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Case Report: Unusual Mechanism for Superior Mesenteric Artery Syndrome after Scoliosis Surgery

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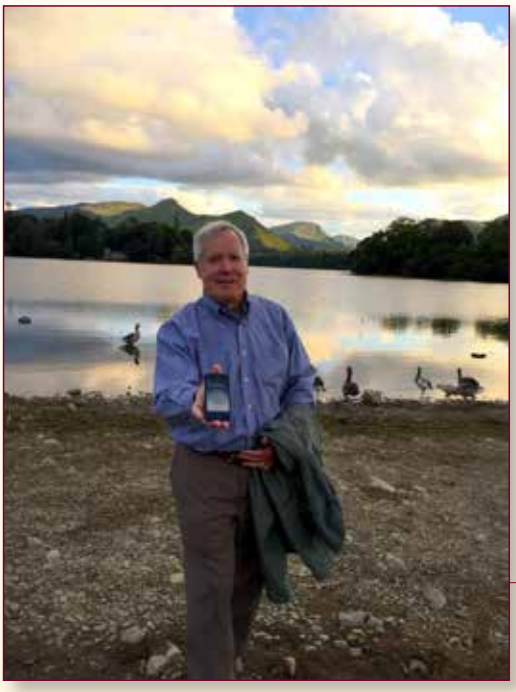

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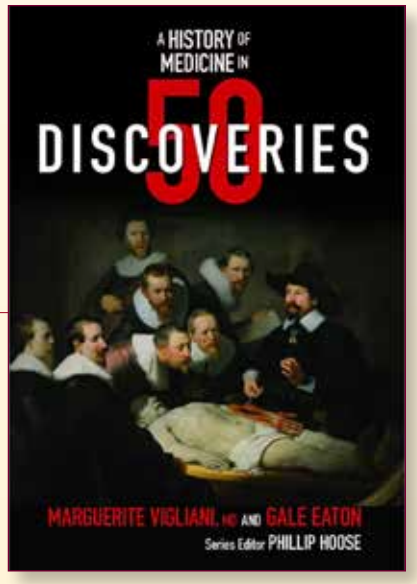

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IN THE NEWS

PEOPLE

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Doctors falling down on the job

JOSEPH H. FRIEDMAN, MD
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I recently was waiting in the parking lot of a supermarket just outside a large retirement community, and watched people walk. It provided an amazing display of senile gait disorders. Over the ten minutes there I found that the majority of people walked abnormally, and these were elderly people who had driven to the market. I wished that I had had my video camera and a tripod, and decided that my smart phone, although adequate, was suboptimal and that the issue of informed consent would be problematic.

Falls are a major public health problem for the elderly. The numbers for incidence, morbidity, mortality and cost are staggering. One third of people over the age of 65 fall each year and only half tell their doctors. Twenty percent of these falls result in a serious injury, so that over 700,000 people are hospitalized each year due to a fall. Over 2.5 million elderly are treated in a hospital emergency department, and over a quarter of a million older people require hip surgery due to falls. The direct costs of falls (not counting the financial losses to family and friends, or to the patient, if still working) are over 34 *billion* dollars each year. Since falling once doubles the chances of falling again, it obviously makes sense for doctors to ask about falls in order to reduce the risk of another. To increase the likelihood that this occurs, doctors are mandated by Medicare to explicitly ask anyone over 65 if they've fallen in the past year. They are penalized if they don't document this in the chart. However, the rules do not require that anything be done about it. There is no requirement to assess gait or refer to someone who might be expert in gait evaluation. Or to simply refer for physical therapy.

Yet it's a rare primary care doctor, or any other doctor, for that matter, who pays attention to this, in the sense of trying to *prevent* the first fall. In a recent study at a major, top-flight American university medical center, in which charts were reviewed to see how cancer specialists evaluated elder cancer patients who had fallen. Only 10% had their falls documented and only 20% had their gait assessed. This is, of course, a population at high risk for complications from falls. This is about the same as occurs in primary care practices as well. Of course, specialists, like oncologists, probably assume that gait is a primary care concern.

I asked 25 older family members or friends of patients I was evaluating whether their primary care doctor had ever watched them walk as part of their exam. Only one could recall this happening. A new patient, a retired elderly physician, saw me recently to evaluate his walking problem. He noted that he made the appointment after he heard me give a talk on gait abnormalities in the elderly and how primary care doctors rarely evaluated walking. My patient told me that he extended my informal study to include his assisted living center, where everyone was over 65, and found that none of the patients had been watched walking by their PCP.

A new patient, a retired elderly physician, saw me recently to evaluate his walking problem. He noted that he made the appointment after he heard me give a talk on gait abnormalities in the elderly and how primary care doctors rarely evaluated walking.

The causes of falls are multitudinous, and may involve one or more of the many systems that give us mobility. These span the body from the toes, with arthritis, deformities, ulcers, neuropathy to the top of the brain, with a variety of brain disorders. In between are disorders of skin, joints, bones, muscles, nerves, spinal cord, inner ear, vision, brain and psyche.

Most gait problems are probably not fixable, but some are. Physical, balance and vestibular therapy may be quite effective in reducing fall rates, and some gait problems may be improved dramatically, as sometimes occurs in people who are diagnosed with Parkinson's disease when placed on

appropriate medications.

Many improve miraculously when certain medications are stopped. Learning to use an assistive device such as a cane or walker, rather than avoiding it, can save hips and nursing home placement.

The most basic principle of prevention is prevention. It is best done *before* the first fall, although gait assessment at any time is better than ignoring it all the time. In the elderly a "routine" examination is more likely to turn up a gait abnormality than it is to reveal a new heart, lung or abdominal problem. PCP's need to evaluate gait in the elderly as part of their routine examination. As Yogi said, "You can see a lot just by looking." The goal is to identify the problem as existing, not necessarily diagnosing the cause, and then figure out how to reduce the risk of a fall. ❖

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

Disclosures on website

Erratum

R I Med J (2013). 2017 Apr 3;100(4):33-36.

ERRATUM: Unexpected Serious Cardiac Arrhythmias in the Setting of Loperamide Abuse.
Rasla S[1], St Amand A[2], Garas MK[3], El Meligy A[1], Minami T[4]

Corrected to: (Authors added: [2,3,6])
Rasla S[1], Parikh P[2], Hoffmeister P[3], St Amand A[4], Garas MK[5], El Meligy A[1], Minami T[6], Shah NR[2]

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PUBLISHED ERRATUM: R I Med J (2013). 2017 Aug 1;100(8):5.
Abstract: Loperamide (Imodium) is a non-prescription opioid receptor agonist available over-the-counter for the treatment of diarrhea. When ingested in excessive doses, loperamide can penetrate the blood-brain barrier and is reported to produce euphoria, central nervous system and respiratory depression, and cardiotoxicity. There is an emerging trend in its use among drug abusers for its euphoric effects or for self-treatment of opioid withdrawal. We report a case of ventricular dysrhythmias associated with loperamide abuse in a 28-year-old man who substituted loperamide for the opioids that he used to abuse. [Full article available at http://rimed.org/rimedicaljournal-2017-04.asp, free with no login].
Keywords: Arrhythmias; Lopermide; QTc prolongation; Ventricular tachycardia; opioid abuse
PMID:28375418

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The Core of Medical Ethics

HERBERT RAKATANSKY, MD

I WAS TAUGHT IN MEDICAL school that rich or poor, law abiding or criminal, all ill persons should receive treatment.

Our country is in the midst of a heated debate about the degree to which government should regulate and finance our health-care system. If government defines the relationship of its citizens to the health-care system, governmental values would determine who gets care.

But physicians have intrinsic ethical obligations that transcend the standards imposed by government and other belief systems.

In some countries the values of a specific religion or political system define the values of the health-care system. And these values may clash with the ethical responsibilities of physicians.

For example, physicians recognize informed consent as a fundamental ethical value rather than a policy subject to governmental policy that might change.

In the United States (US), our profession's moral guidelines are codified in the AMA Code of Medical Ethics, a uniquely physician-developed, broad-based set of ethical standards for our profession. Other ethics' guidelines authored by professional medical organizations also set standards.

The "Principles of Medical Ethics," the bedrock of the AMA Code, clearly states the core ethical value: "A physician shall support access to medical care for all persons." Ignoring this imperative puts us on a very slippery slope.

With a few exceptions ("do no harm" espoused by Hippocrates), medical ethics as an independent value system is a recent development. The standards of professional medical behavior in the 19th century generally were codes of etiquette for doctors, rather than values designed to protect patients. Even the first AMA Code (1847) was of this vein.

At the bottom of the slippery slope lie perverted governmental values that became legal medical ethical standards during the Nazi regime (1933–1945).

Interestingly, in 1931 the German government (not the German medical profession) issued "guidelines for human experiments and therapy" that included informed consent and protection of vulnerable populations. Those who believed in eugenics, forced sterilization, etc. received no governmental support. When Hitler came to power in 1933 everything changed.

The Nazi view of humanity considered the entire German population as one organism (the "Volk"). The Volk was defined as white and Aryan. Jews, gypsies, disabled and chronically ill people and other minorities were considered to be diseased parts of the whole organism. Nazi law required reporting of persons with hereditary disease. Elimination of all non-Aryans by forced sterilization and extermination were judged by the government to be therapeutic for the Volk and therefore ethical. This belief infected the German medical community and was taught in all German medical schools as part of a standardized national ethics course. There was little if any resistance by the German medical establishment.

In fact, Dr. Rudolph Ramm, a dedicated Nazi anti-Semite, wrote a textbook of ethics reflecting this viewpoint. Ramm's book emphasized informed consent, the right to a consultation and the use of specialists when appropriate, but only for pure Aryans. And he endorsed the 1931 guidelines, but only for Aryans. The book was a best seller and was reprinted several times. Dr. Ramm was captured, tried and executed by the Soviets in 1945. Twenty-three Nazi doctors used this viewpoint as a defense during their trial in Nuremberg in 1946–1947. Sixteen were convicted. Seven were executed.

Also, consider the German doctors

The "Principles of Medical Ethics," the bedrock of the AMA Code, clearly states the core ethical value: "A physician shall support access to medical care for all persons." Ignoring this imperative puts us on a very slippery slope.

who developed and prescribed Pervitin, an amphetamine, to German troops *en masse*. Did you ever wonder how the blitzkriegs that overran Western Europe so rapidly were accomplished? The German troops were able to stay awake and fight for three days continuously because they were on drugs (chemical warfare in reverse).

There are other examples of societal and governmental values influencing and sometimes defining medical ethics. Stalinist Russia considered political dissidents to be mentally ill, and Soviet psychiatrists committed them to hospitals.

Closer to home, consider the doctors who have participated in executions and state-sponsored torture. Their victims were not offered the opportunity to give informed consent. (They certainly would have refused.) Forced sterilization of "misfits" by doctors in the US started in 1907 in Indiana and persisted until 1981 in Oregon. The indigent black subjects of the Tuskegee experiments were denied penicillin when it was proven effective. These prisoners, torture victims, "misfits" with hereditary and other "defects" and experimental participants were considered to be inferior parts of our society, not worthy of the protections contemporary medical ethics afforded to others (sound familiar?).

Governmental policies may, *de facto*, withhold medical care from some groups. The primary mechanism is financial. The vast majority of patients who do not get treatment do not get it because they cannot afford it; 11.2% of the non-elderly were uninsured in 2015: 45% were white, 32% were Hispanic and 15% were black. Policies that perpetuate poverty, discrimination and lack of literacy create groups of people without access to health.

Bias in the political arena (based on race, gender, sexual orientation or identification and other issues) may influence health care. For example: the Senate task force to rewrite the health-care law has no women members. This is a political issue but, since it may affect the medical care of women, it also is a medical issue.

Another example: In 2010, Medicaid financed 48% of all births in the US. That figure is likely higher now. If legislation narrows Medicaid coverage, the group of women with no health-care coverage during their child-bearing years will enlarge. And this will happen in a country with the highest maternal death rate in the developed world.

Governmental creation of groups of persons who, as a result of focused policies, or *de facto* as a consequence of other policies, are denied medical care is an ethical issue for doctors today, as it has been historically.

It is critical that we practice medicine in concert with our own professional ethics' standards, not those imposed by third parties, especially the government. This requires not only diligence when treating individuals but also active involvement of individuals and medical organizations in the democratic process when policies (current or proposed) designate specific groups of persons who are or will be denied medical care. ❖

Author

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Kilmartin's castigation of physicians, medical society regarding warrantless searches into PDMP demeans AG's office

Editor's note: Excerpts of the following Letter to the Editor from Dr. Michael E. Migliori appeared in the Providence Journal recently.

To the Editor:

I read with disgust Attorney General Peter F. Kilmartin's comments about the Rhode Island Medical Society's objection to the bill [now signed into law] that would allow warrantless searches in the Prescription Drug Monitoring Program (PDMP), calling us disingenuous and liars, and suggesting doctors have something to hide. He further stated in an article in the Providence Journal that "Doctors helped create the opioid problem; now they need to be part of the solution and support this bill."

http://www.providencejournal.com/news/20170717/advocates-urge-veto-of-bill-to-open-prescription-drug-database-for-law-enforcement

The AG is tacitly saying that all physicians are criminal; he just hasn't caught them yet. That would justify violating protections from unwarranted searches. His attack on physicians and the medical society is demeaning and personally insulting. I am a past president of the medical society and have been chair of its legislative committee for close to 17 years. Just about any legislator can tell you that the vast majority of what we do at the State House is for the benefit of our patients, including keeping the government out of the exam room and protecting patients' privacy. Our opposition to this legislation is no exception.

Doctors and other prescribers do share some responsibility for making narcotics easily available. Up until a few years ago, medical providers were being penalized for not doing enough to alleviate pain. Because of pressure by the federal government, insurers, and state legislatures to address pain, physicians, in retrospect, did overprescribe. As the opioid epidemic has grown, however, RI prescribers have stepped up and reduced the amount of narcotic prescriptions by 24%, the second highest reduction in the country. The Rhode Island Medical Society worked with the Department of Health to craft the PDMP to give prescribers a tool to see if patients were getting controlled substance prescriptions filled elsewhere, and continues to work with the General Assembly to create programs that educate prescribers on safe prescribing and reducing drug diversion. As a result of the reduction in prescription drugs being diverted in RI, opioid users are turning to illicit narcotics. The vast majority of overdose deaths in this state are from illicit drugs, especially drugs laced with Fentanyl. So even with the reduction in medical provider contribution to the problem, we don't have a corresponding reduction in the demand, and that is the sad part.

Rhode Island's medical providers have already become "part of the solution" and done more than most to reduce the availability of prescription narcotics. What hasn't been done is the hard work of reducing demand. This requires infrastructure, destigmatization of addiction, alternatives to incarceration, mental health services, and, most importantly, money. When addicts cannot get prescription drugs, the get illicit drugs, and they die from that, but our leaders won't tackle that because it costs too much. They pat themselves on the back because they've done something meaningless while Rome burns.

