physical doctor, but sometimes he talks to me like a psychiatrist. I don't really know if I could tell him personal stuff.
I trust my doctor because he's been taking care of me since I was, like, two.
Yes, he tells me personal questions that I don't like to answer, but I got to know him in time then, yeah, I started sharing. It kind of feels strange at first, but once you start going to your doctor you get used to [it]….It took a while…, like 4 years.
That's like a bond that you make with somebody,…after you've known them for a couple years already,…and you know all their family….You got to know how they live, know who they are.
Physicians do not ask about violence
My doctor really doesn't care.
They don't ask.
Cause they don't ask. If they got engaged in a conversation like this then maybe, yeah, I'd tell them.
Yeah, I mean some doctors care; some doctors, like, they care for your well-being, but some doctors, they just there to do their job. They just care about getting paid, so they could care less for asking you.
[Doctors] don't do nothing to help us. Don't ask me if you're not going to help me.
Youth have mixed feelings on how physicians could help them with the violence in their lives
They're not trained in how to deal with this stuff…They could be trained.
Don't rush into it. Take your time when you ask things like that….Um, just ask comfortable questions then, I mean, start getting a little deeper in.
Some people get touched by words easier than other people, so maybe you just change some person's mind about something if you just happened to be talking about it.
Maybe if they got together and did something, seeing that they are the people who can save us, who can help us. Because at the end of the day they gotta help us. Without the doctors we're gonna die. So maybe if they got together and did something…
Teach the public, go on the news.
I think it would be a good message to send the younger kids that come up into the next generation, so that they know that they shouldn't do it.

Youth do not inherently trust physicians

Participants were divided on whether they could trust physicians. Some mistrust resulted from specific experiences with physicians. One youth explained, "I don't trust my doctor. I asked for condoms and she said no. I don't trust her at all." Others felt that physicians would share their personal information with their parents or other doctors. One participant felt he would become the source of office gossip. Many felt that their experiences with violence were too personal to tell a physician.

Youth identified a longitudinal relationship as critical in the development of trust. They also noted that trust developed not only from knowing an individual for a long period of time but also by having a long-term relationship with his or her family. Many participants reported no continuity relationship with their provider. They described seeing different doctors each visit, and seeing physicians infrequently. One observed, "Your doctor's only on the side of you for one day, for only like, what, a half hour? And then send you off right back to the street."

Physicians do not ask about violence

A majority of participants reported that their physicians did not ask them about violence. Statements such as "They don't ask" and "My doctor really doesn't care" were common. The few exceptions revealed that some physicians would ask about violence, but only in the context of presentation for some resulting physical injury.

> One time when I got jumped…[The doctor] brought it up, so I had to talk to him about it. He said, 'You got to stay away from violence, 'cause this will happen and you'll die or get hurt. Next time don't do that again.'

Participants were clear that they would be unlikely to bring up violence as a health concern to their physicians due to the personal nature of the subject. However, they commonly cited physicians not asking as the main reason, and said that if they felt engaged, they would talk about the subject.

Youth have mixed feelings about how physicians could help them with violence

Overall, youth reported being very selective about whom they will talk to about the violence in their lives. Many felt violence is not a health issue beyond physical injury. Several youth believed physicians simply do not care about the violence in their lives.

Beyond this perception of physician indifference, youth were skeptical of the ability of physicians to help them cope with violence and its ramifications. Some felt there was little that a physician could do, and therefore they should not ask in the clinical setting. They also felt that physicians were not trained in this area, but felt that having a physician trained in youth violence prevention and treatment of its sequelae might be helpful.

Focus group participants emphasized the value of a strong patient-doctor relationship when asked about advice for facilitating a discussion about violence. Several shared their view that a physician could approach the subject in a non-judgmental way spanning multiple visits to allow the teen to feel comfortable.

Participants recognized the social and emotional impact of violence on their mental well-being. Several thought the subject of interpersonal violence was the purview of behavioral health providers, and that primary care physician should focus on physical health. Other youth thought physicians could help, particularly in serving as a trusted adult to talk to, and as someone who could arrange services to address the mental health needs of youth exposed to violence.

Multiple participants felt that primary care physicians could effectively help patients address violence in their lives, both on individual and community levels. Many recognized potential for prevention if physicians actively discussed avoidance of gangs during visits with younger children. They also acknowledged the power physicians have to educate the community on violence as a health problem. They hypothesized that if physicians truly united and spoke up on this issue, their voices would be heard.

DISCUSSION

While many medical organizations have put forth policy statements on addressing youth violence, adolescents participating in our focus groups often regarded it as a "personal" rather than a health issue and did not necessarily trust their physician enough to disclose involvement. Youth questioned whether talking to their primary care physician about violence would have any effect on their well-being, although conceded that a caring interested provider could assist in coping and obtaining of mental health services.

Our work expands on prior research by Johnson,[15] which explored adolescent perspectives on violence, including to whom they could turn for help. While street-wise role models were the main confidants cited, adolescents also noted willingness to discuss with primary care providers, if that was someone who knew them and showed them respect. An emergency department visit has been shown to be a "teachable moment" for youth violence prevention; however, adolescents may be uncomfortable in this setting.[16,17]

The AAP urge pediatricians to inquire about violence and gun exposure starting in infancy and continuing through adolescence, in order to prompt discussion, parenting advice, and intervention.[5] Engaging in these conversations may build relationships with youth, paving the way for future disclosures, and change current norms regarding the acceptability of youth violence discussions in the primary care setting.[18] While not commonly incorporated, inclusion of youth violence on pre-visit risk behavior questionnaires can prompt discussions during primary care visits and were rated as favorable by adolescents and providers. At the same time, adolescents' reluctance to discuss this topic should be considered, and the effects of these conversations should be evaluated.

Our findings should be interpreted in the context of the limitations of this study. The participants were predominantly non-white older adolescent males with significant exposure to youth violence and some level of affiliation with a community-based violence prevention organization. While our findings may not be generalizable to adolescents of all ages or to other settings, we believe our study sample is likely representative of the population most at risk of

violence: young minority men in inner city neighborhoods. Limitations in focus group methodology also exist. While most participants appeared candid in the discussions, some may have held back for fear of "disrespecting" other group members or offending moderators. Finally, focus group moderators were the same study investigators who analyzed focus group transcripts to identify themes. Although thematic identification and analysis was reached by consensus among the investigators, there were no independent evaluators other than the cultural anthropologist who served in a training and advisory capacity.

CONCLUSIONS

In addition to physician lack of inquiry, youth barriers exist to the discussion of youth violence in the primary care setting. Youth articulate reluctance to disclose information for reasons of mistrust, discomfort, and the personal nature of the topic, however express willingness if engaged by compassionate, inquiring physician with whom they have a relationship.

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Pseudotumor cerebri: What We Have Learned from the Idiopathic Intracranial Hypertension Treatment Trial

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ABSTRACT

Idiopathic intracranial hypertension, also known as pseudotumor cerebri, is an unexplained increase in intracranial pressure associated with permanent severe visual loss in 25% of cases and debilitating headaches. The condition is often associated with obesity. The Idiopathic Intracranial Hypertension Treatment Trial, a large, randomized, collaborative clinical trial, evaluated the efficacy of acetazolamide with weight loss versus placebo with weight loss in participants. Herein, we describe the major components of the clinical trial and discuss its shortcomings.

KEYWORDS: Idiopathic Intracranial Hypertension Treatment Trial, IIHTT, pseudotumor cerebri, papilledema, weight loss, visual field loss, perimetric mean deviation

INTRODUCTION

Idiopathic intracranial hypertension (IIH), also known as pseudotumor cerebri, is an unexplained increase in intracranial pressure that predominantly is a disease affecting women of child-bearing age who are overweight, but can arise from medication use or other conditions. Symptoms of IIH include transient visual obscuration, severe headache, diplopia from abducens (VI) nerve palsy, pulsatile tinnitus, and papilledema.[1-5] Although acetazolamide combined with weight loss is a common treatment plan for IIH, the role and efficacy of acetazolamide are uncertain.[5] Indeed, Johnson and colleagues found that 6% weight loss alone – which can be achieved within 3 to 6 months – will result in resolution of papilledema and IIH.[1,6]

The Idiopathic Intracranial Hypertension Treatment Trial (IIHTT) is the third in a series of large, randomized, collaborative clinical trials undertaken by the neuro-ophthalmology community.[7-12] The IIHTT evaluated the efficacy of acetazolamide with weight loss (ACZ) versus placebo with weight loss (i.e., versus weight loss only (WLO)) among patients with mild visual field loss on automated perimetry. In this paper, we describe the major components of the IIHTT and evaluate the shortcomings of the trial.

THE IIHTT

A total of 165 participants with mild visual loss were enrolled in the IIHTT at 38 sites in North America. Eligibility criteria included age 18-60 years, reproducible visual field loss with a perimetric mean deviation (PMD) of -2 to -7 dB in the worst eye (study eye), a diagnosis of IIH by the modified Dandy criteria, and bilateral papilledema.[7-9] Participants were randomized to initially receive 4 tablets daily in 2 doses of 250 mg acetazolamide or placebo, with the dosage increased by one tablet every 6 days with up to 16 tablets (4 grams) daily. All participants were also offered enrollment in a dietary and lifestyle modification program. The primary outcome variable was the mean change in visual field PMD at 6 months in the eye with worse visual loss.

In the trial, only the ACZ group achieved the target 6% weight loss. The PMD in the ACZ group improved by 1.43 dB at follow-up while the WLO group improved by 0.71 dB (P=0.050). The fellow eye in the ACZ group also demonstrated significant improvement in PMD at 0.87 dB as compared with WLO group at 0.42 dB (P=0.045). The papilledema grade significantly improved in both the study and fellow eyes in the ACZ group as compared with the WLO group using both fundus photography and site investigator ratings (p<0.001). Most quality-of-life measures were significantly higher for the ACZ group. The study concluded that acetazolamide with diet resulted in modest improvement in visual function than diet alone, but the clinical importance of the improvement remains to be determined.

SHORTCOMINGS OF THE IIHTT

The IIHTT was designed to determine the effectiveness of acetazolamide in reducing or reversing vision loss in IIH (pseudotumor cerebri) after 6 months of treatment. If both groups (ACZ, WLO) had achieved equivalent 6% weight loss, the effectiveness of acetazolamide could be obtained by subtracting the outcome of the WLO group from the ACZ group. However, the ACZ group, at *6.96%* mean weight loss, had more than double the weight loss as compared with the *3.20%* mean weight loss for the WLO group. Less than 5% of the WLO group had 6% or more weight loss. Any attempt at comparing the ACZ group with the WLO group, in order to achieve the effectiveness of acetazolamide at this markedly unequal weight loss distribution, would be misleading and erroneous at best. Unfortunately, no amount of statistical arbitration or mediation will increase the over 95% of participants who did not achieve 6% weight loss in the WLO group. Hence, the IIHTT failed to demonstrate

the effectiveness of acetazolamide in IIH at the targeted 6% weight loss. Because both groups (ACZ, WLO) did achieve 3% weight loss, the IIHTT would be able to assess the effectiveness of acetazolamide by comparing ACZ with WLO at 3% weight loss. Indeed, the IIHTT data showed *better treatment outcome* for the WLO group with 1.61 dB improvement (PMD: -3.59 dB initial; -2.65 dB 6-month) in comparison with ACZ with 0.94 dB improvement (PMD: -3.59 dB initial; -1.98 dB 6-month). This is in keeping with the findings of Johnson et al.[1,6] which had documented a one-grade change in papilledema, i.e., resolution of mild papilledema (Frisén grades 1-2) with 3% weight loss.[13] This may suggest that for mild papilledema, weight loss only without acetazolamide would be a reasonable treatment option, as only 3% weight loss is required.

It remains uncertain if acetazolamide is necessary if, through motivation, counseling and encouragement, a patient can achieve 6% weight loss.[1,6,14] Clearly, the IIHTT participants achieved the desired 6% weight loss with use of acetazolamide, but at a price of significant adverse events. The IIHTT was only able to achieve 40% compliance of patients taking 4 grams of acetazolamide as patients developed adverse effects or there was noncompliance. In the IIHTT, acetazolamide was associated with a significantly greater rate of paresthesia, fatigue, dysgeusia, decreased carbon dioxide level, nausea, vomiting, diarrhea, and tinnitus. Serious adverse events in the ACZ group included hospitalization for renal impairment, transaminitis, elevated lipase with pancreatitis, diverticulitis, and one case of reduced blood count. Indeed, there have been case series reported of patients sustaining fatal aplastic anemia with acetazolamide use.[15] Losing weight and maintaining weight loss are difficult challenges of our time.

UNANSWERED QUESTIONS ABOUT IIH

In addition to the uncertainty of obtaining optimal efficacy with acetazolamide and weight loss regimens, the pathophysiology of pseudotumor cerebri is yet to be determined. The design of IIHTT did not address causation in the development of pseudotumor cerebri. The proposed mechanisms of IIH pathophysiology are based on: 1) its propensity among obese females of child-bearing age; 2) its association with medications such as vitamin A and tetracycline; and 3) the absence of ventriculomegaly. Anatomic and hormonal etiologies have been considered.[2-5] A filling defect within the venous sinuses may lead to IIH. Additionally, increased vitamin A or aldosterone may influence the development of IIH. Both estrogen and retinoic acid have been implicated in increasing resistance to CSF outflow by affecting epithelial membranes. Substances such as retinol-binding protein, aromatase, cytokines, and leptins secreted by adipose tissue may be involved in the pathophysiology of IIH and could explain the increased susceptibility among obese patients.[2-5] The contribution of cerebral venous abnormalities such as the stenosis of the distal transverse cerebral sinuses or the formation of microthrombosis due to thrombophilia within the cerebral veins as a primal cause of IIH by increasing the resistance to CSF outflow is uncertain.[2-5] The role of brain glymphatics in the pathophysiology of IIH remains to be explored.[16,17] The IIHTT will examine potential selected biomarkers for IIH. Nonetheless, there are still many unanswered questions.

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An Analysis of Organ Donation Policy in the United States

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ABSTRACT

There is currently an organ shortage crisis in the United States. This paper analyzes the magnitude of the problem, the organ procurement programs in other developed countries as compared to the US, and discusses the changes that can be made to address this problem. With the opt-in or explicit-consent method currently practiced in the US, less that one third of the population consents to organ donation. In order to narrow the gap between the demand and supply of organs, steps need to be taken to improve the organ procurement infrastructure. The public needs to be educated about the dire need, the benefits and risks in organ donation, and living vs. deceased donation.

KEYWORDS: Organ donation, opt-in, opt-out, organ transplantation, organ donation policy

One hundred and twenty-two thousand, six hundred and twenty-five (122,625) – this is the number of patients on the waiting list in need of a life-saving organ transplant in the United States. On average, 22 patients die each day while waiting for a transplant that cannot take place because there is a shortage of donated organs.[1] Major policy and regulatory changes need to be made in order to narrow the gap between the demand and supply of organs. Within the past 30 years, the number of organs donated has not kept pace with the number of organs needed. The demand for organs has increased exponentially due to various factors. The increase in life expectancy, obesity, diabetes, and alcohol-related liver failure are a few of those factors.

What if organ donors were compensated? In all countries but Iran, the selling and buying of organs is illegal, as they rely on altruistic donations – donations that do not depend on monetary gain. Some suggest that if it were legalized, donation of organs could be promoted through monetary gain and that the black market organ transplants could be made safer and done professionally. While this idea seems to make sense in theory, it would have problems and would be impractical to execute. One of the problems of this system is that the poor would be unable to obtain organs, and they would be pressured to sell their organs for money. Also, it is nearly impossible to verify the effect of legalizing organ donation on black market sales as there is very little evidence to support its existence or nonexistence.[2]

While the current system of organ donation in the United States is not effective enough to keep up with the demand for organs, blaming this on the use of altruistic donations would be incorrect. Specifically, Spain, Austria, Hungary, Poland, Portugal, and Sweden all have consent rates of above 85% while all rely on altruistic organ donations.[3] These countries are evidence that altruistic donations are not the problem. They are fairing well in transplantation rates as they rely on an opt-out system for donation and have success in other programs and practices. Spain is leading in organ transplantation not only due to the opt-out system, but also due to a comprehensive national organ procurement system.

The United States currently has the "opt-in" system. The opt-in system assumes that everyone does not wish to be an organ donor, and that anyone who does will give explicit consent during their lifetime to be an organ donor. Some argue that the United States could potentially increase organ donation by using an opt-out system, a system in which it is assumed that everyone wants to donate and that anyone who does not wish to donate will make that explicitly clear during their lifetime. Some countries have tried to introduce legislation to change from the opt-in to the opt-out system and faced opposition, and such a proposition in the United States might also face serious political and religious opposition.[4] The opt-out organ donation system has a "soft"

Figure 1. The Growing Gap Between Organ Supply and Demand in the U.S.[1]

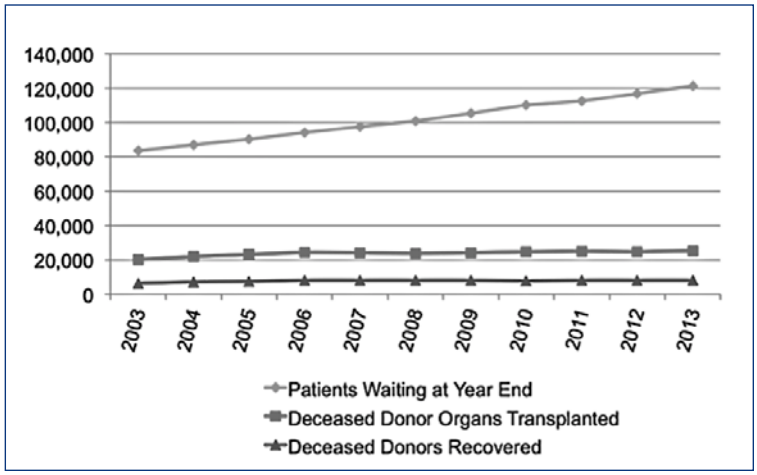
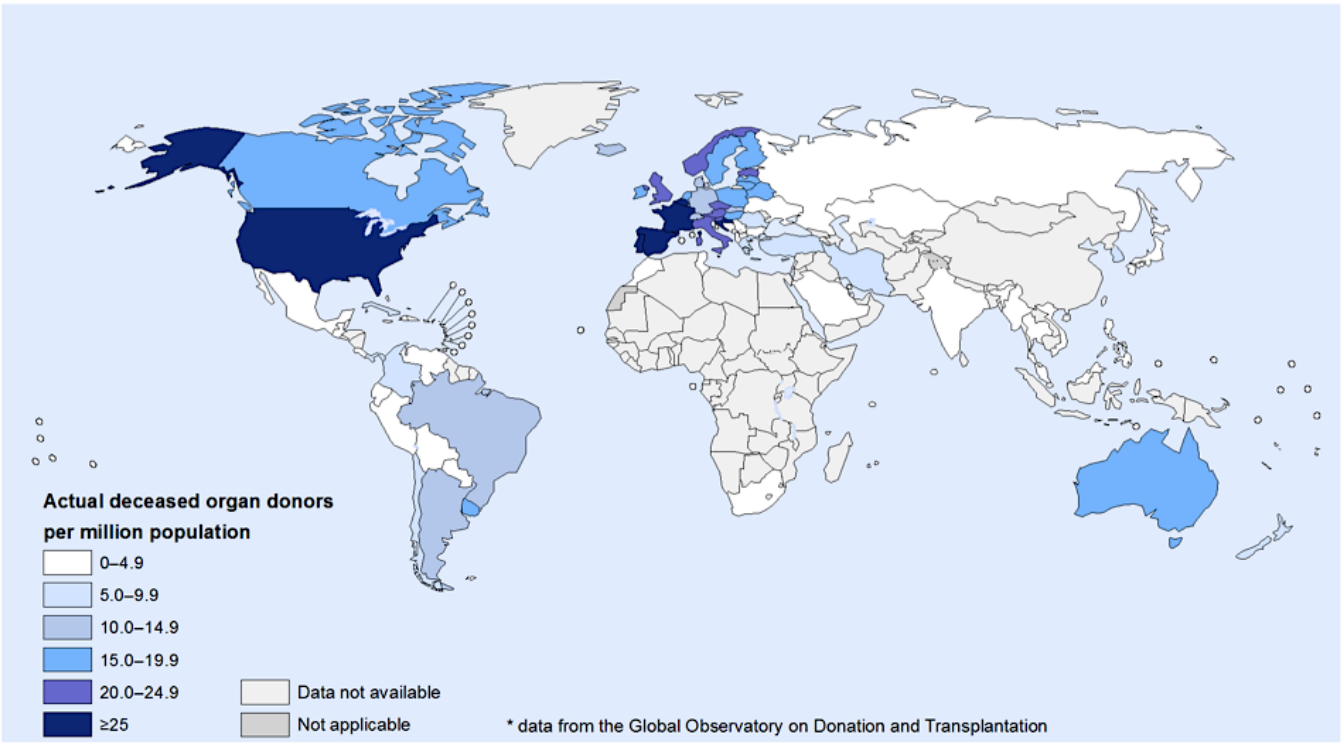


Figure 2. Actual donors from deceased persons, 2013.[7]



version as practiced in Spain in which the family's wishes are considered. The "hard" version of this opt-out method is practiced in Austria where family consent in not needed.[4] The use of different systems of consent are not the only ways organ donation policy can be impacted, but they are unquestionably important.

Culturally and geologically similar countries Austria and Germany have very different consent rates. Germany, using an opt-in system, has only 12% of the population consenting to organ donation, while Austria, with an opt-out system, has 99.98% of the population consenting. The United States fares better with the opt-in system than Germany does, with 28% of the population consenting. However, this could be improved many times over, especially considering that 85% of Americans would donate their organs as reported in surveys. The consent rates correlate directly with effective donations and shorter waiting lists: the ultimate goal.[3] Some countries do not fall under this pattern of high consent rates despite the use of presumed consent. Greece is an example of low organ donation rates, and a multitude of factors such as availability of intensive care facilities, understaffing to recruit potential donors and the economic crisis have been cited as causes.[5]

The difference between the organ donation consent rate between countries that use the opt-in versus the out-out method occurs because people think that the default plan is a suggestion favored by the government and society. They do not make the effort to change the default, and making the decision can be stressful and time consuming, while doing nothing is not. Psychologists identify this as the Default Effect, and it influences the individual's decisions made on organ donation.[3] The downside of using the opt-out system is that some non-willing donors will have their organs taken because they did not make the effort to explicitly opt-out. There is also a similar disadvantage to the opt-in system, as people who may have wanted to be organ donors were unable to do so because they did not make it explicitly clear.

Currently, there are limited programs educating the population about organ donation in the United States. The public lacks basic knowledge and understanding of organ donation, i.e. the dire need, living vs. deceased, which organs can be donated during one's lifetime, the time, effort and risk involved. The next of kin also influences organ procurement in both the opt-in and opt-out methods; people should have a discussion with their families expressing their desire to donate their organs. Well-trained transplant coordinators who are physicians and nurses working in the intensive care units of hospitals in Spain have played a key role in increasing organ donation by working with the families of potential organ donors. These programs strengthen organ procurement.[6] Some educational and awareness programs may have the potential to improve donation rates in countries. In the

United States, indication of donor status on driver's licenses is an example of such a program.

Much needs to be done to save the 22 lives lost everyday due to a lack of donated organs.[1] There is potential for the adoption of an opt-out system in the United States to help fight the organ donation crisis, but such a change in policy would certainly face a number of challenges. The federal government, the states, the media and the professional societies each need to take on this responsibility and play their respective roles in changing organ donation policies, educating the public, and addressing the problems with the current system and developing a more secure organ procurement infrastructure.

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Modifiable Risk Factors in Total Joint Arthroplasty: A Pilot Study

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ABSTRACT

Strong evidence exists to suggest that morbid obesity, smoking, and poorly controlled diabetes mellitus are associated with poorer outcomes after total joint arthroplasty. To our knowledge, no study has reported the effect of the implementation of a risk reduction strategy. Risk factors, based on published data, were defined as Body Mass Index (BMI)>40, Hemoglobin A1c (HbA1c) >8.0, and use of any tobacco product. A retrospective pilot review was done of a 3-month period using this protocol in the practice of a single fellowship-trained academic arthroplasty surgeon (DRJ). Outcomes were evaluated in the subsequent 3-month period. Overall 19/29 (65.5%) patients identified to be "at risk" and offered support for modification followed up under the care of their index surgeon. 11/19 (57.9%) improved their risk factors and 8/19 (42.1%) ultimately met the specific goals set for surgery with 4 (21%) ultimately undergoing their replacement procedure during the 6-month study period. These initial results suggest that a significant proportion of our patients were willing and able to modify their risk before surgery.

LEVEL OF EVIDENCE: Level III retrospective study.

KEYWORDS: Total Knee Arthroplasty, Total Hip Arthroplasty, Obesity, Diabetes Mellitus, Tobacco use, Risk Factor

INTRODUCTION

It is estimated that over 200,000 primary hip and 400,000 primary knee replacements are performed annually in the United States, with substantial increases forecast by 2030.[1] Multiple studies have reported the success of total joint arthroplasty (TJA) in improving pain and mobility.[2–5] While there may be many risk factors that can have an adverse effect on postoperative outcomes, three key risk factors suggested in the literature include obesity, poorly-controlled diabetes, and smoking.[6–9]

While rates of primary TJA continue to increase, so too does the incidence of obesity. It is projected that 42% of Americans will be obese by 2030.[10] This unfortunate statistic may have real consequences in TJA outcomes. According to Ward et al., BMI >40 kg/m^2 led to increased post-operative complications including acute kidney injury, cardiac arrest, reintubation, reoperation, and infection.[11] Additionally, acetabular component malposition has been shown to be associated with BMI >35 kg/m^2, which may necessitate revision surgery.[12]

Patients with poorly controlled diabetes mellitus are also at risk for poorer outcomes after TJA. A Veterans Health administration study found that elevated hemoglobin A1c (HbA1c) values (>7%) led to an increased risk of post-operative infection in non-cardiac surgery with an odds ratio of 2.13.[13] Another study of TKA patients found that HbA1c >8 resulted in an increased risk of superficial surgical site infection, with an odds ratio of 6.14, identifying poor glycemic control as a risk factor for infection.[14]

Tobacco use has also been linked to less favorable outcomes in TJA surgery. Kapadia et al. found that at a mean follow-up of 47 months, smokers had 90% survivorship of their primary joint replacement, as opposed to 99% in non smokers.[15] A large study of 78,191 patients who underwent primary TJA found that 1.8% of current smokers experienced wound complications compared with 1.3% and 1.1% of former and non-smokers respectively.[16] This study also found that both current and former smokers were at increased total complication risk with odds ratios of 1.18 and 1.20 respectively, with an increased pack-year history of smoking being related to the total complication risk.[16]

The purpose of this study was to determine the effect of implementation of an evidence-based risk reduction strategy whereby patients were identified at risk for poorer outcomes after joint replacement surgery and support given to modify their risk in an effort to improve surgical outcome. Specifically, this study assesses the willingness of patients to continue to follow up in the care of their surgeon and their success in the pursuit of risk factor modification after it was decided to delay surgical intervention to mitigate risk of TJA.

MATERIALS AND METHODS

A set of risk factor goals was defined based on published studies[9,12,17–19] and is currently being used in the practices of fellowship-trained academic arthroplasty surgeons at our institution. IRB approval was granted and charts from one participating surgeon (DRJ) were retrospectively reviewed

during the 6- month period from February 16, 2015 through July 27, 2015. Patients were included if they were evaluated in the office during the 3-month period from February 16 to May 4. If the patient met surgical indications for primary TJA based on history, examination, and imaging studies, but was identified as having one or more medical risk factors felt to elevate the risk of surgery, they were included as candidates for this pilot study. The following key risk factors were used to identify patients: BMI> 40 kg/m^2, tobacco use, active oral or other infection, and HbA1c> 8.0. Outcomes were evaluated over the subsequent three months, and descriptive statistics applied.

At the initial office visit, after risk factors were identified, a conversation between surgeon and patient occurred discussing elevated risk for poorer surgical outcomes based on medical evidence. Patients were advised that definitive TJA would be delayed, and their arthritis treated conservatively during a period of time whereby interventions would be offered to improve their operative risk. Support was offered via contact with the patients' PCP to help mitigate risk by optimizing risk factors. Obese patients were counseled regarding the importance of understanding their own body weight and BMI, and also directed to our institution's weight-loss program which includes dietitian counseling, physical exercise advice and bariatric surgery referral if indicated. Patients were also offered consultation with a psychologist, social worker, and exercise physiologist to best optimize physical, nutritional and functional capabilities.[20] Tobacco users were given information about our institution's tobacco cessation programs. Poorly controlled diabetic patients were counseled and referred back to their primary care provider or their endocrinologist for tighter glucose control. Following this initial discussion, a 3-month or earlier follow-up appointment was made to evaluate progress toward risk factor goals. It was expected that some patients would decide to not follow up. Various reasons may motivate patients to seek an easier path to surgical intervention at a surgical practice without a risk factor optimization protocol. Whether this mechanism of patient self-selection for motivated compliant individuals yields a patient population with a greater chance of clinical success was not evaluated.

Patients who chose to follow up continued to be survailed at 3-month, or more frequent, intervals. When risk factor goals were achieved, surgery was scheduled. Obese patients were re-weighed, smokers were asked about nicotine and tobacco use, diabetics had new HbA1c results evaluated, infection status was reassessed, and oral health status was queried and examined. Patients who met risk factor goals were indicated for surgery while those who did not were given encouragement and counseling and continued to undergo routine follow-up with the attending surgeon (DRJ) as needed or in three months, whichever came first.

Patient information and data was compiled and analyzed using Microsoft Excel 2007 (Microsoft Corp, Redmond, WA).