The AG thinks that we can solve the opioid crisis by passing laws that target prescribers and violates privacy. Allowing access to private medical information in the PDMP (which includes not only the identity of the doctor prescribing the medication but also the name, address, and the narcotic, anti-anxiety, ADHD, and every other controlled substance prescription history of patients) without a judicial review is wrong. The so-called protections in this bill make the Director of Health the judge, which is not fair to the Director, physicians, or patients. The Director already has access to the database, and knows who is prescribing what. She already has power to sanction abusers. I see no reason that we should allow anyone else to bypass judicial review to access sensitive and confidential information.

AG Kilmartin, I take personal offense at your characterization of physicians and the Rhode Island Medical Society. I know what we stand for and why we protect our patients. We may disagree with each other on the merits of this bill, but for you to publicly castigate us as liars and criminals is beneath the dignity of your office.

Michael E. Migliori, MD, FACS
Past President
Chair, Public Laws Committee
Rhode Island Medical Society
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"3 Good Things" in Recovery

SAMUEL M. MILLER, ScB; ROHAN KATIPALLY, ScB

"How do I know you're not going to use again?" a woman reads in a text message from her 14-year-old daughter. The woman struggles with her daughter still worrying about her relapsing one day, erasing the goodwill accumulated from ten years of being clean. "Ugh, kids are just so smart these days!" she says with a smile.

Recovery is a difficult process that involves not only the individual but also family and friends. Further complicating addiction is the co-existence of mental health illness. Nationally, 48% of people suffering from heroin addiction also suffer from depression.[1] To address the difficulty that mental illness poses to those in recovery, we piloted a mindfulness and positive-psychology intervention titled "3 Good Things" as part of a medical school course in population health. Participants were asked to write three good things that happened to them every week and to describe how each made them feel. These "three good things" were then discussed with a counselor on a monthly basis. Originally studied by Seligman et al. in 2005, this intervention was found to lessen depressive symptoms and improve happiness in a general population.[2] We hoped to find similar results with methadone patients at the Discovery House in Woonsocket, RI. Discovery House provides outpatient treatment and counseling for a variety of addictions with the primary goal of promoting holistic recovery.

We were drawn to an intervention that would not only address mental health but also operate within the context of recovery as a process. "3 Good Things" could be done in any setting at any time, making it both a realistic and flexible intervention. Furthermore, the focus on positivity is an especially useful counseling paradigm as it relies on positive self-reflection more than just remembering good things that have happened recently. We partnered with the Discovery House specifically because of its strong counseling program. These counselors, who have established longitudinal relationships with their clients, were able to facilitate reflection on the significance of these journal entries and ultimately, solidify the impact of this intervention.

After meeting with Dr. Andrew Stone, the medical director, and Jennifer Camp, clinical services supervisor, we began the intervention at Discovery House in October 2016. On a weekly basis for twelve weeks, participants completed the "3 Good Things" journaling. During their monthly counseling sessions, patients would review their entries with their counselors.

After three months, we met with the counselors and patients to gather feedback. This program appeared to benefit participants in various ways, some of which we did not entirely expect. By structuring enrollment and check-ins with counselors as the primary point of contact, discussion of journal entries and gratitude served to enrich the patient-counselor relationship. Especially for new patients at Discovery House, this helped engender that initial connection. Furthermore, counselors noticed that journal entries helped their patients reflect on the "value of sobriety and family" and "appreciate the 'now'."

One patient's mom decided to enter his life again after he began his recovery. Getting into his car reflexively triggers him to think about going to a friend's home to use, but he took his entry about his mom being back in his life and wrote it on a post-it note on his dashboard. This helps him remember the tangible positives of being in recovery and how he doesn't want to lose his relationship with his mother again.

Another woman wrote that she was "reminded of how grateful I am to be a mother of two daughters," while another participant wrote, "It really opened my eyes and showed me how far I've come in the past five months of my recovery."

The reflective nature of the intervention may help participants obtain improved insight regarding their moods, their paths to recovery, and how the choices they make affect that. Making the connection between positive experiences and a period of sobriety may also help combat the manifestation of mood disorders in recovery.

Moving forward, we plan to focus on patients who are just beginning their relationship with Discovery House.

Counselors believe that the intervention will be especially helpful for these patients as it will help to establish and strengthen the counselor-patient relationship. In addition, we will suggest making three journal entries weekly for four weeks as opposed to the weekly entries for twelve weeks. We imagine this more condensed exposure will help new patients to acclimate to Discovery House and give them more to talk about at their first few counseling sessions. We also hope that the shorter intervention will be easier for patients to complete.

Some challenges we faced were more intrinsic to positive psychology in general. During one of the group sessions, a patient asked, "What if I don't have any good things to talk about?" This was an important question for us to consider because it encapsulated the purpose of the intervention itself. In many ways, "3 Good Things" is not just about writing down happy thoughts, but also about trying to reflect optimistically and positively about life in general.

This intervention reminded us that recovery in opiate and other addictions is truly a multifactorial process, often complicated by coexisting depression or other mental illness. When counselors encourage patients to reflect on their experiences in positive ways, it not only enriches patient-counselor relationships, but also gives patients a cognitive tool-set to use when they are on their own.

As we begin our final year of medical school and ultimately our lives as physicians, we hope to continue to bring the practice of gratitude to our patients not only to promote physical healing but also to encourage emotional health and general happiness. ❖

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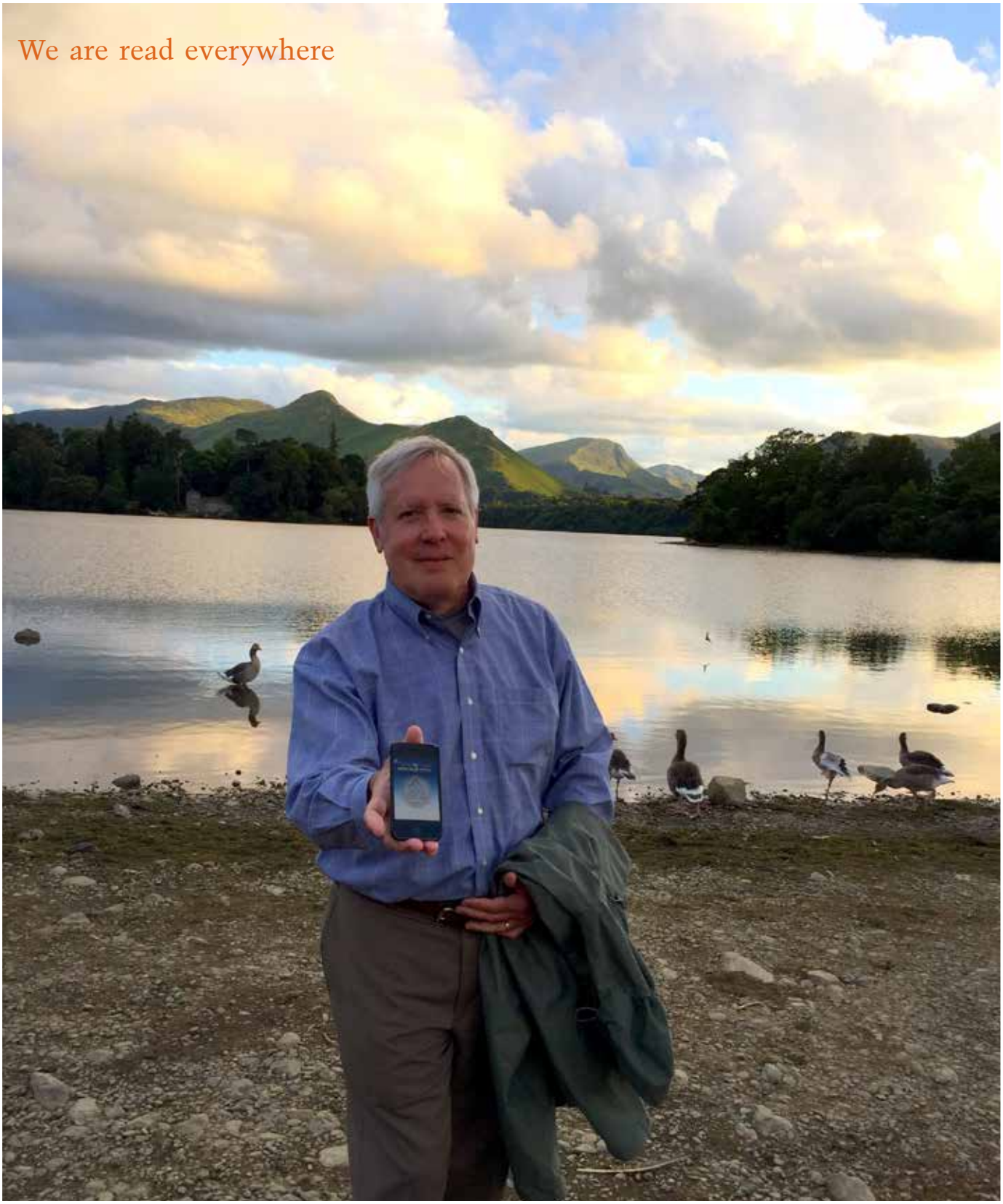

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RIMS Executive Director, **Newell E. Warde, PhD,** downloaded the July issue on the shores of Derwentwater at Keswick in the Lake District National Park in northwestern England.

Assessing acceptability and feasibility of provider-initiated HIV testing and counseling in Ghana

ZACHARY TABB, BS; KATHLEEN MORIARTY, BA; MADELEINE W. SCHRIER, MD; EBENEZER AMEKAH, MD; TIMOTHY P. FLANIGAN, MD; MARGARET LARTEY, MD

ABSTRACT

In Ghana, HIV voluntary counseling and testing remains poorly utilized. The World Health Organization (WHO) has recommended opt-out, provider-initiated testing and counseling (PITC) in order to increase utilization and earlier intervention. Yet implementation challenges remain in resource-scarce settings. This study sought to better understand the dynamics of providing PITC at Apam Catholic Hospital, a district referral hospital in Ghana. Semi-structured interviews were conducted with healthcare providers and patients exploring attitudes regarding PITC, community stigma, and HIV knowledge. Results showed healthcare providers believed PITC would lead to earlier diagnosis and intervention, but concerns persisted over increased costs. Patients welcomed PITC, but expressed discomfort in opting-out. Patients demonstrated incomplete HIV knowledge and widely believed spiritual healers and prayer can cure the infection. Acceptance of PITC by both healthcare providers and patients remains high, but concerns over resource costs and HIV knowledge persist as challenges.

KEYWORDS: opt-out testing, provider-initiated testing and counseling, HIV knowledge, resource-scarce

INTRODUCTION

More than three decades into the HIV/AIDS epidemic, sub-Saharan Africa (SSA) continues to bear the brunt of transmission, treatment and prevention. As a response to low testing rates and lost opportunities for diagnosis, UNAIDS and the WHO recommended shifting from voluntary counseling and testing (VCT) to opt-out, provider-initiated testing and counseling (PITC).[1] Studies of PITC in SSA implemented either at the national level[2,3] or at the clinic level among tuberculosis patients,[4] pregnant women,[5] general outpatients,[6] and children[7] have so far shown high rates of acceptability. Yet, the majority of studies involve women in antenatal care and therefore might not be generalizable to patients in other clinical settings.[8] Recent population-based surveys in Botswana suggest that only 46% of those infected are aware of their seropositive status.[9] Therefore, an opportunity exists to improve testing coverage.

Implementing PITC on a national scale in resource-scarce countries poses several challenges. Routine testing itself may discourage health-seeking behavior or expose patients to stigma,[10] and implementation requires increased testing supplies, antiretroviral therapy, and linking newly diagnosed patients to treatment.[11] HIV stigma and knowledge influence test-seeking behavior; greater HIV knowledge leads to reduced stigma and improved attitudes towards testing.[12] More research is needed regarding implementation challenges and community input regarding the new policy.[13]

Ghana has a generalized HIV epidemic with prevalence at 2.0%,[14] but has yet to scale PITC nationally. Only about 43% of women and 20% of men have ever received both an HIV test and result, despite most knowing where to obtain a free test.[14] Gaps in HIV knowledge exist; 65% of women and 48% of men believe that HIV can be transmitted through supernatural means,[14] suggesting that a comprehensive understanding of HIV transmission has yet to penetrate into many Ghanaian communities.

To further elucidate the barriers to implementing PITC in Ghana, we investigated patient and healthcare worker attitudes towards PITC testing at Apam Catholic Hospital (ACH). ACH is located in Apam, the capital of the Gomoa West District serving as the primary referral hospital responsible for a catchment area of approximately 135,000 residents, mostly from rural communities.[15] The hospital operates 24 hours a day, has 105 beds, and offers medical, surgical, obstetric and gynecological, and laboratory services. We interviewed patients and healthcare workers about the challenges to implementing PITC. We interviewed patients regarding HIV modes of transmission, testing, and beliefs towards HIV-infected individuals in order to better understand how community HIV knowledge and stigma influence seeking testing and care.

METHODS

Design

We conducted semi-structured interviews with open-ended questions on-site at ACH. Staff interviews focused on existing HIV testing culture and attitudes toward PITC. Patient interviews focused on PITC acceptance and HIV knowledge, particularly regarding transmission and testing practice. Staff interviews were conducted in English. Patient interviews were conducted in Fante with the assistance of a native-Fante speaking interpreter. All interviews were

conducted in private, confidential locations and audio-recorded. The institutional review board of Brown University, Providence, Rhode Island, USA, approved this study.

Protocol

Patients were recruited from the waiting area of the general outpatient clinic after their medical visits to avoid disrupting their care. Hospital staff, including doctors, nurses, lab technicians, and counselors, were approached outside of their hospital working hours to avoid disrupting their work responsibilities. No financial incentives or rewards were provided to participants. Participants were excluded if they were under 18 years old, refused, or lacked the capacity to consent. Verbal informed consent was obtained after explaining the study purpose.

Data Analysis

Audio-recorded interviews were transcribed and transcripts were analyzed for dominant themes. Three members of the research team separately read each transcript, created codes reflective of the responses, and identified representative passages. The team resolved coding discrepancies to maintain consistency, and the major overarching themes were identified.

RESULTS

Eight staff and 25 patient interviews were conducted. **Table 1** shows the demographic characteristics of patients interviewed. The following themes emerged from interviews: PITC acceptability and feasibility; psychosocial fears and stigma as barriers to HIV testing; and limited HIV knowledge.