RESULTS

Twenty-nine (29) patients met inclusion criteria for the study and 19 (65.5%) followed up (**Table 1**). Ten (10) patients were males, 19 were females. 21 patients had a chief complaint of knee arthritis while 8 presented with hip arthritis (**Table 2**). Of the patients that followed up, 11 (57.8%) improved their risk factors, 8 (42%) met criteria for surgery, and 4 (21%) either underwent or had their surgery scheduled within the study period (**Table 3, Figure 1**). Sixteen patients (84.2%) elected for corticosteroid injections at some point in their treatment course. Ten patients did not follow up within the study period and their outcome is unknown.

Overall 4/15 (36.4%) tobacco users quit; 1/6 (16.67%) obese patients lowered their BMI below 40, and 1/2 (50%) of diabetics lowered their HbA1c below 8.0. Morbidly obese (N=7) patients' average BMI decreased from 44.4 to 42.9 (P= 0.21). These patients were most likely to be lost to follow-up with 6/13 (46.2%) following up. Tobacco users followed up at a rate of 73.3% (11/15).

Table 1. Patient Demographics

	N	Percent*
Patients Meeting Inclusion Criteria	29	
Patients Who Followed Up	19	65.5%
Overweight	**13**	
Average BMI at Presentation	47.3	
Average BMI at Follow-Up	43.3	
Patients who Followed Up	6	46.2%
BMI < 40 at Follow-Up	1	16.7%
Smokers	**15**	
Patients who Followed Up	11	73.3%
Patients who Quit Smoking	4	36.4%
Diabetics HbA1c > 8.0	**3**	
Average Initial HbA1c at Presentation	9.6	
Patients who Followed Up	2	66.7%
Average HbA1c at Follow-Up	9.1	
HbA1c <8.0 at Follow-Up	1	50.0%
Active Infection	**2**	
Patients who Followed Up	1	50.0%
Cleared Infection at Follow-Up	1	50.0%
Poor Dentition	**4**	
Patients who Followed Up	4	100.0%
Dental Clearance Achieved at Follow-Up	4	100.0%
>2 Risk Factors	**6**	
Patients who Followed Up	4	66.7%
Modified Risk Factors at Follow-Up	2	50.0%

*Percent for Risk Modifications is of Patients Who Followed Up

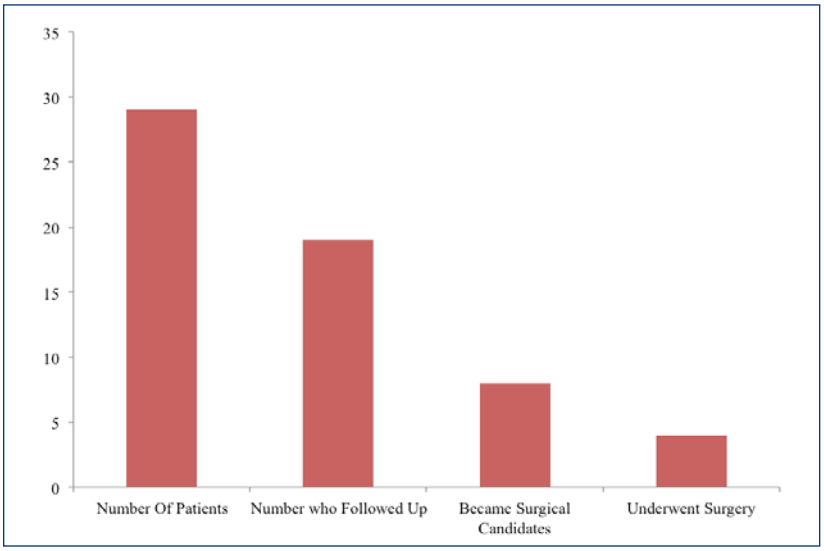
Table 2. Patient Presentation

Total Patients	29
Average Age	56.8
Male	10
Female	19
Knee OA	21
Hip OA	8

Table 3. Follow-up visit statistics during 6-month study period

	N	%
Number of patients who followed up	19	
Average number of follow-up visits per patient	1.8	
Average time elapsed before follow-up visit	3.9 mo	
Number of patients who modified risk factors at follow-up	11	57.9%
Number of patients who opted for joint injections	16	84.2%
Number of patients who met risk factor goals at follow-up	8	42.1%
Number of patients who scheduled or underwent surgery after meeting goals during study period	4	21.1%

Figure 1. Risk Factor Modification Results



DISCUSSION

For primary TJA, payer policies are now trending toward bundled payment models that may either withhold compensation for the treatment of complications after surgeries, or penalize both hospital and surgeon for observed complication rates that are higher than expected. Awareness of this issue may motivate surgeons and total joint replacement centers to reduce risk by attempting to modify patient factors before proceeding with elective TJA. Arthroplasty surgeons in competitive markets may be hesitant to incorporate strategies that delay surgery to improve risk factors out of concern for losing patients to other less selective surgeons. In our study, a majority of patients not only continued under the care of their surgeon following initial consultation, but also successfully worked towards modifying their risk factors.

The most frequent modified risk factor encountered in our study was tobacco use (N=15).

Our study shows that educating patients about the risks of tobacco and encouraging them to quit preoperatively is successful. Tobacco use turned out to be one of the most modified risk factors, with 4 patients ultimately quitting. Obesity was a more difficult risk factor to overcome. Six (6) of 13 morbidly obese patients followed up with only 1 reaching their goal BMI. While the relatively short study period is a contributing factor, this also highlights the particular difficulty patients have with obesity and weight loss. It is our practice to refer patients to our institution's weight loss center which includes specialty dietitian and nutrition support as well as bariatric surgery consultation. One diabetic patient was able to lower his/her HbA1c appropriately. HbA1c requires a period of time with altered average blood glucose to affect a change, and our brief follow-up period was likely too short to allow for this.

The modification of risk factors is likely to lead to improved patient outcomes, and the potential benefit of implementation of a risk reduction strategy is supported by literature evidence. Paxton et. al. in their study of 12,030 patients found a 3.6% 30-day readmission rate following elective THA.[9] Morbid obesity, medical comorbidities and system-related hospital problems were found to be risk factors associated with readmission.[9] Maoz et. al. reviewed 3,672 primary and 406 revision arthroplasties and reported modifiable risk factors associated with periprosthetic joint infection.[21] Obesity (BMI > 40 mg/k^2) was found to have an odds ratio of 4.13 while tobacco use and colonization with *Staphylococcus aureus* were additive risk factors with an odds ratio of 12.76 when combined with other risk factors.[21] Kapadia et al compared the outcomes of 110 smokers to 220 non-smokers who underwent total hip arthroplasty and found a 92% survivorship in smokers compared to 99% in non- smokers at an average of 51 months post-operatively.[19]

The two key limitations of this pilot study are its small sample size and brief study duration. Patients were enrolled over just a 3-month period and followed for an additional 3 months. It is the goal of the investigators to use the data generated by this study as a pilot to support a longer-term study with increased patient numbers. Additionally, patient drop-out was expected after patients were advised that they were not immediately surgical candidates, and due to the retrospective design of this study, information is not available for the 10 patients who did not follow up with the study surgeon. Future studies could be directed at determining whether these patients sought care elsewhere, and if offered surgery, their outcomes.

In conclusion, we report a set of modifiable risk factors and goals that can be used in an effort to improve results after elective arthroplasty surgery. Our study shows that with proper support, counseling, and guidance, some arthroplasty

candidates are willing to "buy in" to a shared-decision making model. This model empowers patients to become partners in their healthcare with their medical doctor and surgeon and therefore work to meet goals in a mutual effort to improve their own likelihood of a good surgical outcome. While some preoperative risk factors cannot be altered, the factors we investigated are ultimately within the control of the patient and physicians and desired goals can often be achieved, as has been the clinical observation in our practice. The results of our initial study are encouraging both with regards to retaining patients in follow-up and also in terms of meeting defined evidence-based goals to effect improved surgical outcomes. A majority of patients continued in the care of the study surgeon despite the difficulties of risk factor modification and surgical time delay, and actually improved their modifiable risk factors, with a number of patients meeting these goals and having surgery scheduled within the three months after risk factor modification was initiated.

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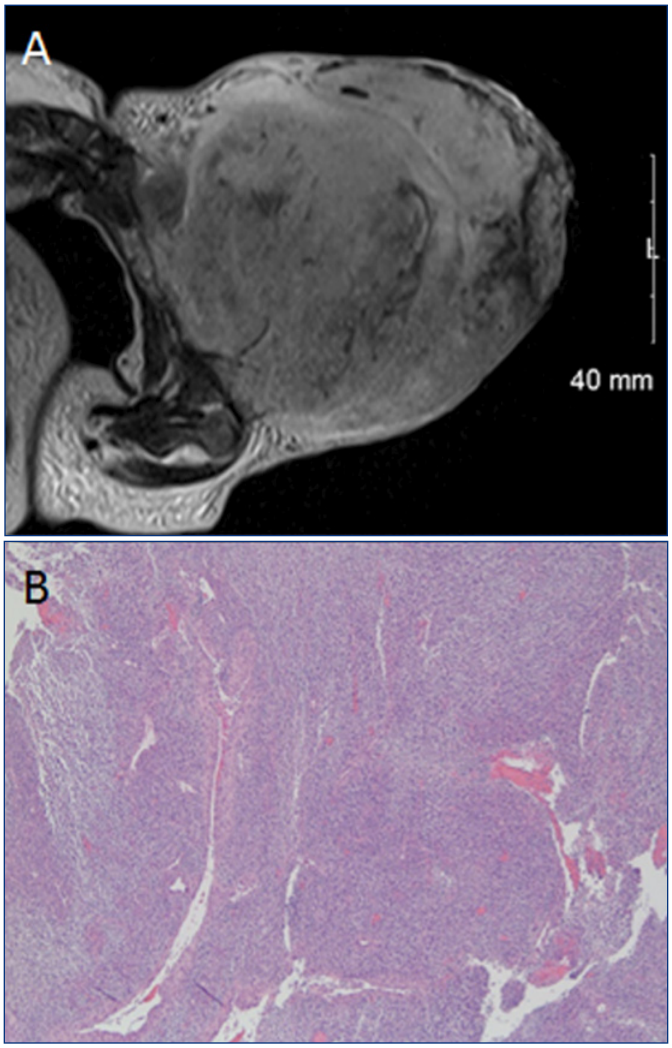
Hypercalcemia of Malignancy in a Newborn with Infantile Fibrosarcoma

SUNGEETA AGRAWAL, MD; LISA SWARTZ TOPOR, MD, MMSC

CASE REPORT

A newborn full-term female was noted to have a large, left-arm, soft-tissue mass on prenatal ultrasound. She had significant blood loss from the mass at birth, resulting in hypotension. Magnetic resonance imaging on day of life (DOL) 2 revealed a 9.2 by 7.5 by 8.9 cm heterogeneous solid mass with multiple vessels throughout, along with areas of hemorrhage and necrosis (**Figure 1, Panel A**). The mass caused significant remodeling of the ulna and apparent displacement of the neurovascular bundle. Biopsy showed morphology consistent with infantile fibroscarcoma: spindle and plump cells with significant mitotic activity and a vascular pattern similar to a hemangiopericytoma (**Figure 1, Panel B**). Flourecence in situ hybridization (FISH) showed ETV6 (Tel; 12p13) rearrangement, confirming the diagnosis of infantile fibrosarcoma.

Figure 1. Panel A. MRI showing 9.2 by 7.5 by 8.9 cm heterogeneous mass with vessels scattered throughout. Panel B. Biopsy of the mass showing spindle and plump cells, along with a vascular pattern similar to that of a hermangiopericytoma.



As a consequence of the blood loss at delivery the infant developed acute kidney injury, with a peak creatinine level of 376 mmol/L (4.25 mg/dL) on DOL 5. Acute liver injury also developed and transaminases rose with the peak aspartate aminotransferase of 519 IU/L and alanine transaminase of 395 IU/L on DOL 4.

Hypercalcemia was initially noted on DOL 6, with total calcium level (corrected for albumin) of 3.25 mmol/l (13 mg/dl), reference range 1.9–2.6 mmol/L (13 mg/dL). Hypercalcemia persisted with a peak calcium level of 4.2 mmol/L (16.9 mg/dL) on DOL 13. Parathyroid hormone (PTH) and 1.25 dihydroxyvitamin D levels were undetectable. The parathyroid-hormone related protein (PTHrP) level was 654 ng/L (reference range 14-27 ng/L). Treatment with normal saline and furosemide led to minimal improvement of the hypercalcemia.

An erythematous area with firm white-yellow papules on the ankle was noted on DOL 22 (**Figure 2**) at a prior intravenous

Figure 2. Subcutaneous calcinosis (black arrow) developed on the ankle, at a prior intravenous catheter site.

catheter site. The lesion was consistent with subcutaneous calcinosis. On DOL 22 the infant was started on chemotherapy with vincristine, dactinomycin and cyclophosphamide. The calcium normalized 3 days after initiation of chemotherapy. Hypercalcemia did not recur and the repeat PTHrP level on DOL 43 was 118 ng/L.

The infant underwent several debridements of the tumor over the following months, and the tumor was resected at 5 months of age. She received a total of 8 cycles of chemotherapy and completed chemotherapy at age 7 months. As of age 20 months, she is in remission. The subcutaneous calcinosis on the ankle resolved.

DISCUSSION

Infantile fibrosarcoma is a rare tumor that can secrete PTHrP.[1] PTHrP secretion led to hypercalcemia and subsequent subcutaneous calcium deposition in our patient. There are very few case reports detailing the hypercalcemia in infantile fibrosarcoma and the response to chemotherapy. We found that while the hypercalcemia was refractory to hydration with intravenous fluids and furosemide, chemotherapy led to rapid resolution of the hypercalcemia and reduction of the serum PTHrP level.

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Reference

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Human Papillomavirus (HPV) Vaccination Coverage among Rhode Island Adolescents, 2008–2014

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Human papillomavirus (HPV) is the most common sexually transmitted infection. In the United States, approximately 79 million people are currently infected with human papillomavirus and another 14 million people become newly infected each year.[1-3] In fact, most sexually active adults become infected at some point in their lives, with the highest rates of infection among people in their late teens and early 20s.[1-3] Although most HPV infections are asymptomatic and transient, certain types can cause cancers of the cervix, vagina, and vulva in women; cancers of the penis in men; and cancers of the anus and oropharynx (back of the throat, base of the tongue, and tonsils) as well as genital warts in men and women.[1-3] Every year, an estimated 17,600 women and 9,300 men are diagnosed with a cancer caused by HPV, and many of these cancers could be prevented with vaccination.[1-3]

CDC's Advisory Committee on Immunization Practices (ACIP) recommends HPV vaccination for adolescent girls and boys at ages 11 or 12 years to protect against cancers and genital warts caused by HPV infections. HPV vaccines are administered as a 3-dose series over 6 months, ideally, before adolescents are exposed to HPV.[1-3] In Rhode Island, HPV vaccine has been provided to clinicians through the state program since November 2006 for girls and since July 2011 for boys.

This report describes 1) the trends of HPV vaccination coverage among Rhode Island adolescents 13-17 years of age, 2) the missed opportunities to receive the HPV vaccine, and 3) the role of healthcare provider recommendations in HPV vaccine uptake.