PITC acceptability and feasibility

Every patient welcomed routine testing. Many patients felt that knowing their serostatus was important because *"if you don't have [the test], you can't protect yourself."* Patients had mixed feelings when asked whether PITC might dissuade hospital visitation, but generally believed that *"If you refuse to come to the hospital, then it depends on you, on your behavior. Maybe you are a fan of [sleeping with] girls, [sleeping with] boys all the time.... If you are not of that behavior…you will come for testing."*

Most patients said they would not feel comfortable refusing HIV testing, fearful of losing services, *"When I refuse, the doctor will also refuse to take care of me."* Others appeared reluctant to challenge their provider, *"The physician knows his job and if he recommends [the test]... you have to agree with him."*

Staff expressed concern over increased resource needs, yet acknowledged that PITC would simplify their work *"because there are people who are walking about who have the virus but they don't know…"* and recognized that *"the prognosis is better [when diagnosed earlier]."*

Table 1. Patient demographics.

Characteristics	Patients (N = 25)	
	No.	%
Sex		
Female	18	72
Male	7	18
Age, y		
18–29	12	48
30–49	6	24
> 50	6	24
Unknown	1	4
Education, y		
None	6	24
1–6	4	16
7–9	8	32
12–10	4	16
> 12	3	12
Previously HIV tested		
Female		
Yes	10	40
No	7	28
Unknown	1	4
Male		
Yes	2	8
No	4	16
Unknown	1	4

Psychosocial fears and stigma

Both patients and staff related the community's deep-seated fears of receiving an positive HIV diagnosis. As one staff explained: *"...the fear is that when it's testing and it's found positive, people will know and he will lose his job.... And his children will also be affected because always people will see his children as being also HIV positive."*

Staff also acknowledged patients' fears: *"They refuse because of privacy issues, especially those who are from Apam here. They think that once they go to the lab to do the test and it's positive, the lab staff or the nurses…will start spreading [the test result]."*

Patients emphasized the ensuing psychological distress more so than physical consequences from receiving a positive diagnosis. As one patient explained, *"Having knowledge about it will kill you faster, so they won't [test] at all."*

Limited knowledge of HIV

Patients demonstrated a limited understanding of HIV. When asked how HIV was transmitted, all patients mentioned sexual intercourse; however, answers varied widely regarding alternatives. Some said through *"the same toothbrush,"* others responded *"they get it through the air,"* and still others believed when *"you drink from the same cup."*

When asked whether they would purchase from a merchant who is HIV positive, 9 (36%) patients said they would not, and an additional ten (40%) said that they would only buy pre-packaged items, a decision commonly influenced by a fear that the *"food would become infected."*

A majority believed a spiritual healer or prayer could cure HIV. For some, it was as simple as *"with God everything is possible."* Another patient explained the role of faith in curing HIV, using the metaphor of fixing a broken computer: *"I believe that God is a master healer….When something happens to this laptop…the person can replace the lost item that has been damaged on it. So if God created us, I believe that if something has happened to us, he can diagnose and replace it."*

Several staff voiced concern over the

community's conviction that HIV has a spiritual cure and that spiritual services can present a great expense for patients who *"go and sell their belongings to get money"* to pay the costs. One staff member explained: *"the spiritualist will tell [patients] they should not take any drug, they should only take what [the spiritualist] will give them at that place."* Another described a former patient outcome witnessed as a result of these beliefs: *"She came back very ill, very debilitated, and eventually she died believing it was juju, believing that there was a spiritual force behind her sickness."*

DISCUSSION

Our investigation sought to better understand local perception regarding PITC through interviews with hospital staff and outpatients. While patients expressed concern over receiving a positive HIV diagnosis, for several patients the anticipated emotional, rather than physical, distress instilled greater testing apprehension. Aspects of their fear included stigma from their family and community, a concern aligned with recent assessments documenting only 8% and 14% of women and men in Ghana, respectively, hold attitudes accepting of HIV-infected individuals.[14] Staff also reported that some patients fear staff would discuss their testing result with those in the community. De-incentivized by these perceptions, many prefer to live without confronting their status. It is possible that an understanding of the benefits of HIV therapy has failed to penetrate the community, and attending to this might contribute to reducing fears and lead to higher testing utilization. Staff did not report any breaches of patient confidentiality following testing, so this fear might be a manifestation of their generalized concern of stigma. Nevertheless, people living with HIV/AIDS represent a highly vulnerable population and confidentially should remain a top priority to ensure engagement of care continues.

Despite their fears, every patient interviewed welcomed PITC. While portraying ideal acceptance, almost all patients also expressed discomfort in refusing testing. Consequently, opt-out routine testing in this context might function more like mandatory testing in practice, a policy not supported by WHO.[1] Surveys of patients offered opt-out testing in Democratic Republic of Congo, Malawi, Uganda, and Kenya indicate that patients may not understand or believe that they have the option of refusing an HIV test,[4,16,17,18] underscoring that our findings in Apam are not unique and represent an important policy consideration.

While staff acceptance was tempered by the additional supply costs, most believed that improved outcomes would be realized through earlier diagnosis with PITC.

Inaccurate and incomplete HIV knowledge was a prominent among patients. Many would alter their purchasing habits from HIV-infected merchants, suggesting a measurable negative economic impact to being HIV-positive. Emerging from our interviews was the belief of a cure for HIV through prayer and spiritual healers. Increasingly, Ghanaians report believing HIV has a supernatural etiology with recent assessments noting that 65% of women and 48% of men maintain this belief,[15] up from previous figures of 52% and 40% of women and men, respectively.[19] Routine testing might identify these individuals at earlier disease stages, as has been confirmed elsewhere in SSA.[20] While important to respect local beliefs, education provided during PITC would allow for a stronger understanding of HIV transmission. Health providers can open the door for a discussion about how contemporary medicine can be compatible with traditional practices.

Our findings have limitations. As ACH mostly serves a rural population, our findings might not be representative of urban settings. Further, as this was a qualitative study, social desirability bias might have influenced responses. We do not believe these issues have compromised the study's validity, only its generalizability.

PITC had broad acceptability by both patients and staff; however, logistical challenges remain to transition from VCT because of increased resource needs. A reluctance to opt-out of HIV testing begs the question whether testing would be mandatory in practice. Incomplete HIV knowledge, particularly around transmission and spirituality, continue to have consequence for health-seeking behavior. Further research examining community healthcare-seeking behavior, particularly based on spiritual beliefs, might help elucidate the best means of improving patient HIV education so that PITC can fully realize its benefit to reducing the HIV/AIDS burden.

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An analysis of diagnoses that drive readmission: What can we learn from the hospitals in Southern New England with the highest and lowest readmission performance?

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ABSTRACT

BACKGROUND: The Hospital Readmission Reduction Program was instituted by the Centers for Medicare & Medicaid Services in 2012 to incentivize hospitals to reduce readmissions.

OBJECTIVE: To examine the most common diagnoses driving readmissions among fee-for-service Medicare beneficiaries in the hospitals with the highest and lowest readmission performance in Southern New England from 2014 to 2016.

METHODS: This is a retrospective observational study using publicly available Hospital Compare data and Medicare Part A claims data. Hospitals were ranked based on risk-adjusted excess readmission ratios. Patient demographic and hospital characteristics were compared for the two cohorts using t-tests. The percentages of readmissions in each cohort attributable to the top three readmission diagnoses were examined.

RESULTS: Highest-performing hospitals readmitted a significantly lower percentage of black patients (p=0.03), were less urban (p<0.01), and had higher Hospital Compare Star ratings (p=0.01). Lowest-performing hospitals readmitted higher percentages of patients for sepsis (9.4% [95%CI: 8.8%-10.0%] vs. 8.1% [95%CI: 7.4%-8.7%]) and complications of device, implant, or graft (3.2% [95%CI: 2.5%-3.9%] vs. 0.2% [95%CI: 0.1%-0.6%]), compared to highest-performing hospitals.

CONCLUSIONS: Ongoing efforts to improve care transitions may be strengthened by targeting early infection surveillance, promoting adherence to surgical treatment guidelines, and improving communication between hospitals and post-acute care facilities.

KEYWORDS: readmissions, Medicare, quality, aging

BACKGROUND

Readmissions result in increased costs, are burdensome for patients, and are often preventable. Prior to 2012, hospitals had few financial incentives to reduce readmissions. However, with the enactment of the Affordable Care Act and the creation of the Hospital Readmission Reduction Program (HRRP), the Centers for Medicare & Medicaid Services began to reduce payments to hospitals with high rates of readmissions.[1] The Medicare program initially targeted admissions for acute myocardial infarction, heart failure, and pneumonia. Starting in 2015, admissions for chronic obstructive pulmonary disease (COPD) and elective total knee and hip replacements were added.

By tracking and reporting readmissions as a quality measure, the Medicare program anticipated that efforts to curtail readmissions would encourage innovation, improve care coordination, and reduce healthcare utilization.[2] However, some experts criticize using a hospital's 30-day readmission rate as a quality measure because it may poorly correlate with quality[3,4] and mortality,[5] and because it may inadequately account for social determinants of health.[6, 7]

This study aims to compare the most prevalent readmission diagnoses in the highest- versus the lowest-performing cohorts of hospitals in Southern New England (Connecticut, Massachusetts, and Rhode Island). We hypothesized that the lowest-performing hospitals would have different diagnoses driving their readmissions than the highest-performing hospitals and that the findings could inform efforts to improve care and reduce readmission rates, particularly among hospitals in the bottom cohort.

METHODS

Data Sources

We used publicly available data from the Hospital Compare website to obtain a risk-adjusted list of the excess readmission ratios for hospitals in Connecticut, Massachusetts, and Rhode Island. The latest available data was for the performance measurement period of July 1, 2012 to June 30, 2015.[8] The excess readmission ratio is a measure of an individual hospital's readmission performance compared to the readmission performance for hospitals with a similar case mix across the country. The measure is calculated for the specific condition (e.g., pneumonia) that was the primary diagnosis for the original index admission. The measure is adjusted for certain patient demographic characteristics and comorbidities. In other words, individual hospitals are compared to other hospitals with similar patients for each of the conditions measured.[1] If the hospital has more unplanned readmissions than would be expected for a similar hospital for a given condition, it will have a ratio greater than 1.00 for that condition. For the present study, we combined these

ratios into a mean ratio for each hospital, as explained below under "Study Design."

We obtained hospital-level characteristics from Hospital Compare, including overall Star rating (which summarizes multiple hospital quality measures),[9] Medicare spending ratios, and whether patients reported they were given information about what to do during their recovery at home. The latter measure is derived from the Hospital Consumer Assessment of Healthcare Providers and Systems survey. We also examined whether the hospital was designated as a Disproportionate Share Hospital (DSH).[10] This designation allows for additional Medicare funding for hospitals based on the proportion of low-income and uninsured patients they serve. The DSH formula incorporates multiple factors, including whether patients receive Supplemental Security Income, are enrolled in Medicaid, and are uninsured. Based on this formula, Medicare assigns each designated hospital a DSH Index, which determines the hospital's DSH payment. The data source for this variable is the CMS Impact File Hospital Inpatient Prospective Payment System (IPSS).[11] Last, hospitals were designated as urban or non-urban based on the Quality Innovation Network National Coordinating Center's[12] ZIP Code analysis file, which uses population size determined by U.S. Census data.

In partnership with the Medicare Quality Innovation Network-Quality Improvement Organization for New England, Healthcentric Advisors, we used Medicare fee-for-service Part A claims to obtain demographic data for patients and readmission diagnoses. Readmission diagnoses represent the principal discharge diagnosis codes submitted on the claims for the hospital readmissions, regardless of the reason for the original index admission. Diagnoses are grouped according to the Agency for Healthcare Research and Quality (AHRQ) Clinical Classifications Software.[13]

Study design

We ranked all acute-care hospitals in Southern New England based on their excess readmission ratios. The HRRP calculates separate excess readmission ratios for six conditions – acute myocardial infarction, COPD, heart failure, pneumonia, coronary artery bypass graft surgery, and elective hip or knee arthroplasty – when the conditions represent the primary reason for the original index admission. We included any hospital with at least one reported excess readmission ratio. For a hospital with more than one excess readmission ratio reported, we calculated the mean of the reported ratios for that hospital. We designated the ten hospitals with the lowest mean excess readmission ratios as the highest-performing cohort and the ten hospitals with the highest mean excess readmission ratios as the lowest-performing cohort.

We identified the percentage of readmissions attributable to the top three readmission diagnoses in each cohort, and calculated 95% confidence intervals (CIs). We examined readmission diagnoses for every other quarter from September 2014 through June 2016.

Statistical Analysis

Patient demographic and hospital characteristics for the two cohorts were compared using unpaired t-tests. We used ArcGIS® software to generate geographic information system (GIS) maps depicting population density (population per square mile) and mean household income in the counties immediately surrounding individual hospitals in the highest- and lowest-performing cohorts. We calculated the percentage of readmissions attributable to the top three readmission diagnoses for each of the cohorts using STATA.

RESULTS

Excess readmission ratios were reported for 94 hospitals in Southern New England. **Table 1** summarizes the patient and hospital characteristics for the highest and lowest performers in quarter 4 of 2014. The highest-performing cohort had 10,172 admissions in this period, while the lowest-performing cohort had 12,211 admissions. There was no significant difference between the cohorts regarding the percentage of admissions resulting in readmission (15% in the highest-performing hospitals vs. 19% in the lowest-performing hospitals, p=0.69). The two cohorts had similar characteristics with respect to gender, readmission to the same vs. different hospital, and the mean length of stay of the readmission. However, the lowest-performing hospitals readmitted a higher percentage of black patients (p=0.03) and patients younger than 65 years old (p<0.01), while the highest-performing hospitals readmitted a higher percentage of white patients (*p*=0.01).

The two cohorts had comparable mean DSH indices and mean Medicare spending ratios and similar percentages of patients who reported receiving discharge instructions (**Table 1**). Hospitals in the lowest-performing cohort had a lower mean overall Star rating (p=0.01).

Figures 1 and 2 show the geographic location of the hospitals included in the study. Seven of the twenty hospitals were in the Boston metropolitan area. Generally, both the highest and lowest-performing hospitals were located in areas with higher population density (**Figure 1**). Half of higher-performing hospitals were coastal, including hospitals located in South County and Newport, Rhode Island; Cape Cod and Nantucket. The mean household incomes in the counties surrounding highest- and lowest-performing hospitals were similar (**Figure 2**).