METHODS

We analyzed data from the 2008-2014 National Immunization Survey – Teen (NIS-Teen). NIS-Teen has collected HPV vaccination information among adolescents aged 13–17 years since 2008 for girls and since 2011 for boys in each of the 50 states and selected areas. NIS-Teen is a two stage survey: 1) a random-digit-dialed telephone interview with an adolescent's parent/guardian to collect socio-demographics, parents' attitude on vaccines, as well as vaccination provider contact information (Household Survey), and 2) a mailed survey to the child vaccination providers to obtain immunization history information from the medical records (Provider Survey).[4,5] HPV vaccination coverage data presented in this report is based on the Provider Survey[a] and the information on whether the parents received HPV vaccination recommendation by their child healthcare provider is based on the Household Survey. Both household and provider survey data are weighted to represent the entire adolescent population in Rhode Island. Details regarding NIS-Teen methodology, including weighting procedures and synthesizing provider-reported vaccination histories, are available elsewhere.[4,5]

In this report, a missed opportunity to receive the HPV vaccine was defined as a healthcare encounter where the adolescent received at least one adolescent vaccine (Tdap or MCV4)[b] but did not receive the first dose of HPV vaccine. The trends of HPV vaccination coverage were presented for girls and boys separately each year. However, we combined the most recent 3-year (2012–2014) data when examining the role of provider recommendations in receipt of HPV vaccination. Differences in vaccination coverage were considered statistically significant if $p<.05$.

RESULTS

Trends in HPV Vaccination Coverage

Figure 1 shows the trends in vaccination coverage with ≥1 and ≥3 doses of HPV vaccine among Rhode Island adolescent girls (2008-2014) and boys (2012-2014).[c] For girls, HPV vaccination coverage for both ≥1 and ≥3 doses increased significantly in the early part of the period: during 2008-2010, coverage rates for ≥1 dose of HPV vaccine increased from 54.7% to 73.0% (18.3 percentage points increase, linear trend $p<0.01$) and coverage rates for ≥3 doses increased from 31.4% to 55.1% (23.7 percentage points increase, linear trend $p<0.001$). However, the coverage rates remained unchanged since 2010 for both ≥1 and ≥3 doses. The same pattern was observed in the coverage trends for boys. Coverage for both ≥1 and ≥3 doses of HPV vaccine among boys significantly increased only between 2012 and 2013 (from 55.2% to 69.3%; $p<.05$; for ≥1 dose and from 17.7% to 43.2%; $p<.0001$; for ≥3 doses). However, between 2013 and 2014, the coverage rates for both ≥1 and ≥3 doses did not change at all (from 69.3% to 69.0% and from 43.2% to 42.9%, respectively).

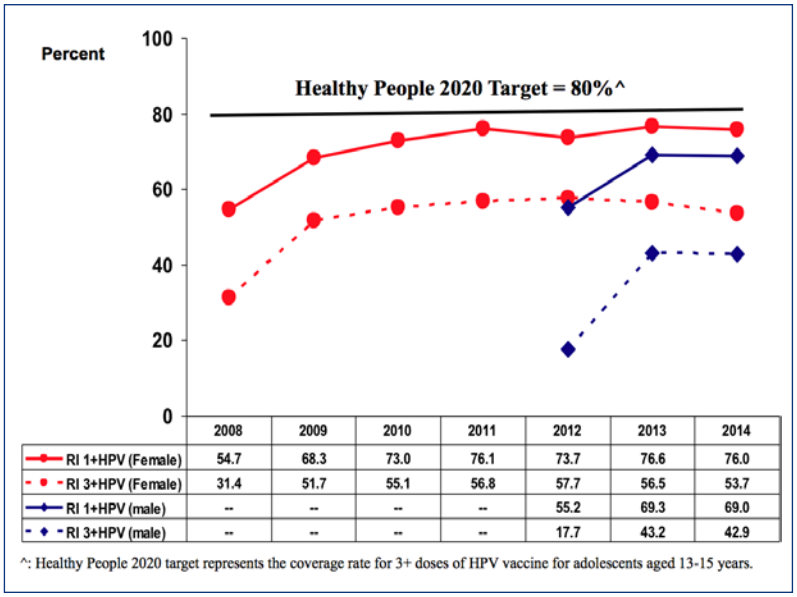
Overall, coverage rates with ≥1 and ≥3 doses of HPV vaccine among Rhode Island adolescents, both girls and boys, were much higher than the national coverage throughout the periods. For girls, during 2008-2014, the coverage difference between Rhode Island and the U.S. for ≥1 dose of HPV vaccine peaked in 2010 with 24.3 percentage points, but

it narrowed down to 16.0 percentage points in 2014. For boys, during 2012–2014, the coverage difference between Rhode Island and the U.S. for ≥1 dose of HPV vaccine peaked in 2012 with 34.7 percentage points, but it narrowed down to 27.3 percentage points in 2014 (The coverage rates for the U.S. were not presented in Figure 1).

Missed Opportunities in HPV Vaccination

Figure 2 presents the coverage trends of three adolescent vaccines in Rhode Island – Tdap, MCV4, and HPV vaccines. Although the CDC's Advisory Committee on Immunization Practices (ACIP) recommends that adolescents aged 11–12 years receive these three vaccines during a single healthcare visit,[8] there has been a substantial difference in coverage levels among vaccines. Coverage for ≥1 dose of HPV vaccine has remained lower compared with the other two vaccines, especially since 2010, which indicates many missed opportunities for administering HPV vaccine at visits when Tdap or MCV4 vaccine is given. The coverage rates for ≥1 dose of Tdap vaccine and ≥1 dose of MCV4 vaccine continuously increased from 2008 until 2012, where the coverage levels for both vaccines reached far above the Healthy People 2020 target of 80%. Their high coverage levels have been maintained since 2012. On the other hand, the coverage rate for ≥1 dose of HPV vaccine among girls increased from 2008 until 2010, where the coverage level was much lower than the other two vaccines, and then the coverage level stopped increasing. Because of the early stagnation in the increase in HPV vaccination coverage, the coverage difference between the HPV vaccine and the other vaccines has persisted since 2012. If HPV vaccine had been administered to adolescents during healthcare visits when they received Tdap or MCV4 vaccine, the coverage rate for ≥1 dose of HPV vaccine could have reached 98.3% (95% CI: 96.6%–99.9%) in 2014. In other words, if missed opportunities had been eliminated for adolescents 13–17 years of age in Rhode Island, the vaccination coverage for all three adolescent vaccines potentially could have reached 98.3%. The difference between the actual and potential coverage for ≥1 dose of HPV vaccine was 22.3 percentage points for girls and 29.3 percentage points for boys, compared to 5.9 percentage points for Tdap vaccine and 4.2 percentage points for MCV4 vaccine in 2014.

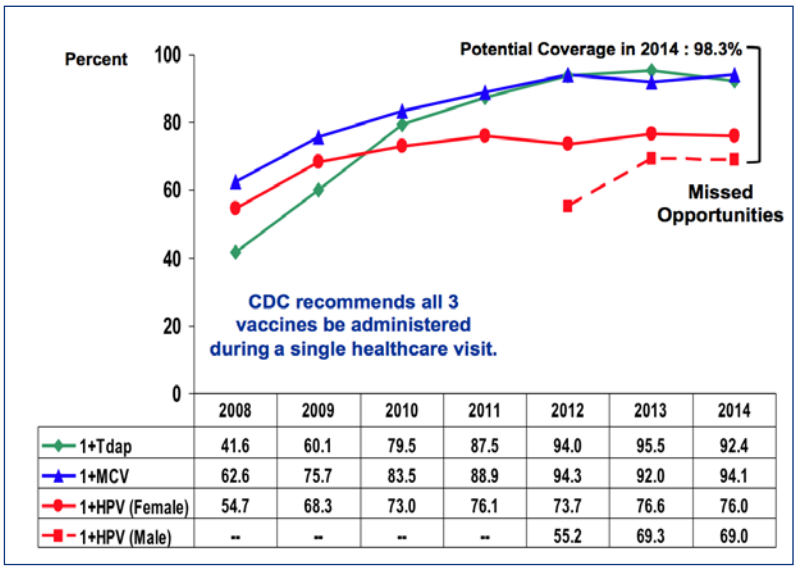
Figure 1. Trends of HPV vaccination coverage among adolescents 13–17 years of age, Rhode Island, 2008–2014[d]



	2008	2009	2010	2011	2012	2013	2014
RI 1+HPV (Female)	54.7	68.3	73.0	76.1	73.7	76.6	76.0
RI 3+HPV (Female)	31.4	51.7	55.1	56.8	57.7	56.5	53.7
RI 1+HPV (male)	--	--	--	--	55.2	69.3	69.0
RI 3+HPV (male)	--	--	--	--	17.7	43.2	42.9

^: Healthy People 2020 target represents the coverage rate for 3+ doses of HPV vaccine for adolescents aged 13-15 years.

Figure 2. Missed opportunities in HPV vaccination among adolescents 13–17 years of age, Rhode Island, 2008–2014



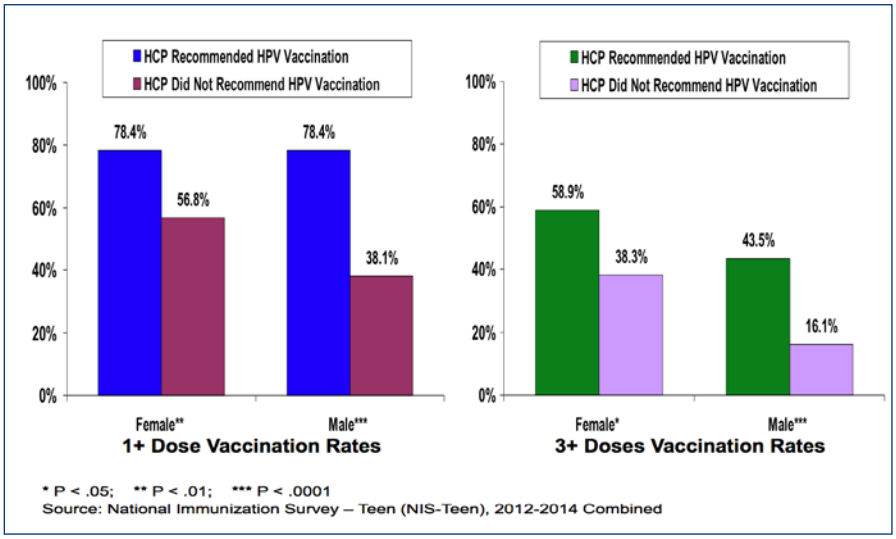
	2008	2009	2010	2011	2012	2013	2014
1+Tdap	41.6	60.1	79.5	87.5	94.0	95.5	92.4
1+MCV	62.6	75.7	83.5	88.9	94.3	92.0	94.1
1+HPV (Female)	54.7	68.3	73.0	76.1	73.7	76.6	76.0
1+HPV (Male)	--	--	--	--	55.2	69.3	69.0

Provider's Recommendations and Receipt of HPV Vaccination

As seen in **Figure 3** (2012–2014 combined data), the provider's recommendation was significantly associated with the receipt of HPV vaccination for both adolescent girls and boys.

Coverage rate for ≥1 dose of HPV vaccine was 78.4% (95% CI: 72.9%–83.9%) among girls whose parents reported receiving recommendations for the HPV vaccine by their child's provider, compared to 56.8% (95% CI: 42.4%–71.3%) among girls whose parents reported not receiving recommendations (p=0.0031). The association was even more significant for boys: coverage rate for ≥1 dose of HPV vaccine was 78.4% (95% CI: 73.6%–83.2%) among boys whose parents reported receiving recommendations for the HPV vaccine, compared to 38.1% (95% CI: 28.2%–48.0%) among boys whose parents reported not receiving recommendations (p<.0001). The same patterns were found for ≥3 dose coverage among both

Figure 3. Provider Recommendation and Receipt of HPV Vaccine, Rhode Island, 2012–2014 combined



girls and boys. Coverage rates for ≥3 doses of HPV vaccine among girls was 58.9% (95% CI: 53.0%–64.9%) when their parents received provider's recommendations, compared to 38.3% (95% CI: 23.7%–53.0%) when their parents did not receive recommendations (p=0.0123). For boys, the coverage for ≥3 doses of HPV vaccine was 43.5% (95% CI: 37.4%–49.7%) when their parents received provider's recommendations, compared to 16.1% (95% CI: 8.7%–23.4%) when their parents did not receive recommendations (p<.0001) (Figure 3).

The parents of adolescents who did not receive the full 3 doses of HPV vaccine and who were unlikely to receive HPV vaccine in the next 12 months were asked to provide the main reasons for not vaccinating their teens (multiple responses were allowed). **Table 1** presents the top 5 reasons reported in the 2012–2014 NIS-teen. Among parents of girls, 17.5% (95% CI: 11.3%–23.7%) reported that the main reason was that HPV vaccination had not been recommended; among parents of boys, 31.5% (95% CI: 24.6%–38.4%) reported that HPV vaccination had not been recommended.

Table 1. Top five reasons for not vaccinating adolescents with HPV vaccine, Rhode Island, 2012–2014 combined

PARENTS OF GIRLS			PARENTS OF BOYS		
Reason	**%**	**(95% CI)**	**Reason**	**%**	**(95% CI)**
Not needed or necessary	18.1	10.5-25.7	Not recommended	31.5	24.6-38.4
Not recommended	17.5	11.3-23.7	Not needed or not necessary	14.1	9.2-18.9
Lack of knowledge	14.9	8.6-21.2	Lack of knowledge	11.7	6.4-17.0
Safety concern/Side effects	10.7	4.8-16.6	Child not sexually active	10.2	5.2-15.2
Child not sexually active	6.8	2.8-10.9	Safety concern/Side effects	6.6	3.1-10.0

DISCUSSION

Although the HPV vaccination coverage rates among Rhode Island adolescents 13–17 years of age, both girls and boys, were significantly higher than the U.S throughout the period, the coverage rates were much lower when compared to other routinely recommended adolescent vaccines. In 2014, nearly one in four adolescent girls (24%) and one in three adolescent boys (31%) in Rhode Island did not initiate the HPV vaccination series. Only 54% of girls and 43% of boys completed the full 3-dose series. HPV vaccination coverage rates in Rhode Island have not increased since 2010 for girls and since 2013 for boys. In addition, our data show that there have been many missed opportunities for HPV vaccinations, compared to the other routinely recommended adolescent vaccines. If the missed opportunities were eliminated, coverage of one dose of HPV vaccine could have reached 98.3%.

Recommendations for Rhode Island Healthcare Providers

Healthcare providers (HCPs) play a critical role in improving HPV vaccination rates. HCPs should educate parents that HPV vaccine is safe and effective in preventing cervical cancer and genital warts, and that HPV vaccine is a 3-dose series administered over 6 months that is most effective when given before their child is exposed to HPV.[1,2] To eliminate missed opportunities for vaccination, HCPs should make a strong recommendation for HPV vaccine, since it is the strongest predictor of vaccination, and administer HPV vaccine the same way and the same day as other adolescent vaccines. Reminder/recall systems, use of KIDSNET (Rhode Island's Integrated Child Health Information System that includes the Immunization Information System) to monitor coverage rates, and using every encounter (well and sick visits) to assess vaccination status could improve HPV series completion rates.

Public Health Action to Improve HPV Coverage Rates

In an effort to improve HPV vaccination coverage in Rhode Island, in August of 2015 the Rhode Island Department of Health (RIDOH) implemented a school requirement with a graduated approach as follows. In fall 2015, one HPV vaccine dose was required for entry into 7th grade. For fall 2016, one dose will be required for 7th grade entry and two

doses will be required for 8th grade entry. For fall 2017 and thereafter, one dose will be required for 7th grade entry, two doses will be required for 8th grade entry, and three doses will be required for 9th grade entry.[9] In addition, Rhode Island's *Vaccinate Before You Graduate (VBYG)* program, a catch-up vaccination program for high school students, has been expanded to the public middle schools effective in fall 2015, to eliminate access barriers for students to receive the HPV vaccination series.[e,10]

There are several limitations in this report. First, the vaccination coverage trends during 2008–2014 should be interpreted with caution, as the NIS-Teen data collection methods changed in 2011[6] and 2014[7]. Second, HPV vaccination coverage might have been underestimated due to the possible incompleteness of provider-verified vaccination histories. Third, the provider's recommendations for HPV vaccination data were reported by parents/guardians, which is subject to recall bias. Despite these limitations, this report provides important information on HPV vaccination among Rhode Island adolescents.

Footnotes

a HPV vaccination coverage does not distinguish between bivalent (2vHPV) and quadrivalent (4vHPV) vaccines. Although the nine-valent HPV vaccine (9vHPV) was licensed in December 2014, the vaccine was not distributed until 2015 and therefore the 9vHPV vaccine was not administered to adolescents during this study period.

b Annual influenza vaccination was not included in this analysis, even though it is routinely recommended for all people ≥ 6 months of age during the flu season.

c Although the NIS-Teen has presented the HPV vaccination coverage data for boys since 2011, this report did not include the 2011 coverage data for boys because Rhode Island state program has provided HPV vaccine to clinicians since July 2011 for boys.

d The vaccination coverage trends during 2008-2014 should be interpreted with caution, as the NIS-Teen data collection methods changed in 2011[6] and 2014[7].

e This expansion was initially funded by CDC's Prevention and Public Health Funding (PPHF) funds.

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Disclosure

The authors have no financial interests to disclose.

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

VITAL EVENTS	REPORTING PERIOD		
	NOVEMBER 2015	12 MONTHS ENDING WITH NOVEMBER 2015	
	Number	Number	Rates
Live Births	959	11,601	11.0*
Deaths	821	10,488	9.9*
Infant Deaths	10	76	6.6#
Neonatal Deaths	7	61	5.3#
Marriages	363	6,63	6.3*
Divorces	222	3,109	2.9*
Induced Terminations	180	2,600	224.1#
Spontaneous Fetal Deaths	52	609	52.5#
Under 20 weeks gestation	45	559	53.3#
20+ weeks gestation	7	50	4.3#

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

Underlying Cause of Death Category	REPORTING PERIOD			
	MAY 2015	12 MONTHS ENDING WITH MAY 2015		
	Number (a)	Number (a)	Rates (b)	YPLL (c)
Diseases of the Heart	193	2,375	225.5	3,419.0
Malignant Neoplasms	182	2,212	210.0	5,194.5
Cerebrovascular Disease	33	427	40.5	507.5
Injuries (Accident/Suicide/Homicide)	87	824	78.2	12,441.0
COPD	42	542	51.5	612.5

(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

April 4, Monday

RIMS Council Meeting, Dr. Jody Rich presenting on the Governor's Task Force on Overdose Intervention and Prevention

April 5, Tuesday

RIMS Physician Health Committee: Herbert Rakatansky, MD, Chair

Legislative hearings

Chairwoman Gallo fundraiser

Rep. Slater fundraiser

April 6, 2016, Wednesday

Meeting with EOHHS and RI Quality Institute regarding legislation

Meeting with Senate leadership regarding legislation; Michael Migliori, MD, RI Public Laws Chair, and staff

Legislative hearings

April 7, Thursday

Meeting with "Food on the Move" regarding healthy weight initiative

OHIC Administrative Simplification Workgroup

SIM Population Health Plan Workgroup

Meeting with Rep. Naughton and OHIC regarding legislation

Legislative hearings

April 8, Friday

Meeting with United HealthCare; Russell Settipane, MD, President; Sarah Fessler, MD, President-Elect; with Senior Medical Director Neal Galinko, MD

April 11, Monday

Conference call with AMA and EOHHS regarding SAMHSA (Substance Abuse and Mental Health Services Administration, US. Department of HHS)

House Corporations Chair Brian P. Kennedy fundraiser

April 12, Tuesday

Worker's Compensation Medical Fee Taskforce

Legislative Hearings

Chairman Miller fundraiser

Rep. Bennett fundraiser

Rep. Maldonado fundraiser

April 13, Wednesday

Board of Medical Licensure and Discipline

Governor's Opioid Taskforce, Gary Bubly, MD, Past President, Taskforce member

Worker's Compensation Advisory Council

Legislative Hearings

Rep. Canario fundraiser

Senator DiPalma fundraiser

April 14, Thursday

Meeting with American Heart Association

Legislative Hearings

SIM Steering Committee; Peter A. Hollmann, MD

Rep. Archambault fundraiser

Rep. Trillo fundraiser

April 15, Friday

Legislative Recess Begins

RI Chapter of the American College of Family Physicians annual meeting, Newport

April 18, Monday

JOIN for ME conference call (RIMS, YMCA, Brown Medical School, UnitedHealthcare)

AMA Advocacy Resource Center Executive Committee conference call

April 19, Tuesday

RI ACEP Board Meeting, Steve DeToy, Director of Government and Public Affairs, presenting legislative update

Meeting with American Heart Association

April 20, Wednesday

DOH Primary Care Physician Advisory Committee, focus on Governor's Opioid Taskforce and new dual-eligibles managed care contract with NHPRI

Meeting with EOHHS regarding SAMHSA (Substance Abuse and Mental Health Services Administration)

Meeting with Aetna

April 21, Thursday

RIMS Nominating Committee Meeting

Jody Rich, MD, MPH, at the April 4 meeting of the RIMS Council, speaking about his work as an expert advisor to the Governor's Overdose Prevention and Intervention Task Force.

April 25, Monday

Certificate of Need Panel Discussion, Providence College; Steve DeToy, Director of Government and Public Affairs, Panelist

RIMS Finance Committee Meeting; Jose Polanco, MD, Chair

April 26, Tuesday

Legislature reconvenes

Economic Progress Institute Annual Meeting

RI College seminar, Steve DeToy, Director of Government and Public Affairs, presenting

Webinar with 3WON regarding potential Credential Verification Organization (CVO); Peter Hollmann, MD; Michael Migliori, MD

EOHHS Provider Advisory Group; Secretary Roberts, Nicole Alexander-Scott, MD, Director of Health

April 28, Thursday

Reach Out and Read RI Annual Event

Blue Cross Blue Shield of RI Event for Peter Andruszkiewicz

April 30, Saturday

RIMS' *Eleventh Hour Education Event*, Crowne Plaza Hotel, Warwick

RIMS' Mix and Mingle

RIMS' sponsors, staff, and leadership met for an evening at the Chapel Grille in Cranston on March 31 to enjoy the opportunity to share ideas and marketing strategies, and to enrich friendships.

RIMS CORPORATE AFFILIATES

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 healthcare and related business to work with our membership.

RIMS thanks these participants for their support of our membership.

Contact Megan Turcotte for more information:
401-331-3207
mturcotte@rimed.org

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Contact John Luo, John@Insurehealthgroup.com, 401-404-7373

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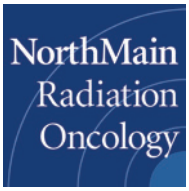

For more information about group rates, please contact Megan Turcotte, RIMS Director of Member Services

Why You Should Join the Rhode Island Medical Society

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

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Lifespan, several Rhode Island physician groups form independent physician association

Community Physician Partners, Inc., includes Anchor Medical Associates, Medical Associates of Rhode Island, University Internal Medicine and University Medicine

PROVIDENCE – On April 28, Lifespan announced the formation of Community Physician Partners, Inc., (CPP) an independent physician association that includes Anchor Medical Associates, Medical Associates of Rhode Island, University Internal Medicine and University Medicine, all in partnership with Lifespan.

The creation of CPP allows the physician groups to remain independent yet contract with health insurers in partnership with Lifespan to share responsibility for total cost and quality of care delivered in their patient-centered medical home practices. Patients continue to see their primary care physician, nurse practitioner, and nurse care manager for routine and preventive medical care management as well as management of chronic illnesses.

"There is a strong desire for primary care physicians to want to go it alone, but in this day and age, we just can't."
—David A. Marcoux, MD, co-founder of University Internal Medicine, president of CPP.

As an integrated health system providing care throughout the state, Lifespan and CPP seek to streamline and enhance the delivery of health care for their patients. The CPP was founded by Anchor, Medical Associates and University Internal Medicine, with University Medicine joining in April.

Lifespan President and CEO **TIMOTHY J. BABINEAU, MD**, said this new, integrated approach leverages the unique strengths of each partner to elevate the quality of care.

"We strongly believe that the primary care physician must take center stage in our efforts to deliver care in an extremely cost effective way and, importantly, in a way that clearly demonstrates quality outcomes," said Babineau.

He added that Lifespan is able to support the work of the primary care physician by easing some of their business burdens, giving them quick easy access to electronic records and providing them full access to the depth and talent of specialty physicians with Lifespan.

Approximately 170 primary care physicians throughout most parts of the state are members of the CPP. Anchor Medical Associates has practices located in Lincoln, Providence and Warwick; Medical Associates of Rhode Island has practices located in Bristol and East Providence; University Internal Medicine practice is located in Pawtucket; and University Medicine has practices located in Providence and its surrounding communities.

"There is a strong desire for primary care physicians to want to go it alone, but in this day and age, we just can't," said **DAVID A. MARCOUX, MD**, co-founder of University Internal Medicine and president of CPP. "The beauty of Community Physicians Partners is that we still have the autonomy to treat our patients in the manner we believe most appropriate, but with the incredible bench support of the Lifespan network of specialty physicians and infrastructure assistance, which frees up precious time for the primary care doctor to do what he or she does best – care for the patient."

"The most significant shift, however, is that we are now in the role of quarterback for our patients and are able to consult specialists with ease, such as with cardiologists, brain surgeons, cancer specialists, all of whom are working on the same team. This is accomplished in a cohesive way, not a fragmented one."
—Nathan Beraha, MD, medical director of Anchor Medical

NATHAN BERAHA, MD, medical director at Anchor Medical, added, "The most significant shift, however, is that we are now in the role of quarterback for our patients and are able to consult specialists with ease, such as with cardiologists, brain surgeons, cancer specialists, all of whom are working on the same team. This is accomplished in a cohesive way, not a fragmented one." He continued, "All aspects of the patient's care is known to us and we are able to serve as guide and advocate, which hopefully reduces time in a hospital emergency room, reduces unnecessary tests and streamlines the delivery of care." ❖

Bradley Hospital launches new outpatient program for high-risk adolescents

Mindful Teen program helps teens develop emotion regulation skills to avoid hospitalization, improve quality of life

EAST PROVIDENCE – Bradley Hospital has launched a six-month outpatient treatment program for adolescents 13 to 18 years old who struggle with suicidality, nonsuicidal self-injury (NSSI) or other self-destructive behaviors. The Mindful Teen program offers dialectical behavior therapy for adolescents (DBT-A), a proven treatment that combines individual, family and group-based therapies to help eliminate life-threatening and self-destructive behaviors and improve overall quality of life.

The Mindful Teen program helps adolescents learn to effectively manage their emotional experiences and eliminate self-destructive behaviors by providing a structured environment for adolescents and caregivers to learn new skills. The ultimate goal of the program is for teens to learn to function safely outside of an intensive treatment setting.

"Because emotion regulation difficulties, self-harm and suicidality are chronic conditions for many adolescents, teens in this program receive ongoing support in generalizing new skills to all aspects of their everyday lives," said **KARYN HOROWITZ, MD**, director of outpatient child psychiatry and behavioral health services at Lifespan. "Without such support, teens remain at a high risk for repeated emergency room visits and inpatient and partial psychiatric hospitalizations due to unsafe behaviors that arise from difficulties in effectively managing distress and negative emotions."

The Mindful Teen program is offered at the Bradley Hospital campus in East Providence and will also be offered at the Newport County Community Mental Health Center in Middletown. Both programs are staffed entirely by intensively trained DBT clinicians who also participate in an ongoing weekly DBT-A consultation team. Program services include weekly multifamily DBT-A skills groups, individual and family therapy, and phone coaching available to patients and parents 24 hours a day, seven days a week.

Research has validated that DBT-A treatment is successful in managing symptoms of suicidality and NSSI while also reducing health care costs associated with the frequent emergency room visits and psychiatric inpatient and partial hospitalizations that are often associated with these symptoms.

"Similar to teens with chronic medical conditions such as diabetes, adolescents who struggle with chronic suicidality or self-injury require long-term support in implementing new skills to safely manage their symptoms in an outpatient setting," said **JENNIFER KITTLER, PhD**, outpatient DBT-A program manager at Bradley Hospital.

For more information on the Mindful Teen program, call Bradley Hospital's outpatient department at 401-432-1119.

RIH study finds more deaths in US from sailing than football

Alcohol use is critical factor in many sailing fatalities

PROVIDENCE – A new study from Rhode Island Hospital researchers based on data from the U.S. Coast Guard found that sailing has a higher fatality rate than football and downhill skiing. Despite an image of carefree jaunts in sun-splashed waters, sailors experience fatalities at a higher rate than that of sports known for lightning speeds, falls and collisions. In fact, falls overboard, high winds and operator inattention are known factors lifting American sailing death rates, with alcohol implicated in 15 percent of all sailing deaths.

"Drowning was the most common cause of death and, sadly, 82 percent of drowning victims were not wearing a life jacket," said **ANDREW NATHANSON, MD**, an emergency medicine physician at Rhode Island Hospital and clinical professor of emergency medicine at the Alpert Medical School of Brown University. "Death and injury can be prevented when skippers and passengers wear life jackets, abstain from alcohol while boating, and maintain proper vigilance."

The vast majority of the sailing-related deaths during 2000 and 2011 occurred when boaters fell into the water. Alcohol intoxication was the leading preventable factor contributing to death, followed by operator inexperience and inattention. Together, operator-preventable contributing factors were associated with 37 percent of all fatalities. Weather or hazardous waters were listed as primary contributing factors in 28 percent of deaths.

"Neither experienced nor novice boaters were spared from injuries and death," said Nathanson. "The boating accident reports chronicled mishaps from day sailing on a small boat on a lake, to cruising a catamaran along the coast, to racing competitively in a regatta. For the eight million people who go sailing at least once a year in the United States, the risks must be understood."