Patients were most frequently readmitted with a primary diagnosis of sepsis in both the highest- and lowest-performing hospital cohorts. Among the highest-performing cohort, readmissions with a primary diagnosis of sepsis comprised 8.1% (95%CI: 7.4%-8.7%) of all readmissions, while sepsis accounted for 9.4% (95%CI: 8.8%-10.0%) of readmissions in the lowest-performing cohort, a statistically significant difference (**Figure 3**). Heart failure was the next most common readmission diagnosis in both cohorts (7.9% [95%CI: 7.3%-8.6%] in the highest and 7.3% [95%CI: 6.8%-7.8%] in

Table 1. Patient and hospital characteristics for hospitals in Southern New England (Connecticut, Massachusetts, and Rhode Island) with the highest and lowest readmission performance† (October–December, 2014)

	Highest Performers	Lowest Performers	P-value
Total number of admissions	10,172	12,211	
Total number of readmissions	1,541	2,321	
Readmissions/admissions ratio	0.15	0.19	0.69
Patient characteristics			
Female, n (%)	830 (53.9)	1193 (51.4)	0.07
Race/ethnicity, n (%)			
White	1365 (88.6)	1988 (85.7)	0.01
Black	103 (6.7)	206 (8.9)	0.03
Hispanic	37 (2.4)	46 (2.0)	1.00
Asian	8 (0.5)	29 (1.2)	1.00
Other	26 (1.7)	48 (2.1)	1.00
Age in years, n (%)			
<65	314 (20.4)	557 (24.0)	<0.01
65-74	407 (26.4)	640 (27.6)	0.17
75-84	419 (27.1)	588 (25.3)	0.16
>84	401 (26.0)	536 (23.1)	0.16
Readmitted to same hospital, n (%)	1251 (81.2)	1861 (80.2)	0.44
Mean length of stay at readmission, in days	5.24	5.23	0.99
Hospital characteristics			
Urban, n (%)	9 (90.0)	10 (100.0)	<0.01
Mean DSH index°	0.22	0.21	0.46
State, n			
Connecticut	1	1	
Massachusetts	7	8	
Rhode Island	2	1	
Mean Hospital Compare overall Star rating*	3.89	3.00	0.01
Mean percent of patients reporting they received discharge instructionsT	89.7	89.2	0.32
Mean Medicare spending ratioΔ	0.98	1.01	0.17
Mean excess readmission ratio	0.94	1.10	<0.01

† Highest-performing hospitals had the lowest rates of readmission within 30 days of hospital discharge; lowest-performing hospitals had the highest rates of readmission within 30 days of hospital discharge.

° DSH: Disproportionate Share Hospital; the index is derived from the proportion of patients at the hospital who receive Supplemental Security Income, are enrolled in Medicaid, and/or are uninsured, with a higher index indicating a higher proportion of low-income patients.

* The Hospital Compare overall Star rating ranges from 1 to 5, with a higher number of Stars indicating higher quality of care at the hospital.

T Derived from the Hospital Consumer Assessment of Healthcare Providers and Systems survey results reported on Hospital Compare; included here is the percent of patients who responded that YES, they were given information at discharge about what to do during their recovery at home.

Δ The Medicare spending ratio shows whether Medicare spends more, less, or about the same for an inpatient stay at a particular hospital compared to what it spends per patient at all hospitals nationally; a ratio greater than one means that Medicare spends more per patient at a particular hospital and a ratio less than one means that Medicare spends less per patient compared to what it spends at all hospitals nationally.

the lowest); this difference was not statistically significant. In the lowest-performing hospitals, complications of surgical procedures or medical care accounted for 3.0% (95%CI: 2.6%-3.5%) versus 2.7% (95%CI: 2.2%-3.3%) in the highest-performing hospitals, which was also not statistically significant. Finally, complications of device, implant, or graft accounted for 3.2% (95%CI: 2.5%-3.9%) of all readmissions in the lowest-performing hospitals versus 0.2% (95%CI: 0.1%-0.6%) in the highest-performing hospitals, a statistically significant difference (**Figure 3**).

DISCUSSION

Readmission rates are an important quality measure – any potentially preventable hospital stay is undesirable to patients and payers, and hospitals are incurring penalties for excess readmissions. In comparing readmission diagnoses for the highest- and lowest-performing hospitals in Southern New England, we found that the lowest-performing cohort had higher proportions of its readmissions attributable to sepsis and complications of device, implant, or graft.

While Medicare initially targeted excess readmissions for heart failure, pneumonia, and acute myocardial infarction, some analyses suggest that readmissions for sepsis may be even more prevalent and may also be potentially preventable.[14, 15] The U.S. healthcare system spends more on hospitalizations for sepsis than any other cause.[14] In a California-wide study, the annual cost of sepsis readmissions was $500 million, compared to $229 million for heart failure readmissions.[16] Risk factors for sepsis readmissions in this study of 368,514 hospitalizations included dementia and malignancy as co-morbidities, hospital discharge to a skilled nursing facility, and longer length of stay during the original index admission. Approaches to reducing readmissions for sepsis include dedicated wound care programs, obtaining laboratory studies early after discharge to assess for renal failure in high-risk patients, avoiding urinary catheter insertion, and counseling patients on infection risks and signs prior to discharge.

Readmissions for complications of care also present an important quality improvement opportunity for hospitals. A recent study of 44,120 patients examined readmissions after elective orthopedic surgeries; the authors suggest that preventing surgical site infections,

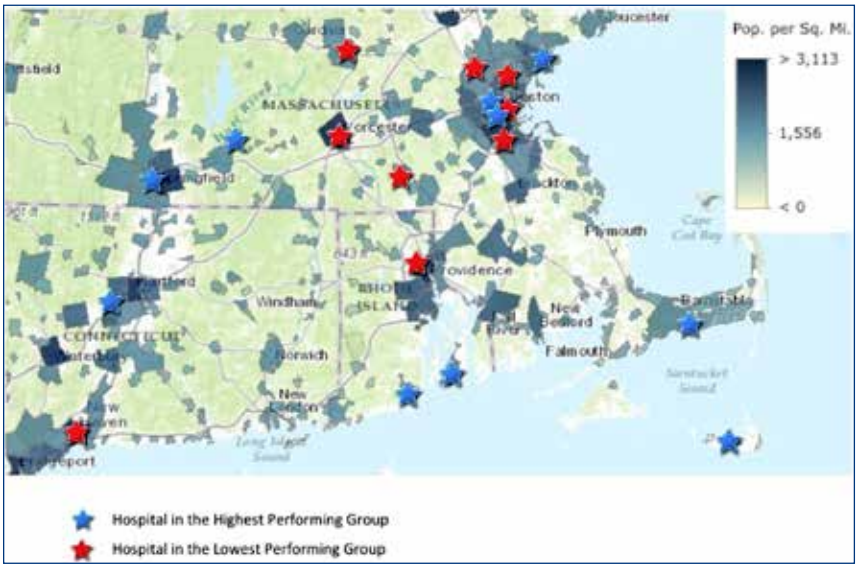
venous thromboembolism, and post-operative bleeding would be the highest-yield interventions for reducing readmissions in this cohort.[17] One-half to two-thirds of unplanned readmissions were related to the surgical procedure and could potentially be related to the patient's perioperative care. Proper use of antibiotic prophylaxis[18] and adherence to clinical standards such as those in the Surgical Care Improvement Project[19] have led to modest reductions in rates of surgical site complications. Further research into how to effectively reduce complications after surgery is needed.

Additionally, hospitals may be able to employ strategies during a patient's original index admission to decrease susceptibility to complications after discharge. Krumholz and colleagues have described a "post-hospital syndrome," in which a patient's vulnerability is not only due to their acute illness, but also a product of their hospitalization.[20] During the hospital stay, many patients experience stress, poor sleep, decreased nutritional intake, loss of muscle tone, adverse drug events, and exposure to potentially life-threatening pathogens.[20] Efforts that target any one of these hospital-imposed conditions, rather than solely addressing the principal reason for readmission, could potentially alter patients' post-discharge trajectories.

Currently hospitals incur most of the HRRP penalties for excess readmissions; however, post–acute care facilities likely also play a role in whether their patients are readmitted to the hospital. Although quality information on nursing homes is publicly available at Medicare's Nursing Home Compare website, patients may receive little information about facilities prior to discharge.[21] Medicare introduced a new readmission measure for short-stay residents in 2016; it reports the percentage of residents who are readmitted to the hospital within 30 days of their admission to the post–acute care facility. This measure has been incorporated into the Quality Measures Star Rating on Nursing Home Compare.[22] Nursing homes with higher quality ratings may have better strategies to avoid readmissions. Establishing referral networks between hospitals and post–acute care facilities may also decrease readmission rates, perhaps by improving communication and by facilitating collaboration on projects to address local barriers.[23]

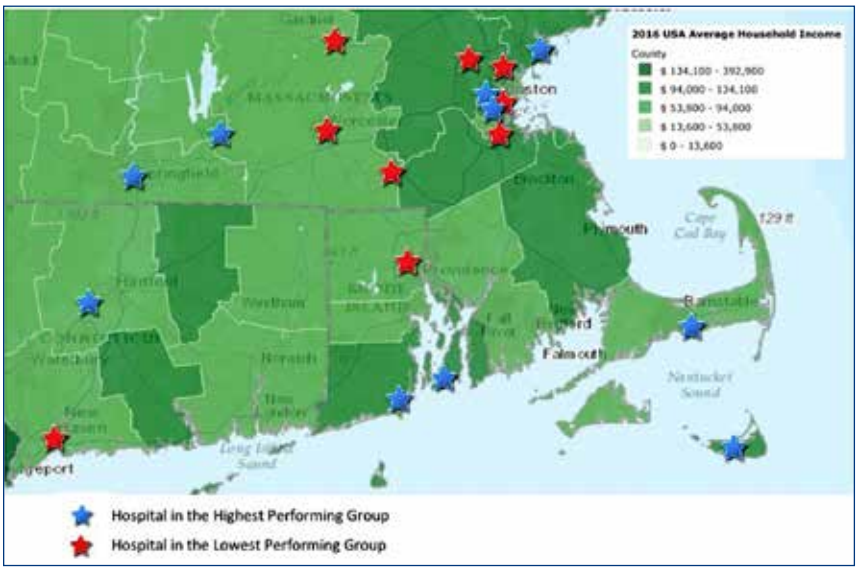
We note several limitations of this analysis. The study uses claims data, which relies on documentation by providers and may be incomplete. Second, the hospital cohorts in this study were derived from the most recent excess readmission ratios available on the Hospital Compare website. Hospital performance may change over time. Finally, readmission diagnoses were based on the principal discharge diagnosis of the readmission claim, but patients may be readmitted for multiple reasons that are not captured in the primary diagnosis.

Figure 1. Geographic information system (GIS) map showing population density (population per square mile) and locations of the highest-performing and lowest-performing hospitals



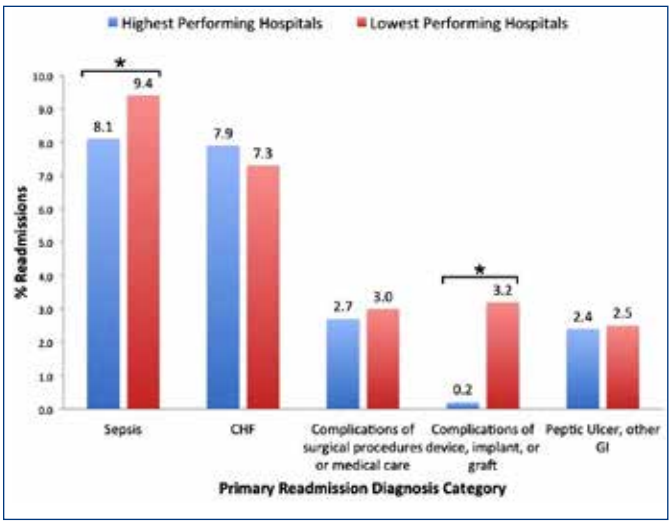
Note: Highest-performing hospitals had the lowest rates of readmission within 30 days of hospital discharge; lowest-performing hospitals had the highest rates of readmission within 30 days of hospital discharge.

Figure 2. Geographic information system (GIS) map showing mean household income by county and the location of the highest-performing and lowest-performing hospitals



Note: Highest-performing hospitals had the lowest rates of readmission within 30 days of hospital discharge; lowest-performing hospitals had the highest rates of readmission within 30 days of hospital discharge. Data source for mean income: Esri's 2016 Updated Demographic Data using Census 2010 geographies.

Figure 3. Percent of readmissions due to selected conditions, highest and lowest performing hospitals



Notes: Asterisk indicates that the difference between the highest- and lowest-performing hospitals for that diagnosis category is statistically significant at a $p<0.05$ level. Highest-performing hospitals had the lowest rates of readmission within 30 days of hospital discharge; lowest-performing hospitals had the highest rates of readmission within 30 days of hospital discharge.

CONCLUSIONS

In conclusion, we found that the lowest-performing hospitals in Southern New England had higher proportions of their readmissions attributable to sepsis and complications of device, implant, or graft, compared to the highest-performing hospitals. Ongoing efforts to improve care transitions may be strengthened by targeting early infection surveillance, promoting adherence to surgical treatment guidelines, and improving communication between hospitals and post-acute care facilities.

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Pulmonary Hypertension in a Patient with Hereditary Hemorrhagic Telangiectasia

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ABSTRACT

Hereditary Hemorrhagic Telangiectasia (HHT), also known as Osler-Weber-Rendu Disease, is an autosomal dominant genetic disorder that is characterized by the abnormal development of blood vessels. While the pathophysiology underlying the development of pulmonary hypertension (PH) in patients with HHT is not fully understood, it is believed to occur by one of two mechanisms: increases in pulmonary vascular resistance or cardiac output. In the following report, we describe an interesting case of a 26-year-old woman with HHT whose right heart catheterization initially demonstrated PH with elements of both pre- and post-capillary PH. Once the pre-capillary PH component was treated, however, an underlying high-normal cardiac-output state was unmasked.

KEYWORDS: arteriovenous malformation, pre-capillary pulmonary hypertension, post-capillary pulmonary hypertension

INTRODUCTION

Hereditary Hemorrhagic Telangiectasia (HHT) is a genetic disorder characterized by the development of telangiectasias in the skin, mucosa, and gastrointestinal tract.[1,2] Arteriovenous malformations (AVMs) may also develop in the central nervous system, liver, and lungs. Pulmonary hypertension (PH) develops in 1% of patients.[3–5]suggesting that alveolar capillary NO production is increased. We speculated that alveolar capillary NO overproduction might have a similar mechanistic role in the development of shunting vessels, arteriovenous malformations, in hereditary hemorrhagic telangiectasia (HHT). In the following case report, we describe a patient with HHT who presented with PH of unusual etiology.