By law, all boating deaths, disappearances, significant injuries and major vessel damage must be reported to authorities. The Coast Guard maintains a database of the reports, and the researchers analyzed the 4,180 reports detailing 271 fatalities and 841 injuries. They estimated the fatality rate at 1.19 deaths per million sailing person-days. Comparatively, the fatality rates for alpine skiing and snowboarding are 1.06 per million skier/snowboarder person-days. During the 11-year study period, 271 deaths were related to sailing versus the 197 incidents of American football players who died during play or practice.

Nathanson's study was published recently in the journal Wilderness and Environmental Medicine, a peer-reviewed international journal devoted to original scientific contributions on medicine defined by isolation, extreme natural environments, and limited access to medical help and equipment. ❖

Body Dysmorphic Disorder symptoms improve, relapse preventable with sustained medication

RIH, Mass. Gen. researchers collaborate on groundbreaking study

PROVIDENCE – People with Body Dysmorphic Disorder (BDD) fare better and are less likely to relapse when treated with medication on a long-term basis, according to researchers at Rhode Island Hospital and Massachusetts General Hospital.

BDD is an often-chronic mental illness in which people focus intensively on perceived physical flaws, which to others appear minor or even nonexistent. Cognitive behavioral therapy (CBT) that is tailored to BDD and certain types of antidepressant medication called serotonin-reuptake inhibitors (SRIs) often alleviate symptoms. Until this study, no research existed to verify that medication was effective in preventing a relapse of symptoms after medication is suspended. In addition, previous studies regarding the efficacy of medications were short-term.

"This research yielded clinically important data about BDD, a common, often-chronic and understudied illness in need of more evidence-based treatment," said **KATHARINE PHILLIPS, MD**, director of the BDD program at Rhode Island Hospital. "We showed that the risk of relapse can be substantially reduced by continuing effective medication and also that the continuation of medication after the acute period can further improve symptoms."

Authored by Phillips and her colleague, **SABINE WILHELM, PhD**, director of the OCD and related disorders program at Massachusetts General Hospital, the study found that 81 percent of adults with BDD who took the SRI escitalopram, also known as Lexapro, for a full 14 weeks experienced substantial improvement in BDD symptoms. The responders who continued to take the medication for another six months tended to further improve. Furthermore, those who responded to escitalopram and continued taking the medication were less likely to experience worsening of BDD symptoms in comparison to those who were switched from escitalopram to placebo (a "sugar pill"). The study was published recently in The American Journal of Psychiatry.

Approximately two percent of the American population suffers from BDD, and it affects men and women about equally. People with BDD obsess about perceived flaws in their appearance and perform repetitive and time-consuming behaviors, such as mirror checking and comparing with others, in response to their appearance concerns. A majority receive cosmetic treatment, such as surgery and dermatologic treatment, which is rarely effective for BDD concerns. SRI medications can help relieve the obsessive and compulsive symptoms of BDD as well as accompanying symptoms such as depression and anxiety.

This research study found that six months of additional treatment following initial response to the medication did positively affect outcomes. Across the sites, 74 people completed phase one, which involved escitalopram treatment during the 14-week, acute period. During phase two, the relapse prevention efficacy phase, 58 participants were randomized to double-blind continuation treatment with escitalopram or were changed to placebo treatment.

"Among patients who responded to acute-phase escitalopram, continued pharmacological treatment significantly delayed time to relapse compared to patients in the placebo group," said Wilhelm. "Further, more than twice as many placebo-treated patients relapsed than escitalopram-treated patients. This is important data for providers treating patients with BDD. Research studies are also needed that investigate whether treatment with CBT for BDD will decrease the risk of relapse when an effective medication is stopped."

Phillips and Wilhelm have presented the results of this research at the New England OCD Research Symposium; the Anxiety and Depression Association of America Annual Conference; the International College of Obsessive Compulsive Spectrum Disorders Scientific Meeting; BDD Research Day at the Institute of Psychiatry, Psychology and Neurosciences, Kings College London; the Annual Meeting of the American Society of Clinical Psychopharmacology; the Annual Conference of the International OCD Foundation; and the annual meeting of the American College of Neuropsychopharmacology.

Phillips and Wilhelm are currently conducting a study that is comparing the effectiveness of two different kinds of therapy for people with BDD: CBT and supportive talk therapy.

The study was supported by a grant from the National Institute of Mental Health to Phillips (R01 MH072917) and Wilhelm (R01 MH072854)

Other researchers contributing to the study were: **APARNA KESHAVIAH, ScM**, of Massachusetts General Hospital; **DARIN DOUGHERTY, MD**, of Massachusetts General Hospital and Harvard Medical School; **ROBERT L. STOUT, PhD**, of the Alpert Medical School of Brown University and Decision Sciences Institute in Pawtucket and **WILLIAM MENARD, BA**, of Rhode Island Hospital and Butler Hospital. ❖

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Women & Infants/Brown to Continue Participation in NIH's Maternal Fetal Medicine Units Network (MFMU) and Neonatal Research Network (NRN)

PROVIDENCE – Since 1986, a great deal of research to improve the care and outcomes of high-risk pregnant women and newborns, especially very low birth weight infants, has been organized and conducted through two networks in the National Institute of Health's (NIH) *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) – the 12-center Maternal Fetal Medicine Units Network (MFMU) and the 15-center Neonatal Research Network (NRN).

Following a rigorous review process, Women & Infants Hospital and The Warren Alpert Medical School of Brown University, have recently received notification that their participation in both research networks has been renewed for the five-year cycle that begins in 2016. Women & Infants/Brown is one of only a few sites nationwide – and the only one in New England – to be part of both networks simultaneously.

DWIGHT ROUSE, MD, of the Division of Maternal-Fetal Medicine at Women & Infants Hospital and a professor of obstetrics and gynecology at the Alpert Medical School, is the Brown/Women & Infants principal investigator for the MFMU.

The Network conducts large randomized clinical trials aimed at improving outcomes for pregnant women and their offspring. With 140,000 births spread among its 12 centers, the Network is able to perform trials of sufficient size to reach definitive conclusions that result in health-improving practice changes locally, nationally and internationally. These trials directly inform the guidelines of the American College of Obstetricians and Gynecologists and clinical obstetric practice in the U.S. and abroad. As a result of MFMU Network trials, in the U.S. it is now routine to:

- Use weekly 17-alpha hydroxyprogesterone caproate to prevent repeat preterm birth.
- Administer antibiotics to women with preterm premature rupture of membranes to improve neonatal health.
- Give women in early preterm labor magnesium sulfate to lower the chance that their baby will suffer from cerebral palsy.
- Treat mild gestational diabetes to improve maternal and neonatal health.

Dr. Rouse said, "The two most recently completed MFMU Network studies will also directly improve practice. The Antenatal Late Preterm Steroids (ALPS) study showed that betamethasone administered to mothers delivering in the late preterm period (from 34 to 36 weeks gestation) lowers the risk of respiratory problems in their babies. Of the 2,800 women in this study, 290 were enrolled at Women & Infants. The TSH study, presented orally at this year's Society for Maternal Fetal Medicine Meeting but not yet published, showed that treating pregnant women with subclinical hypothyroidism does not improve the intelligence of their children at age five (as had been claimed), and therefore screening pregnant women for this condition is not warranted."

Neonatal Research Network conduct studies of newborn medicine

ABBOT LAPTOOK, MD, medical director of the neonatal intensive care unit (NICU), professor of pediatrics at the Alpert Medical School, and principal investigator for the Women & Infants/Brown Neonatal Research Network, said, "The Neonatal Research Network has conducted a number of important clinical trials which have improved the outcomes of sick newborns and changed how neonatologists care for their patients. Not all trials performed by the NRN have changed clinical practice; even when this occurs, the results are important to guide neonatologists as to what treatments are not helpful and should not be used."

Treatments that have been demonstrated in NRN trials to help newborn infants include:

Therapeutic hypothermia: This trial demonstrated that cooling the brain from a normal temperature to 92.3°F for three days is the only treatment to be of benefit for infants with a serious brain condition at birth, encephalopathy.

Targeted oxygen saturations: This trial showed the risks and benefits of maintaining oxygen levels either high or low in extremely preterm infants requiring supplemental oxygen.

Aggressive phototherapy: This trial demonstrated better outcomes of extremely preterm infants when phototherapy for yellow jaundice was used aggressively compared to conservative use.

Vitamin A supplementation: This trial demonstrated that administration of vitamin A over the first month of life decreased the risk of Bronchopulmonary Dysplasia (BPD, a form of chronic lung disease) among extremely low birth weight infants.

Prophylactic Indocin: Administration of low doses of Indocin (similar to aspirin) in the first 24 hours of life reduces the extent of severe intracranial hemorrhage among extremely low birth weight infants.

Inhaled nitric oxide: This trial helped clinicians understand when to start nitric oxide therapy for serious conditions affecting the circulation to and within the lungs among infants born at term. ❖

PROVIDENCE VA MEDICAL CENTER PHOTO BY WINFIELD DANIELSON

Left to right, Dr. David Dosa, the associate director of the VA Center of Innovation in Long-Term Services and Supports for Vulnerable Veterans, Debra D'Allesandro, the center's administrative officer, Krista Tocco, program assistant, and Dr. James Rudolph, the center's director, at the Providence VA Medical Center Monday, April 11, 2016. The center was awarded funding for continued research by VA Health Services Research and Development, to improve the access, quality and value of long-term care for vulnerable veterans.

Long-Term Services Research for Vulnerable Vets gets funding

PROVIDENCE – The VA Center of Innovation in Long-Term Services and Supports for Vulnerable Veterans, located at the Providence VA Medical Center, was awarded funding for continued research by VA Health Services Research and Development.

"With the projected doubling of veterans over 65 years old who will be eligible for VA-funded long-term care in the next 10 years, there's a critical need for innovative ways of providing long-term care that both meets the needs of veterans and promotes their independence," said **DR. JAMES RUDOLPH**, director of the LTSS Research Center. "Long-Term Services and Supports are focused on keeping veterans in their home as long as possible, which is not only the veterans' preferred environment, but is cost effective, as well."

The overall goal of the research is to improve the access, quality and value of LTSS for veterans. To do this, the center has launched a Collaborative Research to Enhance and Advance Transformation and Excellence, called CREATE, program focused on improving care for veterans in long-term care, and a Community Nursing Home Quality Enhancement Research Initiative, called CNH-QUERI, to measure and improve the quality of care provided to veterans in community nursing homes. Other initiatives are focused on shifting care from the nursing home to the home.

The new funding will continue the research through fiscal year 2021. Rudolph said, "The LTSS Center of Innovation works closely with VA Geriatrics leadership to design research that will improve care today and build a system for innovative long-term care tomorrow."

"The continued funding of these initiatives, combined with our research partnerships with the Brown Center for Gerontology and the University of Rhode Island, will help us deliver the excellence in long-term care Veterans have earned through their service," said **DR. SUSAN MACKENZIE**, director of the Providence VA Medical Center. ❖

Health department confirms first case of Zika virus in RI

PROVIDENCE – On April 19th, The Rhode Island Department of Health announced the first confirmed case of Zika virus in the state. The individual who tested positive, a male in his 60s, had recently traveled to Haiti, where there is active mosquito-borne transmission of Zika.

"We have been closely monitoring the Zika situation internationally and have been coordinating with Rhode Island healthcare providers for months. We were fully prepared for this first case," said Director of Health Nicole Alexander-Scott, MD, MPH. "While the risk to the public is very low, we are coordinating with doctors, especially those who work with pregnant women, on how best to identify symptoms and educate patients about prevention."

Measures that RIDOH has taken to prepare include:

- Established a Zika Task Force that includes fetal medicine specialists from Women & Infants Hospital in February;
- Issuing regular briefs to Rhode Island healthcare providers with updated guidance and information on symptoms and specimen collection;
- Coordinating patient specimen collection and shipment to the Centers for Disease Control and Prevention (CDC); and
- Coordinating with the Rhode Island Department of Environmental Management for increased mosquito surveillance and larvaciding.

Zika is spread primarily through bites from infected mosquitoes. It can also be spread sexually.

"We don't expect locally-acquired cases here because the species of mosquitos that are currently known to transmit Zika are not found in Rhode Island," said Dr. Alexander-Scott. "However, Rhode Islanders who are pregnant or are considering becoming pregnant should avoid travel to countries where there is active transmission of the virus." ❖

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Miriam Hospital receives $743,000 federal grant to develop online resources to curb risk behaviors, HIV in men

PROVIDENCE – The National Institute of Mental Health (NIMH) has awarded The Miriam Hospital a five-year grant totaling $743,869 to study media influences on risk behaviors among young men who have sex with men and develop an online health media literacy intervention to help reduce HIV and sexually transmitted diseases (STDs) among this population.

"In today's high-tech society in which individuals increasingly turn to the internet for health information – health literacy is inextricably linked to media literacy," said **KIMBERLY NELSON, PHD, MPH**, research scientist at The Centers for Behavioral and Preventive Health at The Miriam Hospital and an assistant professor of psychiatry and human behavior (research) at The Alpert Medical School of Brown University. "This is particularly true for marginalized populations and stigmatized behaviors – cases in which individuals may not have access to or feel comfortable asking traditional sources for sexual health information. The intersection between health literacy and media literacy is especially pronounced for young men who have sex with men."

The prevalence of HIV among gay, bisexual, and other men who have sex with men continues to increase. In the U.S., this population accounts for 65 percent of new HIV infections, with younger men – between the ages of 13 and 24 years – having elevated incidence rates.

Because younger men in this population don't typically have access to developmentally appropriate sexual education specific to their sexual orientation, they often use online media to learn about sex and gay culture. Not only is this content often incorrect, but it can promote risky sexual behavior. According to the Centers for Disease Control and Prevention, online media may be a significant contributor to this group's high HIV infection rate.

Nelson said media literacy interventions can positively impact health behaviors. Her study will include both a research component and clinical trial. It will focus on developing online recruitment and retention methods for sexual minority males using feedback from five focus groups. The next aim of the study will be to develop a brief, online sexual health media literacy intervention aimed at lowering HIV-risk behaviors among this population using information from a youth advisory board and a cross-sectional online survey. An exploratory clinical trial will then be used to test the developed online sexual health media literacy intervention. Little research is currently available on at-risk young men, and no empirically supported sexual health interventions exist for this age group.

"This research has the potential to reach a wide audience of sexual minority males at that critical early stage in their sexual development," said Nelson. "My hope is for them to learn to be better informed and to increase their critical examination of online media, ultimately decreasing their sexual risk taking and reducing their incidence of new HIV infections." ❖

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Recognition

Leah Arsenault of South County Health named 2016 Oncology Nurse of the Year

South County Health staff: Tonia Williams, RN; Lisa Willis, receptionist; Donna Bell, medical assistant; Denise Linderson, medical assistant; Maria Monteiro, RN; Susan Pavao, lab technician; Leah Arsenault, oncology nurse navigator, award recipient; Debora Barber, RN; Gerald Colvin, DO.