CASE DESCRIPTION

A 26-year-old female with two months of progressive dyspnea presented with a six-day history of acutely worsening dyspnea on exertion, palpitations, and chest discomfort consistent with New York Heart Association Functional Class (NYHA FC) Three. Past medical history was notable for asthma and HHT with associated epistaxis, pulmonary AVMs status post embolization in 2012 to alleviate symptoms of exercise intolerance, and hepatic AVMs (**Figure 1**). There was no family history of HHT and the patient had not undergone any genetic testing. Hemoglobin level was 14.7 g/dL and thyroid function tests were within normal limits. Electrocardiogram demonstrated sinus rhythm with right-axis deviation, ST depressions in leads III and aVF, and diffuse T-wave inversions. CT angiography demonstrated pulmonary artery (PA) enlargement, an increase in cardiac size since February 2013, and previously noted pulmonary AVMs in the left upper and right lower lobes. No other AVMs were visualized. Mucosal telangiectasias were noted, but were believed to be insignificant clinically. Due to constraints on equipment availability at the

Figure Legend

The patient's hepatic AVM can be seen circled in the accompanying figure. Hepatic AVMs can reduce systemic vascular resistance, leading to increased cardiac output and blood flow through the pulmonary vessels. Over time, these changes can lead to high-output heart failure and remodeling of the pulmonary vasculature.

time of evaluation, the patient and staff mutually agreed to admit the patient overnight for evaluation of PH.

Transthoracic echocardiogram demonstrated moderate enlargement of the right ventricle (RV) associated with moderately decreased systolic function, interventricular septal flattening, right atrium enlargement, and dilation of the proximal PA with normal left ventricular function. The estimated PA diastolic pressure was elevated to at least 16 mm Hg, and the PA systolic pressure was elevated at an estimated 45.8 mm Hg. No prior echocardiography testing was available for comparison. Right heart catheterization (RHC) showed elevated mean PA pressure (PAP_{mean}) of 50 mm Hg and pulmonary vascular resistance (PVR) of 1160 dynes·s/cm^5 in the context of decreased cardiac index of 1.63 L/min/m^2 calculated via the Fick method (**Table 1**) and normal pulmonary artery wedge pressure (PAWP) of 8 mm Hg. Venous oximetry demonstrated an oxygen saturation "step-up" from the superior vena cava (56%) to the right atrium (74%), determined to be secondary to a left-right shunt through hepatic AVMs. The PA oxygen saturation was approximately 78-79%. The patient was started on tadalafil 40 mg daily. Repeat RHC performed five months later showed continued PVR elevation at 608 dynes·s/cm^5 and cardiac index of 3.11 L/min/m^2 calculated via the Fick method. The PA oxygen saturation at this time was 79.4%. Macitentan 10 mg daily was added, improving symptoms to NYHA FC One. Hemoglobin level was found to be 15.2 g/dL and thyroid function tests were within normal limits. Repeat transthoracic echocardiogram eight months after initial presentation showed reduced RV size, new RV hypertrophy, and reduced RV function consistent with the prior study. RV systolic pressure was estimated to be at least 54 mm Hg. PA systolic pressure can be equated with this value as there is no evidence of a RV outflow obstruction. PA diastolic pressure was not reported. There was insufficient tricuspid regurgitation to calculate RV systolic pressure at the patient's most recent transthoracic echocardiogram, which was conducted 20 months after initial presentation.

DISCUSSION

The pathophysiology underlying the development of PH in patients with HHT is believed to occur by increases in either PVR or CO, as demonstrated by the equation PAP_{mean} = (PVR*CO) + PAWP. RHC is the gold standard for the diagnosis of PH and yields information that is necessary to distinguish between etiologies.

In patients with hepatic AVMs, a reduction in systemic vascular resistance leads to increased CO and blood flow through the pulmonary vessels. Over time, progression of the intrahepatic shunt leads to elevated left-sided pressures, high-output cardiac failure, and remodeling of the pulmonary vasculature due to sheer stress.[5–7] Ultimately, these changes lead to what is known as post-capillary PH because of the increase in PAWP.[5,8] On RHC, these patients have elevated PAWP and CO with normal PVR. Management of these patients is aimed at limiting complications of high-output cardiac failure with diuretics and beta-blockers, but liver transplantation is the only definitive treatment.[6] While angiogenesis inhibitors, including bevacizumab and thalidomide, have emerged as potential alternatives to liver transplantation, data regarding their long-term efficacy and safety is lacking.[9] In contrast, the second mechanism underlying the development of PH occurs in patients with Type II HHT. A mutation in the gene *ACVRL1* causes the intima and media to proliferate throughout the pulmonary vasculature, leading to pre-capillary PH. These patients tend to be women in their 20s and 30s and have a poor prognosis.[10] RHC shows normal PAWP and low-to-normal CO with elevated PVR.[5,11]

Table 1. The patient's right heart catheterization hemodynamic parameters.

Parameter	Normal Values[17]	Test Result (RHC April 2015)	Test Result (RHC September 2015)
Hemoglobin	12-16 g/dL	14.7 g/dL	15.2 g/dL
Mean Right Atrial Pressure	0-8 mmHg	7 mmHg	8 mmHg
Right Ventricle Pressure	15-25/0-8 mmHg	75/5 mmHg	84/8 mmHg
Pulmonary Artery Pressure (Mean)	15-25/8-12 (16) mmHg	75/31 (50) mmHg	92/38 (59) mmHg
Mean Pulmonary Capillary Wedge Pressure	9 mmHg	8 mmHg	17 mmHg
Cardiac Output	5 L/min	2.90 L/min (via Fick method)	5.53 L/min (via Fick method)
Cardiac Index	2.8-4.2 L/min/m^2	1.63 L/min/m^2	3.11 L/min/m^2
Pulmonary Vascular Resistance	20-120 dynes·s/cm^5	1160 dynes·s/cm^5	608 dynes·s/cm^5
Superior Vena Cava Oxygen Saturation	70-80%	56%	Data not available
Right Atrium Oxygen Saturation		74%	Data not available
Pulmonary Artery Oxygen Saturation		78-79%	79.4%

The patient in this case exhibited features of both pre- and post-capillary PH. The initial RHC data revealed elevated PVR and low CI, which are suggestive of pre-capillary PH. Tadalafil therapy initiated shortly thereafter moderately improved systolic function and ameliorated the degree of RV enlargement.

Interestingly, however, after the pre-capillary PH component was treated, the patient was found to have an underlying high-normal CO and high PCWP. This feature is more suggestive of post-capillary PH and may be explained by the presence of hepatic AVMs.

It is not clear what led to this patient's features of both pre- and post-capillary PH. The large difference in the initial oxygen saturation between the SVC and right atrium suggest significant left-to-right shunting. Over time, as the amount of blood traveling through the shunt grew, and the patient's PVR rose, the patient's heart may not have been able to maintain its output, leading to decreases in CI and PCWP. By the time the patient presented, in fact, the disease was quite advanced.

In studies of sildenafil therapy in patients with pre-capillary PH, cardiopulmonary hemodynamics improved with treatment.[12] The exact mechanism of this is unknown.[13] It has been hypothesized that sildenafil may have similar effects as prostenoids and endothelin-1 receptor antagonists, which are believed to reverse the remodeling of the pulmonary vasculature.[14,15] On that basis, it is plausible that tadalafil may also exert these effects. Additionally, macitentan, an endothelin-1 receptor antagonist, has been shown to reduce morbidity and mortality in patients with pre-capillary PH. Macitentan was thus prescribed to optimize her treatment regimen.[16] Managing PH in patients with HHT is challenging. PH in these patients is clinically categorized as heritable (part of group 1 pulmonary arterial hypertension or PAH) and is treated with prostacyclins, endothelin receptor antagonists, and phosphodiesterase type 5-inhibitors. In patients who inadequately respond to monotherapy, combination therapy may be employed.[12] For patients with severe PAH intractable to medical management, lung transplantation is a last therapeutic option.

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Unusual Mechanism for Superior Mesenteric Artery Syndrome after Scoliosis Surgery

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ABSTRACT

Superior Mesenteric Artery (SMA) syndrome is an uncommon condition caused by mechanical obstruction of the distal third of the duodenum between the superior mesenteric artery and the abdominal aorta. SMA syndrome is associated with both operative and non-operative corrections of scoliosis, as well as anorexia nervosa, severe weight loss, tumors, burns, and other traumas.[1–4] We report an unusual case of SMA syndrome following corrective surgery for scoliosis in which post-operative gastric distension caused duodenal compression that subsequently resolved with gastric decompression, as opposed to the conventional, reverse series of events in which SMA syndrome causes the gastric dilatation.

KEYWORDS: SMA syndrome, scoliosis, spine surgery complications, nasogastric decompression, ileus

CASE REPORT

An otherwise healthy 15-year-old girl presented with adolescent idiopathic scoliosis and a significant right thoracic curve necessitating surgical intervention (**Figure 1**). Her past medical history was noncontributory and there was no family history of idiopathic scoliosis or abdominal pathology. The patient was underweight with a BMI was 16.

The patient underwent a posterior spinal fusion from T2-L3. Pedicle screws were placed at every level on the left and selected levels on the right (**Figure 2**). A Stryker FluoroNav spin confirmed appropriate positioning of all screws. The scoliosis was corrected and reduced using a dual-rod construct. The patient tolerated the procedure well without any intraoperative complications.

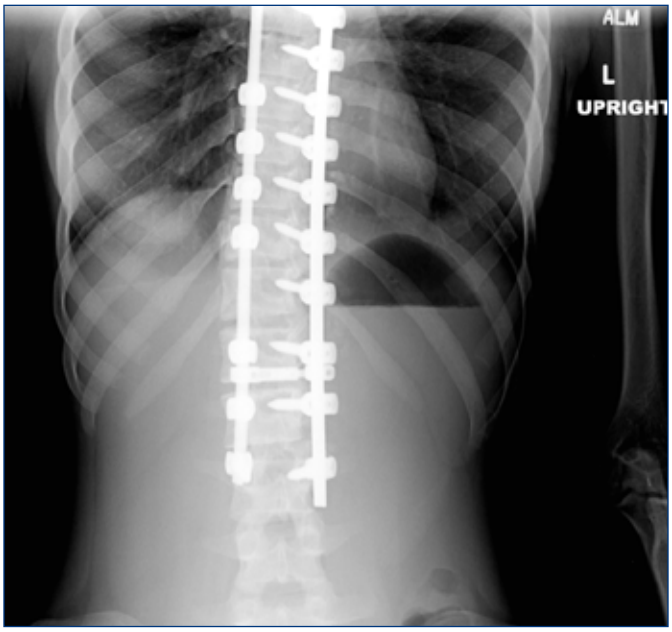
The patient's hospital stay was uneventful; she tolerated a regular diet, had normal bowel function and was ambulating without assistance. She was discharged home

Figure 1. Pre-operative AP and Lateral Radiographs of the Spine shows a right thoracic curvature with a cobb angle of 68 degrees. Pelvis is Risser Stage 4.

Figure 2. Post-operative AP and Lateral Radiographs of the Spine. The patient underwent surgical correction of her scoliosis with posterior spinal fusion from T2-L3.

with her family on the fifth post-operative day. However, while at home on the eighth post-operative day she developed abdominal pain, had multiple bouts of emesis and was unable to tolerate food. She returned to the Emergency Department for evaluation. An AP upright abdominal radiograph revealed marked distention of the stomach with an air-fluid level consistent with an obstructive process (**Figure 3**). An abdominal ultrasound revealed a markedly dilated stomach with the gastric fundus extending down to the level of the aortic bifurcation. On the sagittal images, the superior mesenteric artery course was nearly parallel to the course of the abdominal aorta, such that there was very little space between the two vessels for the transverse duodenum to remain patent (**Figure 4**).

Figure 3. AP Upright Abdominal Radiograph reveals marked distention of the stomach with an air-fluid level. There is otherwise a lack of bowel gas except a small amount of gas and dilatation seen in the descending and rectosigmoid colon.

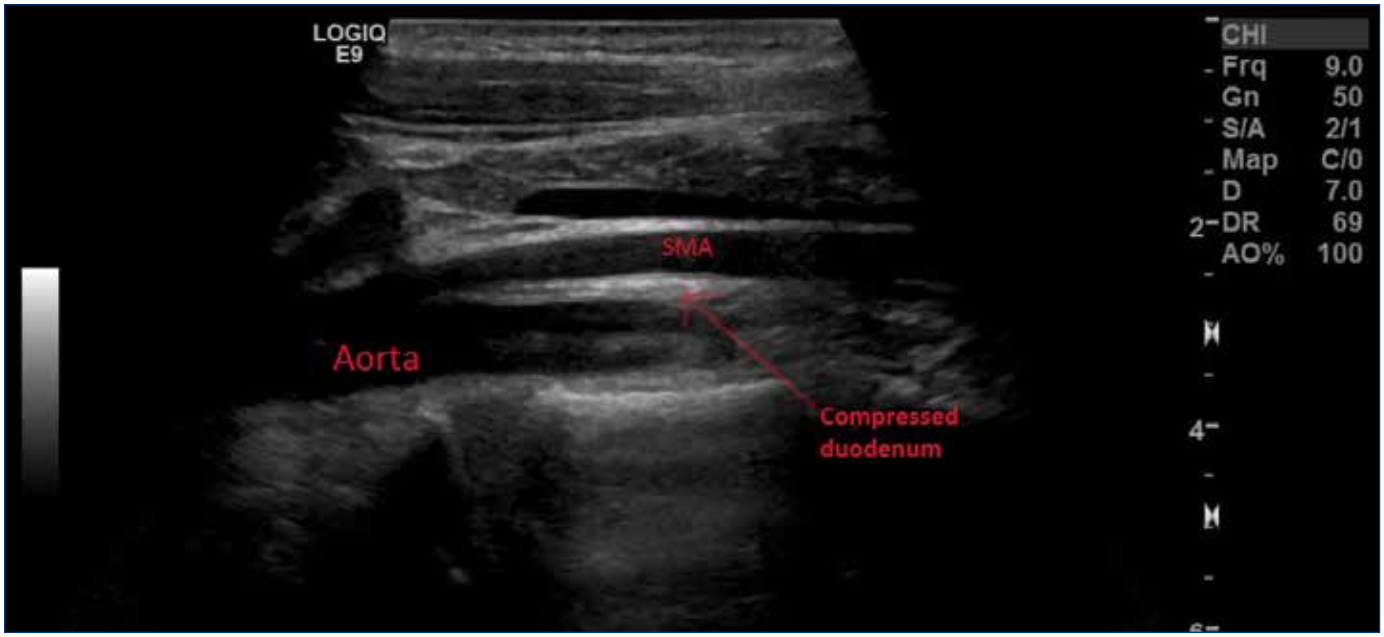


A nasogastric (NG) tube was placed and the stomach was decompressed overnight. A repeat ultrasound was conducted three days after the NG-tube was placed and revealed normal midgut rotation (**Figure 5**). Under fluoroscopic monitoring, a naso-duodenal tube was placed into the descending duodenum (attempts to reach the duodenal-jejunal flexure were unsuccessful). Fluoroscopic images confirmed that the gastric decompression resolved the SMA syndrome, and contrast flowed fairly readily from the duodenum to the proximal jejunum. (**Figure 6**) The patient received continuous decompression of stomach with the NG tube and slow, continuous feeding via the nasoduodenal feeding tube for five days at the hospital and for five days at home after she was discharged.