WAKEFIELD – The Oncology Nursing Society—Rhode Island and Southeastern Massachusetts chapter—named **LEAH ARSENAULT**, oncology nurse navigator at South County Health, the 2016 Oncology Nurse of the Year. She was awarded on Saturday, March 12 at the Crowne Plaza in Warwick.

Oncology Nurse of the Year is presented annually to recognize an oncology nurse who shows the highest level of nursing excellence along with compassion and skill to care for cancer patients and their families. Arsenault has been a member of the local chapter for more than ten years, and is the former president.

Arsenault serves as South County Health's oncology nurse navigator, guiding patients from diagnosis through treatment. She acts as a source of knowledge and support for patients and their families. Arsenault is chemotherapy/biotherapy certified and has received a national certification in oncology nursing. She is also an End-Of-Life Education Consortium instructor.

To be chosen as Oncology Nurse of the Year, a person must be nominated and then selected by the community. Numerous letters of recommendations and nominations were submitted by healthcare professionals, cancer patients, survivors, and the community highlighting the exceptional care, compassion, and life-changing work Arsenault provides. ❖

Dr. Robert Leonard honored with outstanding service award

Rhode Island Society of Osteopathic Physicians & Surgeons bestows Leonard with Laurence E. Bouchard Award

CRANSTON – **DR. ROBERT LEONARD**, chief surgeon and founder of Leonard Hair Transplant Associates, was recently given the Laurence E. Bouchard Outstanding Service Award by the Rhode Island Society of Osteopathic Physicians and Surgeons (RISOPS), for his exceptional dedication and years of service.

Dr. Leonard is a longstanding RISOPS board member and former president. The Rhode Island Society of Osteopathic Physicians & Surgeons is committed to providing advocacy, education and support for physicians practicing the distinct philosophy of osteopathic medicine in Rhode Island and the patients they serve.

"Robert is an ardent supporter and advocate for our profession and I can think of no individual more deserving of this recognition," said **DR. JAMES GRIFFIN**, current President of RISOPS.

"As a long-standing member and former president of this wonderful organization, I am honored to receive this award," Leonard said. "I look forward to continuing the organization's goal of providing education, support and leadership for our members and patients."

The award was first given to its namesake, Laurence E. Bouchard in 2014. There are currently 98 active members in RISOPS. ❖

RI ACS Resident/Fellow Research Findings Contest

[*L-R*] Stephanie Dowd; Emily Dickinson, MD, recipient of the 2016 Andrew Dowd, MD Memorial Surgical Resident Research Award and second place finisher in the RI ACS Research Findings Contest; RI ACS President Jennifer Gass, MD; first place winner Eleanor Fagan, MD; Liudmila Muraveika, MD

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Recognition

Ellen Sturtevant receives Outstanding Pediatric Clinical Practice Award from American Physical Therapy Association

PROVIDENCE – **ELLEN STURTEVANT, PT, PCS**, a pediatric physical therapist at Hasbro Children's Hospital, has received the 2016 Outstanding Pediatric Clinical Practice Award from the American Physical Therapy Association (APTA) Section on Pediatrics. The award is presented annually to an honoree who has demonstrated actions above and beyond typical job expectations to exhibit creativity, adaptability, energy, dedication and innovation.

In its selection of Sturtevant, APTA praised her for "serving tirelessly as a clinician, advocate, mentor, researcher and innovator for more than 30 years." In her role as a clinical specialist in the Hasbro Children's Hospital rehabilitation department, Sturtevant was recognized for developing a variety of effective clinical programs and providing family-centered and evidence-based care that is goal driven and meaningful to patients.

Sturtevant, of Cranston, who is also an adjunct professor at the University of Rhode Island's physical therapy program, was nominated for the award by a group of physicians, physical therapists and patient families. She has been a member of APTA for more than 20 years, serving as a board member for the APTA Rhode Island chapter for seven of those years, where she has developed an evening lecture series with local speakers offering current and informative continuing education that is accessible and affordable to practitioners in the area.

"Ellen has served countless children and families in her work in children's rehabilitation at Hasbro Children's Hospital," said Patricia Wolfe, administrative director of Lifespan rehabilitation services. "She is also a valued colleague and resource to students who has dedicated herself to bettering the field of physical therapy." ❖

Lester Schindel, CEO of CharterCARE, named American Hospital Association "Grassroots Champion"

PROVIDENCE – **LESTER P. SCHINDEL**, CEO of CharterCARE Health Partners, will be honored as the Rhode Island "Grassroots Champion" by the American Hospital Association (AHA) in May. Schindel will be presented with the award at the AHA annual meeting in Washington, DC, and will also be recognized at the Hospital Association of Rhode Island (HARI) annual meeting in November. Each year, HARI chooses one "champion" with a strong track record of grassroots activity within their hospital and community.

Schindel joined CharterCARE in November 2015, following five years of service as CEO and President of Steward Holy Family and Merrimack Valley Hospital. He has led further development of the system and has been instrumental in building CharterCARE's innovative model of coordinated regional care including a thriving independent practice association.

Prior to leading Steward Holy Family and Merrimack Valley Hospital, Schindel was CEO of Merrimack Valley Hospital, COO of Metrowest Medical Center in Natick, MA and COO of Leonard Morse Hospital, also in Natick.

Schindel is a graduate of Rutgers University and received a Master's degree in Health Care Administration from George Washington University. A Fellow of the American College of Healthcare Executives (FACHE), Schindel has delivered numerous addresses to a variety of national and regional health care organizations. ❖

Thomas G. Catena, MD, to receive honorary degree at Brown

Dr. Catena is the medical director, surgeon at Mother of Mercy Hospital in Sudan

PROVIDENCE – **THOMAS G. CATENA, MD**, Brown '86, will receive an honorary doctorate at this year's Brown commencement. He is one of eight candidates in a variety of fields to be honored.

Cited as one of TIME magazine's 100 most influential people of 2015, Dr. Catena is the medical director and sole surgeon at Mother of Mercy Hospital in Sudan, a 435-bed institution that is the only surgical hospital in an area with a population close to one million people.

After completing pre-medical studies at Siena College, he entered Duke University School of Medicine in 1988 and proceeded to complete his internship in internal medicine at the U.S. Navy's medical center in San Diego.

After completing his Navy obligation and working in mission hospitals in Kenya, Catena became medical director at Mother of Mercy Hospital, which he helped to establish. On opening day in 2008, he saw more than 200 patients at the hospital, which lies in an area where humanitarian organizations are not allowed to deliver aid. He has rarely paused from treating patients since then, managing everything from malaria to leprosy to brain surgery.

In addition to the very public honor from TIME in 2015, Dr. Catena was awarded the Duke University Medical Alumni Distinguished Alumni Award in October 2014, the Brown University Alumni Association William Rogers Award in 2014, and the National Football Foundation Gold Medal Award in December 2014. In November 2010, Catholic Digest named Catena one of 12 Catholic Heroes for America and the World. ❖

Recognition

Thomas Puleo, MD, receives CDC Childhood Immunization Champion Award

CRANSTON – Cranston pediatrician **THOMAS PULEO, MD,** recently received The CDC Childhood Immunization Champion Award for the state of Rhode Island, given jointly by the CDC Foundation and CDC, to honor individuals who are doing an exemplary job or going above and beyond to promote childhood immunizations in their communities.

Dr. Puleo earned his medical degree from Universidad Autonoma de Guadalajara; his experiences in Mexico helped him understand the socio-cultural barriers faced by his Hispanics patients. By personalizing his outreach and education efforts, Dr. Puleo is able to effectively communicate the importance and benefits of vaccination. He has championed the idea of meeting people where they are by using their native language and recognizing their unique customs. For example, he has educational materials translated for his Spanish-speaking patients. Dr. Puleo is also learning two languages, Tamil and Telugu, in order to communicate with the Indian families he serves. His open-minded communication strategy has contributed to the high childhood vaccination coverage rates within his practice. ❖

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Kenath Shamir, MD, honored as 2016 Community Clinician of the Year by the Bristol South District Medical Society

FALL RIVER, MASS. – **KENATH SHAMIR, MD**, a member of the Southcoast Physicians Group, has been selected by his peers of the Bristol South District Medical Society as the 2016 Community Clinician of the Year, an honor recognizing his professionalism and contributions as a physician.

Board certified in internal medicine, Dr. Shamir served as chairman of the Department of Internal Medicine at Charlton Memorial Hospital from 1999 to 2003, and has been chairman of the Pharmacy and Therapeutics Committee since 1999. He has been a primary care physician with Truesdale Health since 1990, and a member of the Truesdale Clinic Board of Directors since 1998.

Dr. Shamir joined the Massachusetts Medical Society in 1983 and has served the organization in several capacities. Since 2006, he has been a member of the Society's governing body, its House of Delegates, and has served on its District Leadership Council. He is currently a member of the Board of Trustees.

Dr. Shamir received a combined Bachelor of Arts/Medical Degree from Boston University's six-year program in 1987.

The Community Clinician of the Year award was established in 1998 by the Massachusetts Medical Society to recognize a physician from each of the Society's 20 district medical societies and recognizes member physicians for their significant contributions to their patients and the community. ❖

Southcoast Health named one of Healthgrades 2016 Patient Safety Excellence Award™ Recipients

Distinction places Southcoast Health among the top 10 percent of hospitals in the U.S.

NEW BEDFORD, MASS. — Southcoast Health recently announced that it has achieved the Healthgrades 2016 Patient Safety Excellence Award, a designation that recognizes superior performance in hospitals that have prevented the occurrence of serious, potentially avoidable complications for patients during hospital stays. The distinction places Southcoast Health among the top 10 percent of hospitals in the nation for its excellent performance as evaluated by Healthgrades.

Southcoast Health was listed as one of just eight hospitals in Massachusetts to receive the award in a new study released by Healthgrades, the leading online resource for comprehensive information about physicians and hospitals.

During the study period (2012–2014), Healthgrades 2016 Patient Safety Excellence Award recipient hospitals performed with excellence in providing safety for patients in the Medicare population, as measured by objective outcomes (risk-adjusted patient safety indicator rates) for 13 patient safety indicators defined by the Agency for Healthcare Research and Quality (AHRQ). ❖

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Appointments

David Wazer, MD, named director of the Lifespan Comprehensive Cancer Center

Internationally recognized expert will lead cancer services across three hospitals

PROVIDENCE – **DAVID E. WAZER, MD**, has been appointed director of the Lifespan Comprehensive Cancer Center (CCC). In this role, Wazer will oversee cancer services across Rhode Island Hospital, The Miriam Hospital and Newport Hospital to deepen Lifespan's capabilities in cancer care, broaden its research, and ensure the highest standards of care and support for patients and families.

Wazer, an internationally recognized expert in radiation oncology, has served as interim director of the CCC since November 2014. During that time, Wazer has been integral to advancing a proposed partnership between Lifespan and the Dana-Farber Cancer Institute. That partnership is yet another approach to ensuring access to the best possible care for patients through every phase of their cancer treatment and recovery.

Wazer will continue in his role as radiation oncologist-in-chief at Rhode Island Hospital, The Miriam Hospital and Newport Hospital. He also serves as professor and chairman of the department of radiation oncology at The Warren Alpert Medical School of Brown University.

Wazer has published more than 250 scientific articles and authored several books. In addition, he is editor-in-chief of the *American Journal of Clinical Oncology* and serves as associate editor of the journals *Brachytherapy, Frontiers in Oncology* and *Breast Diseases: a Yearbook Quarterly*. Wazer serves on the board of directors and as immediate past-president of the American Brachytherapy Society and as a member of the Radiation Oncology Commission for the American College of Radiology. He has also held a number of faculty and research positions at Tufts University, Brown University and the Massachusetts Institute of Technology. He is a fellow of the American Society for Radiation Oncology, the American College of Radiology, and the American College of Radiation Oncology, and is a member of numerous societies, including the Radiation Research Society, the American Society of Clinical Oncology, the American Radium Society, and the American Association for the Advancement of Science. Wazer earned his medical degree (with honors) from the New York University School of Medicine, and completed his residencies in internal medicine at Brown University and radiation oncology at Tufts University. ❖

Sidney Migliori, MD, joins Ortho Rhode Island-South County Orthopedics

WAKEFIELD – **SIDNEY MIGLIORI, MD**, has joined Ortho Rhode Island-South County Orthopedics. As an American Board of Orthopedic Surgery-certified surgeon, Dr. Migliori provides sports-related surgeries for shoulders, knees, and rotator cuffs, and age-related replacement surgeries for shoulders, knees, and hips.

Dr. Migliori began medical school and completed her orthopedics residency at the University of Minnesota. Upon graduation she worked at a Level 1 Trauma hospital in St. Paul, MN.

When asked why she chose orthopedics, Dr. Migliori said, "I can have an immediate impact on a patient's life. I'm able to make people functional again and restore their quality of life, which I really enjoy."

Dr. Migliori and her family moved to Rhode Island where she began working at a group practice of three in North Providence, before joining a group in Cranston where she practiced for 15 years.

When she isn't at the office, Dr. Migliori is usually enjoying the outdoors with her husband and three children. She enjoys skiing, running and paddle boarding. She also covers the Providence College women's home hockey games. ❖

Paul J. Adler named Senior Vice President and General Counsel at Lifespan

PROVIDENCE – **PAUL J. ADLER** has been named Lifespan's new Senior Vice President and General Counsel, effective June 1, 2016. Adler, currently Lifespan's Deputy General Counsel, will succeed Kenneth E. Arnold, who will retire in June. Adler's appointment follows a nationwide search.

Adler has been with Lifespan for more than 20 years. In his new role, he will be responsible for all aspects of the health system's legal affairs, including leading Lifespan's legal team, overseeing all outside legal services, legal defense and strategies, governance, business review, labor law, regulatory corporate law, and advising on compliance and physician relations.

Adler will serve on Lifespan's senior leadership team, reporting directly to Lifespan President and CEO Timothy J. Babineau, MD.

A graduate of Duke University and the Boston University School of Law, Adler started his career at a medium-sized law firm in Providence concentrating in health care law and municipal finance law. He is a member of the American Health Lawyers Association. Adler also serves on the Board of Trustees of Moses Brown School and on the Trustees Committee. ❖

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Appointments

Elisabeth D. Howard, PhD, named director of nurse midwifery at W&I

PROVIDENCE – **ELISABETH D. HOWARD, PhD, CNM, FACNM**, of Warwick, has been named the director of nurse midwifery in the Department of Obstetrics and Gynecology at Women & Infants Hospital of Rhode Island and The Warren Alpert Medical School of Brown University.

Dr. Howard joined the faculty and has been a clinical teaching associate at Women & Infants and Brown since 2004. She was promoted to assistant professor (clinical) in 2008. A graduate of William Smith College in Geneva, NY, Howard completed her midwifery training at the Yale University School of Nursing and her PhD in nursing science from Vanderbilt University School of Nursing. She has served as interim director of midwifery since 2014.

"Dr. Howard is a highly valued member of our department and is recognized for her clinical experience, her national leadership, her dedication to teaching, and her effective, collaborative leadership style," said **MAUREEN G. PHIPPS, MD, MPH**, chief of obstetrics and gynecology at Women & Infants. ❖

Dr. Diane Lipscombe named director of Brown Institute for Brain Science

PROVIDENCE — Brown University has named **DIANE LIPSCOMBE, PhD**, professor of neuroscience, to lead the Brown Institute for Brain Science in its multidisciplinary mission of advancing research, technology and education in areas ranging from basic science to the clinic. A scientist, researcher and award-winning teacher, Lipscombe has served as interim director of BIBS since January 2015.

BIBS comprises a community of 120 scholars at the University and in its affiliated hospitals. Multidisciplinary by nature, the Institute includes not only psychiatrists, neuroscientists, neurologists and psychologists, but also faculty members in engineering, biology, mathematics and the humanities. Lipscombe will oversee day-to-day operations, provide intellectual leadership for the community of scholars and represent the Institute around Brown and the world.

"Dr. Lipscombe is an exceptional scientist, committed educator and proven effective, collaborative leader," said Provost **RICHARD M. LOCKE**. "Since arriving at Brown in the department of neuroscience in 1990, she has won numerous teaching awards, directed graduate study in neuroscience, and consistently secured funding to conduct research on the basic properties of calcium channels of neurons and their role in migraines, pain and other conditions.

"The Lipscombe laboratory is internationally recognized for its research, has shared hundreds of research materials developed at Brown with investigators across the globe, and collaborates with colleagues both within and outside of Brown," Locke added.

In an announcement of Lipscombe's appointment to the campus community, Locke credited her with achieving significant gains for BIBS during her 15 months as interim director. She has helped to lead the development of a strategic plan, for example, and to raise $6 million in philanthropic giving.

Lipscombe said she is excited to continue her work on behalf of brain science research and teaching at Brown.

"I'm honored to have been asked to lead the Institute," Lipcscombe said. "There is no better place to be a brain scientist than right here at Brown. BIBS faculty, basic and clinical scientists, students and staff are outstanding and highly collaborative. The integrative research and scholarship that characterizes BIBS foster innovation, creativity and discovery. I'm thrilled to be part of the next exciting decade of brain science at Brown."

Lipscombe's research centers on the expression, regulation and function of voltage-gated calcium ion channels in different regions of the nervous system, with a specific focus on their role in chronic pain and psychiatric disorders. She earned a bachelor's degree and PhD in pharmacology from University College London. Before joining Brown, she studied as a postdoctoral associate at Yale School of Medicine and Stanford University's medical school. ❖

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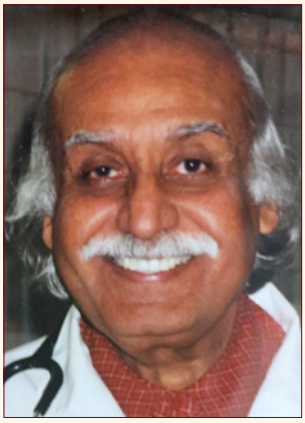
Obituaries

CHARLES FRANCIS ALLENDORF, MD, 73, of Warwick passed away on April 19, 2016 at Rhode Island Hospital. He was the beloved husband for more than 46 years of Elaine M. (Erickson) Allendorf.

Dr. Allendorf graduated from Georgetown University and it's School of Medicine and was board certified in internal medicine. He served as a physician in the United States Navy, attaining the rank of Lt. Commander during the Vietnam War Era. He practiced internal and occupational medicine in Rhode Island and Massachusetts for 40 years.

He was a communicant of Annunciation Greek Orthodox Church in Cranston. Gifts in his memory to the National Kidney Foundation, 85 Astor Ave., Suite 2, Norwood, MA 02062 would be appreciated. ❖

DR. MOHAMMAD A. KHAN unexpectedly passed away at his home on Saturday, April 9, 2016. He was the devoted husband of Sheila Khan and loving father of A. Edward Khan, Alam Khan, Saleem Khan and his wife Meredith, and Kamran Khan and his wife Erin; and doting grandfather to Alayna, Madison, Silas, Quentin and Chace.



Dr. Khan was born in India, and later moved to Pakistan when the country was newly formed. He was a graduate of the prestigious King Edward Medical College and moved to the United States in 1959 to complete his medical training at Harvard Medical School and also to fully embrace the freedoms of America, of which he always stated were greater than what he ever imagined.

Along with Dr. Myron Stein, Dr. Khan established the pulmonary and respiratory therapy departments in several Massachusetts and Rhode Island hospitals in the 1960s before settling down with his growing family and entering private practice in Pawtucket, RI, with an affiliation with Memorial Hospital of Rhode Island for over 40 years.

He was also a long-term clinical faculty on the Brown University Medical School teaching staff. Famous for spending inordinate amounts of time with each of his patients, Dr. Khan was also notorious for equally long wait-times in his waiting room. But, as Dr. Khan was always loyal to his patients, practicing medicine right until the end, his patients were always loyal to him, in return.

A private burial was held at the Seekonk Town Cemetery. A memorial will be held in Dr. Khan's honor at the Ramada Inn in Seekonk, MA, at 2 pm on Sunday, May 15, 2016. Family, friends, patients, colleagues, and all else are invited. Please RSVP by May 5 at MAKMemorial@gmail.com or call 508-951-9038. ❖

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The graduates of the first medical school at Brown: 1811–1826

MARY KORR
RIMJ MANAGING EDITOR

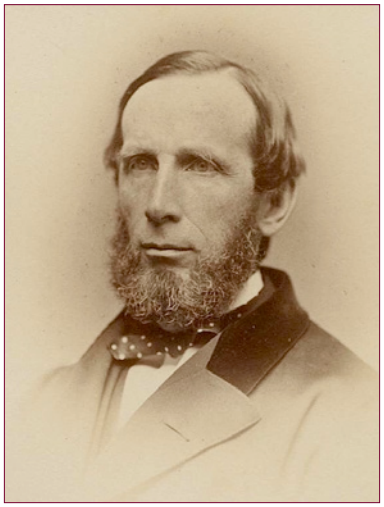
On March 22, 1881, **DR. CHARLES W. PARSONS** (1823–1893) read a historical tract on the first medical school at Brown University to the Rhode Island Historical Society, which commissioned its publication. The publisher's note stated that "hitherto no history of the Medical Department which formerly existed in Brown University has been written." The tract identifies Dr. Parsons as a professor of physiology in Brown.

The following is a brief timeline of the medical school according to Dr. Parsons:

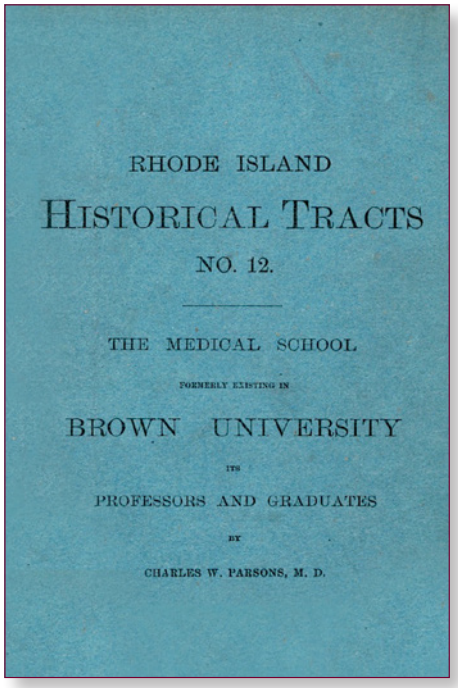
- The Medical Dept. of Brown dates from 1811
- Only 2 medical schools existed in New England at the time, Harvard and Dartmouth.
- Brown appointed three faculty members in Sept. 1811: **Dr. William Ingalls**, anatomy and surgery; **Dr. Solomon Drowne,** materia medica and botany; and **Dr. William Corliss Bowen**, 'chymistry.' Unfortunately, Dr. Bowen experimented with "bleaching liquor with the view of introducing a business…his early death [April 1815] is attributed to these experiments, and to inhaling chorline or strong acid vapors." He was 30 years old.

According to Dr. Parsons, the school "fell rather suddenly." He writes that in 1826 the Rev. Francis Wayland, Jr. of Boston assumed the Brown presidency. The following March the Brown Corporation passed a resolution requiring professors, tutors and officers to occupy a room at the college and devote themselves to instruction fulltime during the semesters or not receive a salary.

"It was impossible that a medical school should continue under these premises," concluded Dr. Parsons. Physicians could not put their practices on hold during the academic calendar and live on campus.



Dr. Charles W. Parsons was professor of physiology at Brown, one of the original members of the Providence Medical Association and from 1860–1862 president of the Rhode Island Medical Association.



RHODE ISLAND
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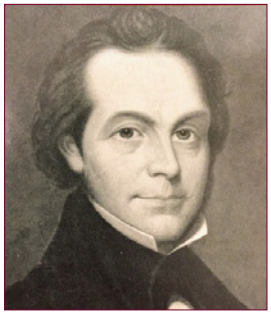
NO. 12.

THE MEDICAL SCHOOL
FORMERLY EXISTING IN
BROWN UNIVERSITY
ITS
PROFESSORS AND GRADUATES
BY
CHARLES W. PARSONS, M. D.

Elisha Bartlett, eminent graduate

The last class contained its most distinguished graduate, **ELISHA BARTLETT** (1804–1855) wrote Dr. Parsons. Bartlett was a native of Smithfield, Rhode Island. Upon graduation from Brown Medical School in 1826, he spent a year in Paris and then returned and opened a practice in Lowell, Mass. He became the first mayor of Lowell at the age of 32 and served two terms. He was elected to the Massachusetts legislature in 1841.



BROWN

Elisha Bartlett, MD, was considered by many to be the most eminent graduate of the first medical program at Brown.

He held positions at nine medical schools and became well-known for his book on fevers, published in 1841, which "established the distinction between the typhoid fever in New England and the more malignant and contagious typhus, or ship fever, bred from famine and overcrowding and dirt."

Dr. Bartlett died at his home in Woonsocket at the age of 51 from what was described as a "neuralgic" condition that resulted in paralysis. He spent his final year writing poetry and verse. His final gift to friends was a compilation of verses called *Simple Settings in Verse, for Six Portraits and Pictures from Mr. Dickens's Gallery* which he sent out on Christmas Day 1854, stating that the "inditing of them has been to me a most pleasant occupation – I cannot call it a labor – and has helped to while away and fill up many an hour that would otherwise have been weary…and if they serve to recall to you, pleasantly, him who sends them, I shall be more than content, and they will have been twice blest to me…"

It would be a century and a half before Brown medical school alumni joined the ranks of their illustrious fellow graduates of yesteryear. ❖

MEDICAL GRADUATES OF BROWN UNIVERSITY.

[Under *each year*, the names of those whose degrees are known or presumed to have been *honorary*, or *ad eundem*, are *printed in italics*.]

1804.

Solomon Drowne (A. B., 1773).

1812.

Pardon Bowen (A. B., 1775).
Levi Wheaton (A. B., 1782).

1813.

William Corlis Bowen (M. D., Edinburgh, 1807).
Charles Cotton (A. B., Harvard, 1808).
William Ingalls (A. B., Harvard, 1790).
John Mackie (A. B., 1800).

1814.

Benjamin Austin.
Micaja Hawkes.
Abner Phelps.

1815.

Thomas Manning Barrows.
John Mathewson Eddy.
James Mann (A. B., Harvard, 1776).

1816.

William Birchmore.
Charles Dix.
Artemas Johnson (A. B., 1808).
Samuel Allen Kingsbury.
David March (A. B., 1811).
John McGore.
Caleb Miller.
Frederic Augustus Parker.
Samuel Bugbee (A. B., 1802).

1817.

William Henry Allen (A. B., 1811).
Goodwin Allenton (A. B., 1814).
George Aldrich Bolton.
Thomas Burr.
Andrew Mackie (A. B., 1814).
Joseph Mulliken (A. B., Dartmouth, 1802).
John Phillips.
Samuel Atwood Shurtleff.
Nathaniel Miller.

1818.

Tyler Briggs.
John Richardson.
Jerome Van Crowninshield Smith.
John Atherton Wadsworth (A. B., 1814).
Shimoleth Stow Whipple.
Ariel Mann.

1819.

Jason Hawes Archer (A. B., 1816).
Elisha Harding.
Royal Tyler.
Abijah Draper (A. B., 1797.)
Lemuel Kollock (A. B., 1786).

1820.

Lucius Allen.
John Kingsbury Briggs.
Isaac B. Hovey.
Silas James.
John Lummus.
Alden March.
Lewis Leprilete Miller, (A. B., 1817).
Cyrus Morton.
William Peck.
William Johns.

1821.

John Stratton Champney.
Obadiah Elkins Durgin.
Gardner Mason Peck.
David Plummer.
Caleb Hopkins Snow (A. B., 1813).
John Cook Tibbitts.
Jonathan Ware.
Jeremiah Williams.
William Blanding (A B., 1801).
Caleb Fiske.
David King (A. B., 1796).

1822.

George Washington Bliss.
George William Russell Corlis (A. B., 1808).
Henry Francis.
Jacob Fuller.
Asa Green.
Caleb Greenough.
Dyer Hughes.
Daniel Ingalls.
George Willard (A. B., 1808).
Alfred Wood.

1823.

Samuel Tubbs Angier (A. B., 1818).
George Capron.
Ezra Bartlett Gale.
John White.
Thomas Oliver Hunt Carpenter.
Abiel Hall.

1824.

William Henry Bradley.
Hiram Bucklin.
Draper Carpenter (A. B., 1821).
Jonathan Dearborn.
Amory Gale.
Johnson Gardner.
John Gregory Needham (A. B., 1821).
Warren Partridge.
Menzies Rayner Randall.
Henry Willard.
Elias Frost (A. B., 1804).
Ashbel Willard.

1825.

Hiram Allen.
Hezekiah Eldridge.
Joseph Jairus Fales (A. B., 1820).
Levi A. Hannaford.
Robert Eddy Hemenway.
William Hutchins.
Thomas Miner.
Thomas Paine Moore.
Levi Rawson.
Morrill Robinson.
Philemon Stacy.
Samuel Gould Stanley.
Freeman Thompson.
John Jeffries (A. B., Harvard, 1815).
Usher Parsons (M. D., Harvard, 1818).
Edward Reynolds (A. B., Harvard, 1811).
Daniel Thurber.

1826.

Elisha Bartlett.
Ezra Leonard (A. B., 1801).
Benjamin Norris (A. B., 1823).
John Rose.
John Scoville.
Thomas Bucklin.
John Green (A. B., 1804).

1827.

William Stillman Stanley (A. B , 1825).
Francis Levison Wheaton.
Elihu White (A. B., 1824).
Jeremiah Fisher Ames (M. D., Harvard, 1827).

The following graduates of the College are said to have received the degree of M. D., but I do not know where or when. If either of them received the title at Brown, I can find no record of it.

	A. B.		A. B.
Elisha Pope Fearing, -	1807	George Gary, -	1820
Luther Metcalf Harris,	1811	Joseph Warren Fearing,	1823
Thomas Bump, -	1814	John Waters Tenney, -	1823

Eliphalet Williams Hervey, 1824.