A week after discharge, the patient was evaluated for displacement of the nasoduodenal tube. Normal swallowing was confirmed with a barium study: the barium emptied promptly into the normal duodenum, proximal small bowel and into the jejunum without evidence of obstruction. Both the NG tube and the nasoduodenal tube were removed and she was transitioned to a regular oral diet.

The patient is now more than a year out from her initial operation. She is doing well in follow-up at one year; she has had no hardware complications or recurrence of her gastrointestinal symptoms.

Figure 4. Sagittal view of an abdominal ultrasound taken prior to nasogastric tube placement. An almost parallel aorta and SMA are seen with a very compressed duodenum passing in between the two vascular structures



DISCUSSION

SMA syndrome is a complication of corrective surgery for spinal deformities with reported incidence of over 4%.[5, 6] SMA syndrome often presents with early satiety after eating, intermittent nausea, bilious vomiting, and gastric dilatation. The onset of symptoms may begin immediately post-operatively, or up to several weeks following the surgery.[1, 6, 8] If untreated, repeated emesis as a result of SMA syndrome may lead to dehydration, electrolyte imbalances, gastric perforation, circulatory collapse due to decreased intraluminal pressures and even death.[1, 3]

Diagnosis relies on a focused clinical history and a combination of imaging techniques to visualize the gastric and proximal duodenal dilatation, as well as an aortomesenteric angle <20°.[1, 6, 8] In this case, the patient's suspected diagnosis was confirmed using upper GI barium contrast after ultrasound, though some studies suggest that the definitive imaging should be upper GI barium and concurrent angiography to visualize the aortomesenteric angle.[6]

The etiology of SMA syndrome in the setting of spinal deformity correction surgery is related to trunk height lengthening with instrumentation, resulting in traction of the SMA and narrowing of the aortomesenteric angle. [9,11] Recent studies have identified certain preoperative risk factors of patients likely to develop SMA syndrome including BMI <20, laterally displaced lumbar curves, sagittal kyphosis, and a large correctional change in the angle of curvature. [5, 6, 9, 10, 11]

However, in the case reported in this article, despite the patient's recent history of corrective surgery for adolescent idiopathic scoliosis and low BMI, her SMA syndrome appears to have been secondary to acute gastric dilatation causing aortomesenteric impingement. Unlike other cases of SMA syndrome, her gastric dilation was the cause, not merely the consequence, of her aortomesenteric duodenal obstruction. After gastric decompression, the patient's SMA syndrome resolved and the contrast was seen to readily flow through her distal duodenum and into her jejunum.

Acute gastric dilatation is a known consequence of duodenal occlusion and SMA syndrome, but there have been no reports of SMA syndrome resulting from acute gastric dilatation.

Figure 5. Sagittal view of an abdominal ultrasound after nasogastric tube placement.
(a) Improved angle between the SMA and aorta are seen here.
(b) a decompressed duodenum is seen between the two vascular structures

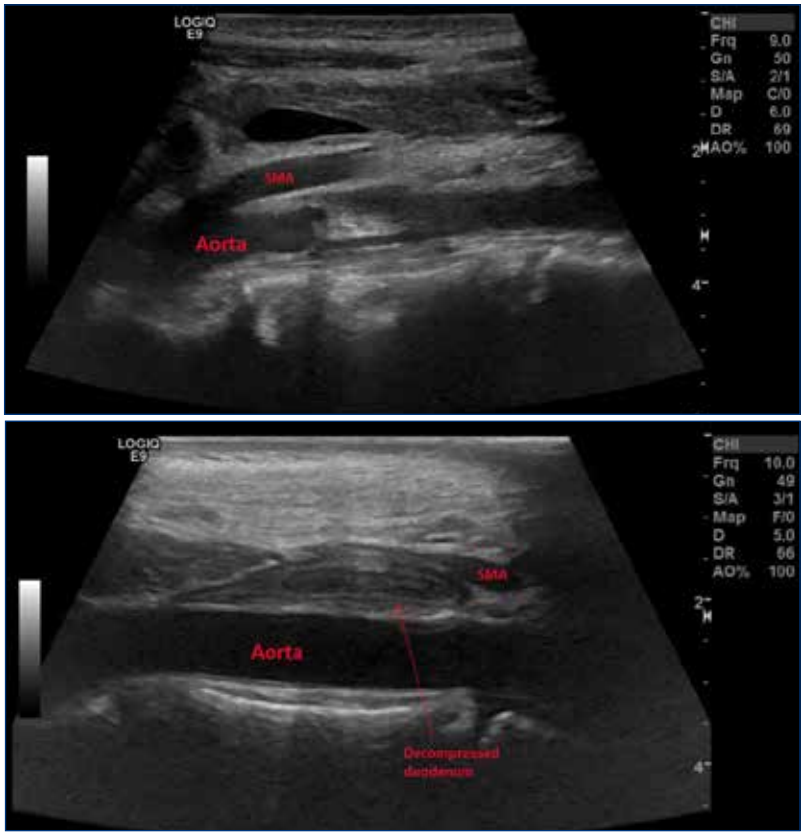
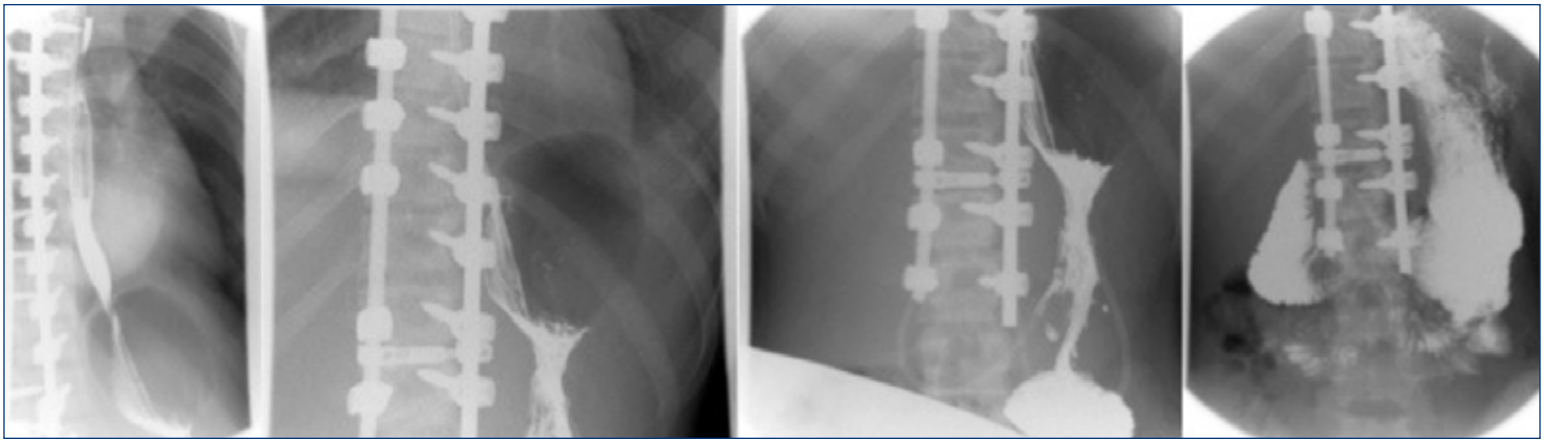


Figure 6. Upper GI Series with barium swallow showed the contrast emptied promptly from the stomach into the normal duodenum without any evidence of obstruction.



SMA syndrome induced by acute gastric dilatation is most commonly seen in patients with eating disorders, where episodes of binge-eating lead to acute stomach distension and compression of duodenum between the SMA and the aorta. [2, 12] This in turn, prevents emptying of the stomach and can cause the dreaded consequences of SMA syndrome.

This is the first described case of SMA syndrome resulting from acute gastric distension following corrective spine surgery for scoliosis. It is important to recognize that patients without identified risk factors for SMA syndrome (<25% weight percentile for height, <20 BMI, postoperative weight loss) may be at risk for developing this potentially fatal complication. Moreover, while the causes of SMA syndrome are mechanical and well understood, SMA syndrome secondary to acute gastric dilatation may be caused by decreased gastric motility (similar to postoperative ileus) or simply by eating too much too soon after surgery, which can be corrected by GI rest and placement of a decompressive NG tube. This finding also has implications for diet recommendations upon discharge.

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A soccer mom with chest pain: Spontaneous coronary artery dissection in a young woman

BENJAMIN BLACKWOOD, MD; STEFI LEE, MD; OTTO LIEBMANN, MD; WILLIAM BINDER, MD, MA, FACEP

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

DR. BENJAMIN BLACKWOOD: Today's patient is a 45-year-old woman who presents to our emergency department with acute onset of substernal chest pain. The patient was watching her son's soccer game when she abruptly stood up from a sitting position to cheer. She had immediate onset of a squeezing chest tightness and pressure that radiated to her left arm and was associated with nausea and mild shortness of breath. She described the pain initially as an 8/10. The discomfort receded over time, but never completely abated, and about 2 hours after onset she came to the emergency department because she felt that her discomfort, which was now a 3/10, was unusual and persistent.

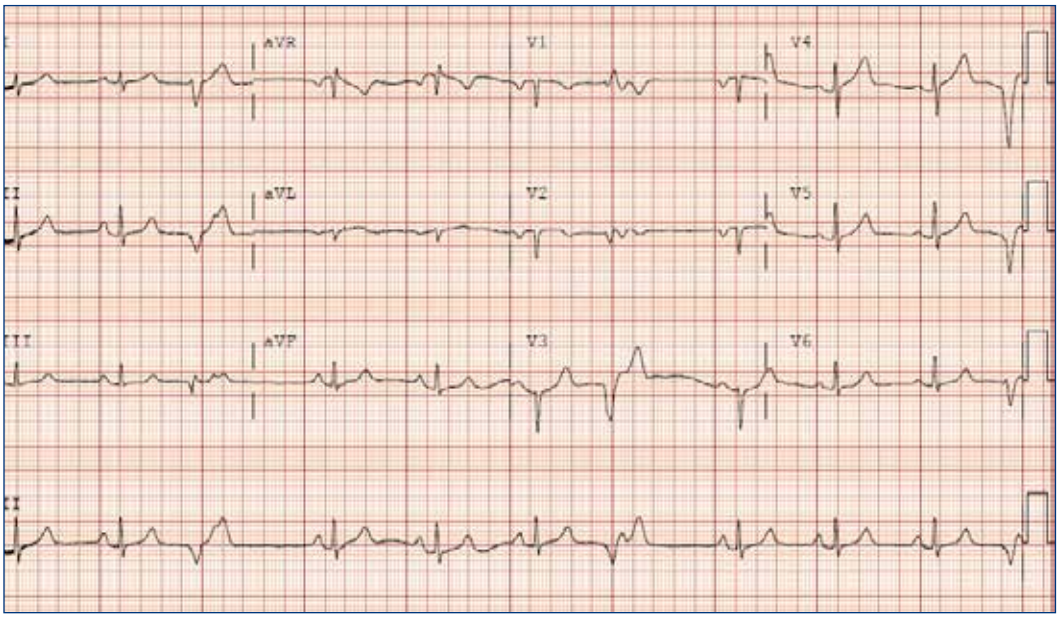
The patient stated that she regularly exercised and jogged several miles 3-4 times per week. She had a history of hypertension, anxiety, and a total abdominal hysterectomy for uterine fibroids and adenomyosis. She was currently taking amlodipine and estrogen replacement therapy. She was a teacher, did not use tobacco or drugs, and was allergic to penicillin and sulfa medications. She did report multiple stressors in her life and stated that her mother had a myocardial infarction in her 60s.

Upon arrival the patient had a blood pressure of 162/99, pulse of 68, and otherwise had normal vital signs. She looked quite well but stated she still had 1/10 residual chest discomfort. Her physical exam was significant for clear lungs, a normal s1s2 with occasional irregular beats, and strong 2+ pulses bilaterally in the carotid, radial, femoral, and dorsal pedis locations. Her abdominal, musculoskeletal, and neurologic exams were unremarkable.

Due to the nature of her complaint an ECG was performed at triage.

DR. ANDREW NATHANSON: This is an abnormal ECG. What was your interpretation and what were your interventions?

DR. BLACKWOOD: The patient was in sinus rhythm with a rate at around 60. She had multiple ventricular premature complexes and she had an abnormal R wave progression. The patient's q wave in lead V2 was concerning for a completed ischemic event. Because of the patient's chief complaint and her abnormal ECG, an aspirin was ordered and she was placed on telemetry. A chest x-ray was unremarkable, the CBC revealed a mildly elevated white blood cell count of 12.4, she had normal electrolytes, and a d-dimer was within normal limits. Her troponin was elevated at 22.2 ng/ml (range .006–.060 ng/ml).



DR. LISA MERCK: The troponin is markedly elevated. While this is likely a myocardial infarction, what other diagnoses did you include in your differential?

DR. BLACKWOOD: The cardiac troponin, found in both the sarcomere and the cytosol of cardiomyocytes, is released into circulation as a byprouct of irreversible myo-cardial cell injury. Necrosis of the cardiomyocyte can be due to a number of processes. Our

patient had sudden onset of pain and consequently we were also concerned about an acute aortic dissection, which is noted to have a troponin elevation in almost 20% of cases. (1) Additionally, acute pulmonary embolism commonly results in an elevated troponin due to a combination of factors, including right ventricular strain. (2,3) While lower on our differential, we were unable to use the Pulmonary Embolism Rule-Out Criteria (PERC) rule due to her use of exogenous estrogen. Consequently, we obtained a CT, which demonstrated both a normal aorta, a normal appearing heart, and was negative for a significant segmental pulmonary embolism. (4,5) Other causes of an elevated troponin in a non-ischemic event include heart failure, cardiac inflammatory syndromes such as myocarditis, endocarditis, and pericarditis, as well as infectious and autoimmune processes, trauma, chemotherapy, and a number of other diseases and syndromes. (6) These causes were not considered relevant to our patient's presentation.

DR. LAWRENCE PROANO: Given this data, it appears that the patient was indeed having a myocardial infarction. What are the indications for going directly to the catheterization lab for this patient?

DR. BLACKWOOD: Patients who are having an ST elevation myocardial infarction (STEMI) should go to the catheterization lab emergently as outcomes are improved for these patients. Data suggests that patients with a non-ST elevation myocardial infarction (NSTEMI) can proceed to the catheterization lab urgently (24 hours and longer) unless they demonstrate an emergent need, defined as hemodynamic instability, a witnessed arrest, mechanical complications such as a valvular insufficiency, acute LV dysfunction and heart failure, sustained ventricular tachycardia, or dynamic ST-T wave changes. Additionally, patients with a rising troponin and stuttering chest pain and unstable angina need urgent catheterization and revascularization. (7, 8)

DR. THOMAS GERMANO: What was your initial treatment for this patient's acute MI?

DR. BLACKWOOD: The patient had already received an aspirin at the triage area of the emergency department. After her CT, she received clopidigrel and was begun on an intravenous heparin drip. A bedside echocardiogram was performed which demonstrated a reduced left ventricular ejection fraction (40%), as well as anterior, anteroseptal, apical and inferoseptal hypokinesis.

DR. ALISON MACGREGOR: This patient had only 1 cardiac risk factor—hypertension—and was on unopposed estrogen. It seems unusual that she would have an ischemic event. What do you think led to her myocardial infarction?

DR. OTTO LIEBMANN: While coronary artery disease due to atherosclerosis is the most frequent cause of a myocardial ischemic event, there are gender-based differences in both the presentation and cause of a myocardial infarction. Plaque rupture is less common in women then in men, while plaque erosion is seen more frequently in women, and particularly in younger women. Non- atherosclerotic disease is increasingly recognized as a cause of myocardial ischemia. In patients with an acute coronary syndrome, up to 10% of patients undergoing coronary angiography are negative for obstructive epicardial coronary artery disease due to atherosclerosis or a "culprit" lesion. (9) A number of clinical entities causing non atherosclerotic MI exist including coronary arteritis from infectious and /or connective tissue disorders, coronary aneurysm, congenital abnormalities, substance abuse (cocaine), fibrous proliferation following transplantation and cardiac surgery, Takotsubo cardiomyopathy, as well as systemic metabolic disorders. (10) Additionally, spontaneous coronary artery dissection (SCAD), vasospastic angina, and coronary microvascular dysfunction are increasingly recognized as causes of ischemia in women without evidence of obstructive epicardial CAD. (9) Given the young age of this patient, the sudden onset of pain, and a lack of multiple CAD risk factors, we were concerned about Takotsubo's cardiomyopathy, SCAD, and, while less likely, vasospastic angina.

DR. JORDAN WOLFE: What transpired overnight and did the patient go to the catheterization lab?

DR. STEFI LEE: The patient was pain free when she arrived in the CCU. She had another episode of squeezing chest pain overnight without ECG changes and received nitroglycerin and lorazepam with good effect. Her troponin peaked at 72 ng/ml and by the following morning had dropped to 38 ng/ml. A left heart catheterization the following morning revealed a dissection of the left anterior descending (LAD) artery with a 99% mid LAD stenosis and TIMI 1 flow. Intravascular ultrasound revealed an intramural hematoma. The patient's other coronary arteries demonstrated only minor irregularities. The patient received 2 drug eluting stents (DES) with excellent results (TIMI 3 flow).

DR. ELIZABETH SUTTON: This patient had minimal cardiac risk factors. Do you think a case such as this can have an impact on risk-stratification tools used in the emergency department?

DR. LIEBMANN: This is an important consideration. In one recent retrospective study, 75% of patients with SCAD had one or fewer atherosclerotic disease risks factors. While our patient's ECG was abnormal, frequently ECGs in SCAD are non-specific and initial troponin levels are negative. Commonly used risk-stratification tools such as the HEART score or the Emergency Department Assessment of Chest Pain score could underestimate a young person's risk for disease. (11)

DR. WILLIAM BINDER: A spontaneous coronary artery dissection (SCAD) is an unusual cause of a myocardial infarction. What are the causes of coronary artery dissection and how often does it occur?

DR. BLACKWOOD: Spontaneous coronary artery dissection was first reported in 1931, and until the past decade was considered to be a rare diagnosis. New techniques used during coronary imaging, including intravascular ultrasound and optical coherence topography, has led to an increased frequency of the diagnosis. (9) SCAD has a reported prevalence of 0.2% - 4.0% of all patients undergoing coronary angiography and has been reported in approximately 10% of women under 50 who present with ACS or AMI (with one Japanese study suggesting 20% of women under 50 had the disorder). (9,12,13,14) SCAD accounts for over 40% of cases of myocardial ischemia in pregnancy, and elevated estrogen and progesterone levels are believed to create both a hypercoaguable state as well as impair the integrity of vessel walls. (15, 16)

Triggers for SCAD include anything that can lead to increased shear stress and elevated blood pressure, including intense emotions, exercise, and the Valsalva response. It is felt that cathecolamine surge may lead to increased shear stress as well as injury to the vascular intima. (9) Underlying causes include an association with fibromuscular dysplasia which is noted in up to 80% of patients with SCAD. (16)

DR. LAURA MCPEAKE: Today's patient had an LAD dissection. Is there a predilection for a particular coronary artery in SCAD?

DR. LIEBMANN: Spontaneous coronary artery dissection can occur in any of the epicardial arteries. Reports suggest that the LAD is most commonly involved, followed by the left circumflex and right coronary artery. (9) Multiple arterial lesions is unusual. Importantly, recurrence is not insignificant – up to 15% of patients have another spontaneous dissection within 2 years, and up to 25% will develop a recurrence within 5 years. (16)

DR. BRUCE BECKER: What was this patient's outcome?

DR. LEE: The patient did well and was discharged on hospital day 4 on dual antiplatelet therapy with aspirin and clopidogrel. Her ejection fraction was 45% and it was expected that it would improve. She was placed on atorvastatin and metoprolol, as well as amlodipine to ameliorate possible coronary artery spasm. She was seen 6 weeks post PCI and was doing well, with minimal atypical chest pain, and with plans to initiate cardiac rehabilitation. Further work-up to diagnose concomitant fibromuscular dysplasia using CT and MR angiography in her renal and cerebral vasculature was deferred for the time being, but will be considered at a later date.

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

VITAL EVENTS	REPORTING PERIOD		
	FEBRUARY 2017	12 MONTHS ENDING WITH FEBRUARY 2017	
	Number	Number	Rates
Live Births	869	11,610	11.0*
Deaths	917	10,096	9.6*
Infant Deaths	5	63	5.4#
Neonatal Deaths	2	48	4.1#
Marriages	279	7,159	6.8*
Divorces	236	3,033	2.9*
Induced Terminations	110	2,115	182.2#
Spontaneous Fetal Deaths	59	552	47.5#
Under 20 weeks gestation	53	479	41.3#
20+ weeks gestation	6	73	6.3#

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

Underlying Cause of Death Category	REPORTING PERIOD			
	AUGUST 2016	12 MONTHS ENDING WITH AUGUST 2016		
	Number (a)	Number (a)	Rates (b)	YPLL (c)
Diseases of the Heart	179	2,350	222.5	3,711.5
Malignant Neoplasms	192	2,219	210.1	5,642.0
Cerebrovascular Disease	39	438	41.5	482.5
Injuries (Accident/Suicide/Homicide)	70	870	82.4	13,101.0
COPD	41	452	42.8	417.5.

(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 1,056,298 (www.census.gov)
(c) Years of Potential Life Lost (YPLL).

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

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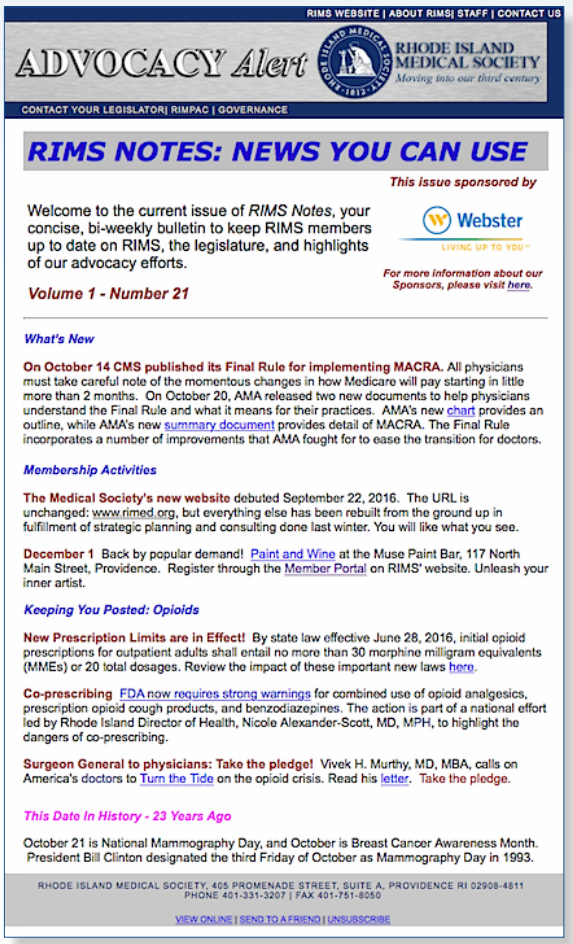

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RIMS NOTES: NEWS YOU CAN USE

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Welcome to the current issue of *RIMS Notes*, your concise, bi-weekly bulletin to keep RIMS members up to date on RIMS, the legislature, and highlights of our advocacy efforts.

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Volume 1 - Number 21

What's New

On October 14 CMS published its Final Rule for implementing MACRA. All physicians must take careful note of the momentous changes in how Medicare will pay starting in little more than 2 months. On October 20, AMA released two new documents to help physicians understand the Final Rule and what it means for their practices. AMA's new chart provides an outline, while AMA's new summary document provides detail of MACRA. The Final Rule incorporates a number of improvements that AMA fought for to ease the transition for doctors.

Membership Activities

The Medical Society's new website debuted September 22, 2016. The URL is unchanged: www.rimed.org, but everything else has been rebuilt from the ground up in fulfillment of strategic planning and consulting done last winter. You will like what you see.

December 1 Back by popular demand! Paint and Wine at the Muse Paint Bar, 117 North Main Street, Providence. Register through the Member Portal on RIMS' website. Unleash your inner artist.

Keeping You Posted: Opioids

New Prescription Limits are in Effect! By state law effective June 28, 2016, initial opioid prescriptions for outpatient adults shall entail no more than 30 morphine milligram equivalents (MMEs) or 20 total dosages. Review the impact of these important new laws here.

Co-prescribing FDA now requires strong warnings for combined use of opioid analgesics, prescription opioid cough products, and benzodiazepines. The action is part of a national effort led by Rhode Island Director of Health, Nicole Alexander-Scott, MD, MPH, to highlight the dangers of co-prescribing.

Surgeon General to physicians: Take the pledge! Vivek H. Murthy, MD, MBA, calls on America's doctors to Turn the Tide on the opioid crisis. Read his letter. Take the pledge.

This Date In History - 23 Years Ago

October 21 is National Mammography Day, and October is Breast Cancer Awareness Month. President Bill Clinton designated the third Friday of October as Mammography Day in 1993.

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Contact Sarah if you've missed an issue, sstevens@rimed.org.

Working for You: RIMS advocacy activities

July 6, Thursday

Lifespan Fellows' Orientation: RIMS Staff

July 10, Monday

Meeting with Department of Health regarding Diabetes Prevention Program

Board of Directors Meeting: Sarah J. Fessler, MD, President

July 11, Tuesday

RIMS Physician Health Committee: Herbert Rakatansky, MD, Chair

Meeting with ACLU-RI regarding warrantless search legislation veto strategy

July 12, Wednesday

Board of Medical Licensure and Discipline

Meeting with Brown University Office of Continuing Medical Education regarding DPP CME Event

Meeting of the Governor's Opioid Overdose Prevention Task Force: Sarah J. Fessler, MD, President; Gary Bubly, MD, Past President

Conference call with coalition members seeking gubernatorial veto of bill giving law enforcement warrantless access to PDMP.

July 13, Thursday

SIM Steering Committee: Peter A. Hollmann, MD, and RIMS Staff

July 14, Friday

Meeting with Nicholas Schilligo, Associate Vice President for State Government Affairs, American Osteopathic Association

July 17, Monday

Morning press conference hosted at RIMS' headquarters for 20 organizations allied with RIMS in opposition to legislation proposed by the Attorney General that would open the PDMP to law enforcement without need of a warrant. RIMS and the allied organizations called upon Governor Raimondo to veto the legislation, which had passed both houses of the General Assembly. RIMS President Sarah J. Fessler, MD, presided.

July 18, Tuesday

OHIC rate review public hearing

July 19, Wednesday

Workers Compensation Fee Task Force

RIMS Foundation Strategic Planning

July 24, Monday

Healthcare Quality Reporting Commission at Department of Health

RIMS Finance Committee: Jose R. Polanco, MD, Treasurer

July 26–29, Wednesday– Saturday

American Association of Medical Society Executives; Steven R. DeToy, Director of Government and Public Affairs, Presenter; Marc Bialek, Director of Membership, Attendee

RIMS CORPORATE AFFILIATES

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

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

www.nhpri.org

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

www.ripcpc.com

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

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Join your colleagues and add your voice

Membership in **The Rhode Island Medical Society (RIMS)** makes you a part of a dynamic network of physicians, residents, students, physician assistants, and healthcare professionals who represent, like you, the best of the profession.

The Rhode Island Medical Society's **annual CME event** was held on April 22 at the Warwick Country Club. This year's focus was on Building Practitioner Resilience in Challenging Times.

A **Rhode Island Academy of Physician Assistants** (RIAPA) town hall meeting was held April 11 at Kent Hospital on PA practice in the state. Representatives from the state and national PA organizations and the Rhode Island Department of Health and the Rhode Island Medical Society participated in a series of meetings and updates on recertification and looking at the future of PA practice in the state.

RIMS Leadership: Treasurer José Polanco, MD; Secretary Christine Brousseau, MD; President-Elect Bradley J. Collins, MD; President Sarah J. Fessler, MD; Vice President Peter A. Hollman, MD; and (seated) Immediate Past President Russell A. Settipane, MD.

The ABCs of membership

Advocacy: RIMS membership offers a cohesive platform for its members to speak with a unified voice on local, state and national issues through committee participation, policy development, legislative representation, educational conferences, and stakeholder seminars.

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Contact Marc Bialek, Director of Membership

A RIMS **Mix and Mingle event** was held at the Chapel Grille restaurant in Cranston on April 11.

RIMS gratefully acknowledges the practices who participate in our discounted Group Membership Program

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A History of Medicine in 50 Discoveries replete with wild and wonderful tales

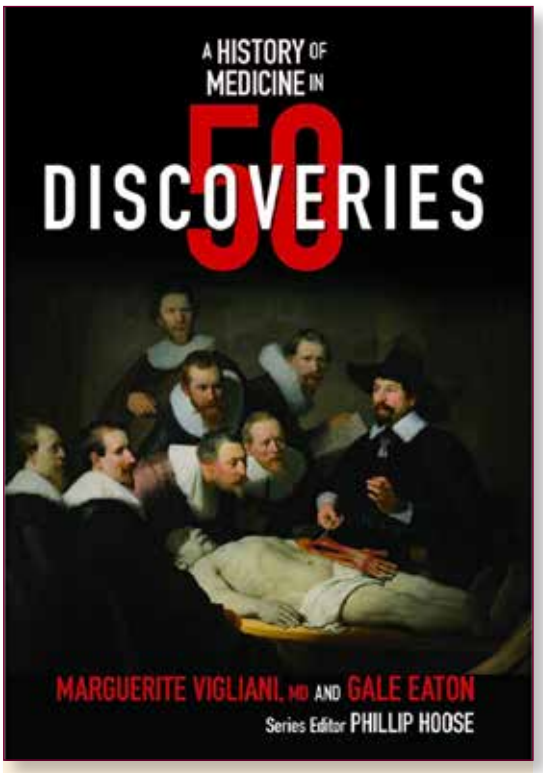
JOSEPH H. FRIEDMAN, MD

MARGUERITE VIGLIANI, MD, Rhode Island obstetrician and gynecologist, and Clinical Professor at the Alpert Medical School of Brown University, has published, with co-author, Gale Eaton, PhD, retired professor of children's literature in the University of Rhode Island's Graduate School of Library and Information Studies, a book on the history of medicine. In this era of Kindle, e-books and e-magazines, like this one, it is a joy to hold in one's hands a book that not only feels good, with a significant heft to it, but is beautifully designed and illustrated.

It is a history of medicine for middle and high school students, part of a series intended to grab kids' attention by focusing on 50 exciting stories in history, in this case, the history of medicine. Of course there cannot be a consensus on the 50 most important or the 50 most exciting stories, just as there can't be universal agreement on who should win a Nobel prize each year, but these are wonderful stories. I must admit up front that Marguerite is an old friend, who delivered two of my children, so that my review may be a tad short of "objective," but this is Rhode Island, where there are way less than 6 degrees of separation.

Marguerite thought that since I'm a neurologist I'd be most interested in the story on trephining, which traced the history of the practice, seen in skulls of people who had survived for many years after the procedure. But I actually liked best the story about Calmette, an early immunologist who will forever be linked with the BCG inoculation against tuberculosis. He was interested in developing an anti-snake venom treatment and was able, in 1894, to purchase a barrel full of cobras from India. As an ardent believer in the balance between evidence and experience-based medicine I was also taken by the story of al-Razi, a legendary Persian physician in the late 800's, who apparently published early, if not the earliest, controlled clinical trials. One demonstrated that epileptics who received sneeze therapy had fewer seizures than those who did not, and that bleeding reduced symptoms of presumed meningitis, compared to controls who were not bled. So much for evidence-based medicine. We also learn that Leonardo da Vinci lingered by an elderly dying man to perform a dissection as soon as possible. DNA, blood circulation, the discovery of penicillin and 40+ more topics are cleverly discussed, in a straightforward and engaging manner, that encourages the reader to think about the larger issues associated with each of these 50 medical advances.

This will make great summer or holiday reading for middle and high school students who might need a little encouragement to learn more about medicine and its history. ❖



BOOK IN BRIEF

Authors
Marguerite Vigliani, MD
Gale Eaton, Phillip Hoose (editor)

Audience
Teens, Young Adults

Publisher
Tilbury House Publishers; June 2017

Overview
Exploration of medicine begins in prehistory

From Mesopotamian pharmaceuticals and Ancient Greek sleep therapy through midwifery, amputation, bloodletting, Renaissance anatomy, bubonic plague, and cholera to the discovery of germs, X-rays, DNA-based treatments and modern prosthetics, the history of medicine is a wild ride through the history of humankind.

Brookdale Overview

Independent Living *An ideal retirement living experience*

- Spacious apartments with minimal maintenance
- Restaurant-style dining
- Plenty of planned activities every day

Assisted Living *The right choice for people who need extra help with daily activities*

- Qualified staff assists with taking medication, dressing, bathing, etc.
- Floor plans, from studio to two-bedroom apartments
- Activities and events for various levels of acuity

Alzheimer's & Dementia Care *Person-centered care for people at various stages*

- Programs that leverage the latest dementia care research
- A care philosophy defined by more than the symptoms of Alzheimer's & dementia
- An experienced staff who help residents thrive

Rehabilitation & Skilled Nursing *For short-term surgerical recovery or long-term rehabilitation*

- Around-the-clock, licensed nursing care
- Providing clinical resources in a comfortable setting that feels like home
- A mission and focus to helping residents get well and then get home as quickly as possible

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Personalized Living *For people who just need a little help with things*

- One-on-one non-medical services for home care needs
- Additional personal needs for those in assisted living or home such as escorts to doctor appointments and more

Home Health *For qualified people in need of therapy or rehabilitation — all in the comfort of home*

- Get Medicare-certified assistance from experienced professionals
- Many healthcare services such as wound care and stroke therapy

Therapy *Specialized programming personalized to encourage recovery*

- An emphasis on education, fitness and rehabilitation that helps seniors retain or enhance their independence
- Most insurances accepted

Hospice *Promoting comfort by addressing the full range of needs of patients and families*

- Primary focus of quality of life
- Specially trained staff help families and patients cope with overwhelming feelings accompanying end-of-life care

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

The Rhode Island Network

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Brookdale Smithfield
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Brookdale Pocasset Bay
Brookdale Sakonnet Bay
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Research evaluates impact of surgical modality on breast-specific sensuality and sexual function in cancer survivorship

Does the type of surgery used to treat breast cancer impact a woman's sensuality and sexual function in survivorship? New research from Women & Infants Hospital analyzed the association of surgical modality with sexual function and found that breast-specific sensuality and appearance satisfaction are better with lumpectomy and may correlate with improved sexual function post-operatively.

The research, "Breast-Specific Sensuality and Sexual Function in Cancer Survivorship: Does Surgical Modality Matter?," has been published in *The Annals of Surgical Oncology*. The research team was led by **JENNIFER S. GASS, MD, FACS**, chief of surgery at Women & Infants Hospital, a director of the breast fellowship at the Breast Health Center at Women & Infants, and clinical assistant professor at The Warren Alpert Medical School of Brown University. The team included former Women & Infants/Brown University fellows and residents Michaela Onstad, MD, now of MD Anderson Cancer Center, Sarah Pesek, MD, now of St. Peter's Health Partners Medical Associates, Sara Fogarty, MD, now of the Greater Baltimore Medical Center, and Kristin Rojas, MD, now at Maimonides Hospital; Ashley Stuckey, MD, of Women & Infants Hospital and the Warren Alpert Medical School; Christina Raker of Women & Infants Hospital; and Don Dizon, MD, of Harvard Medical School. This work was originally presented at the Society of Surgical Oncology in Houston, TX in 2015.

According to Dr. Gass, "In an era where we see more early-staged breast cancer patients choosing mastectomy, no study has previously addressed breast specific sensuality, defined as the breast's role during intimacy. We explored breast-specific sensuality and sexual function among women who underwent lumpectomy, mastectomy alone, or mastectomy with reconstruction and analyzed the association of surgical modality with sexual function."

The study sought to explore the long-term consequences of breast surgery focusing on appearance and sexuality. The research team conducted a cross-sectional survey of women who underwent breast cancer surgery for invasive breast cancer or ductal carcinoma in situ at Women & Infants Hospital. Questions addressed such topics as satisfaction with appearance of the breast, comfort with a partner seeing the breast without clothing, and importance of the breast in intimacy and sex before and after treatment for breast cancer.

Dr. Gass explained, "We hypothesized that outside of overall sexual function, breast-specific sensuality is an important aspect of women diagnosed with breast cancer. Our results demonstrated that when asked to recall their experiences before surgery, most women viewed their breasts as integral to intimacy. We now find that in survivorship, women report that breast-specific sensuality is significantly decreased regardless of the surgical modality, but that lumpectomy has the best reported outcomes."

While women with early stage breast cancer often are cured of their disease, they live with surgical consequences throughout survivorship. These data may guide surgical counseling beyond expected overall survival to include quality of life.

"There is no doubt that overall survival is our number one priority, but ensuring a good quality of life for cancer survivors is also vital, and that includes a 'breast-inclusive' perspective of sexuality in survivorship, " said Dr. Gass. ❖

Marcantano leaves top position at W&I

PROVIDENCE – **MARK R. MARCANTANO**, president and chief operating officer of Care New England's (CNE) Women & Infants Hospital, stepped down from his position on Friday, July 28th. He has been serving in that position since April 2014; previously he had been executive vice president and chief operating officer since January 2010.

His departure comes several months after CNE announced that it would merge with Massachusetts-based hospital group Partners HealthCare. According to newspaper reports, CNE President and CEO Dennis Keefe informed the company's senior management about the decision last week, and stated in a memo: "As you know, the critical changes taking place across Care New England to bring our system to financial stability are happening rapidly. In the midst of this constant change, there comes an important opportunity to assess accomplishments and the work ahead with future opportunity from both a personal and professional perspective."


CNE

Two consultants from the firm Alvarez & Marsal, Diane Rafferty and Arnie Schaffer, will be overseeing Women & Infants until an interim president is chosen. They will report to Dr. Jim Fanale, Care New England's chief clinical officer, according to Keefe's memo.

Prior to his tenure at W&I, Marcantano worked at Children's Hospital in Boston where he served as vice president of ambulatory and network services.

He holds a bachelor of science degree in finance from New York University and a juris doctor from Albany Law School of Union University. ❖

RIDOH announces $680,000 in loan repayment awards

The Rhode Island Department of Health (RIDOH) and the Health Professionals Loan Repayment Board announced more than $686,000 in loan repayment awards today aimed at strengthening the healthcare workforce and narrowing health disparities in Rhode Island by increasing the number of providers in medically underserved communities.

The awards went to 18 healthcare professionals, including physicians, dentists, nurses, and behavioral health providers. In accepting their loan repayment awards, the recipients have committed to practicing in medically underserved communities in Rhode Island for at least two years.

"The Health Professionals Loan Repayment Program is essential to our work to eliminate health disparities by ensuring access to quality health services and care in every zip code in Rhode Island," said **NICOLE ALEXANDER-SCOTT, MD, MPH**, Director of Health and Chair of the Health Professional Loan Repayment Board. "Health and medical education are expensive. This program helps remove barriers for our next generation of healthcare providers, and it also helps us draw the best and brightest to the healthcare workforce in our state.

Funding for the program comes from the federal government and from various health and community organizations. The Rhode Island Health Center Association solicited matching funds from many of these organizations.

"The recruitment and retention of health professionals is essential to having an adequate workforce to provide comprehensive medical services to Rhode Islanders. The loan repayment program is a vital tool which ensures this necessary supply of professionals to deliver care, especially within communities where access can be challenging," said Jane A. Hayward, president and CEO of the Rhode Island Health Center Association.

Contributions to the Health Professionals Loan Repayment Fund were made by the Rhode Island Foundation ($200,000), Neighborhood Health Plan of Rhode Island ($50,000), the Rhode Island Health Center Association ($50,000), Delta Dental of Rhode Island ($50,000), Landmark Hospital ($50,000), CharterCARE ($50,000), Blue Cross/Blue Shield of Rhode Island ($30,000), and UnitedHealthcare Community Plan ($25,000). Additionally, $175,000 in federal funding was contributed by U.S. Health Resources & Services Administration (HRSA) through a grant to RIDOH. ❖

Health Professionals Loan Repayment Program Award Recipients

Blackstone Valley Community Health Center

Alice Eyo *Registered Nurse*

Pedro Ochoa *Dentist*

Shannan Victorino *Registered Nurse*

Providence Community Health Centers

Mofoluso Agbelese *Advanced Practice Registered Nurse*

Beth Cronin *Physician*

Jessica Salak *Physician*

Emily White *Physician*

Rhode Island Department of Corrections

Jessica Bonanno-Hamel *Independent Clinical Social Worker*

Thundermist Health Center

Yamila Cos *Dentist*

Jessica Heney *Physician*

Vanessa Krasinski *Advanced Practice Registered Nurse*

Stephanie Avila *Certified Nurse Midwife*

Emily Collier *Advanced Practice Registered Nurse*

Allison Parkhurst *Marriage and Family Therapist*

The Providence Center

Marol Kerge *Advanced Practice Registered Nurse*

Emily Phrasikaysone *Registered Nurse*

Comprehensive Community Action Program

Kimberly Stokinger *Physician Assistant*

Jason Villa *Physician Assistant*

NEWS BRIEF

Insurance coverage for non-opioid treatments for pain signed into law

Legislation that requires insurance reimbursement for chiropractic and osteopathic non-opioid treatments for pain has been signed into law.

The legislation (2017-S 0789Aaa 2017-H 6124Aaa) states that patients with substance use disorders shall have access to evidence-based non-opioid treatment for pain. In turn, insurance coverage will be required for medically necessary chiropractic care and osteopathic manipulative treatment performed by licensed individuals.

The law goes into effect on April 1, 2018. ❖

VA research funded to help combat antimicrobial resistance

PROVIDENCE – A research pharmacist at the Providence VA Medical Center received notification July 13 of a Career Development Award from the Veterans Health Administration to study the feasibility of penicillin allergy testing in both acute settings and long-term care.

"Antimicrobial resistance significantly threatens Veterans' health and limits optimal patient outcomes," said **DR. KEVIN MCCONEGHY**, a clinician scientist with a clinical pharmacy background working in the VA Health Services Research and Development's Center of Innovation in Long-Term Services and Support at the Providence VA Medical Center. "Documented penicillin allergies are prevalent in our Veteran population, but the lack of direct research in this area limits our understanding and ability to manage these allergies more effectively."

McConeghy will evaluate a new penicillin allergy testing service in collaboration with nurse practitioner Julie White in the Providence VAMC's Allergy Clinic. They will conduct qualitative case analyses, and study drug allergy prevalence and effects on VA patients in long-term care. The results will help determine the feasibility of drug allergy testing in VA acute and long-term care settings. The award will help fund two years of salary for the research.

"Dr. McConeghy's research represents a novel contribution to the VA health care system," said **DR. GAURAV CHOUDHARY**, chief of research at the Providence VAMC. "The results could play an important role in VA antimicrobial stewardship efforts locally and across the nation."

The VA New England Healthcare System's Career Development Award assists junior investigators in developing their research careers, helping them to successfully compete for further research funding. ❖

PROVIDENCE VA MEDICAL CENTER PHOTO BY WINFIELD DANIELSON

Dr. Kevin McConeghy, a clinician scientist in the VA Health Services Research and Development's Center of Innovation in Long-Term Services and Support at the Providence VA Medical Center, received notification July 13 of a Career Development Award from the Veterans Health Administration to study the feasibility of penicillin allergy testing, and possible effects on patient outcomes.

PROVIDENCE VA MEDICAL CENTER PHOTO BY WINFIELD DANIELSON

A Tai Chi class exercises in the new Integrative Health and Wellness Center at the Providence VA Medical Center Friday, June 16, 2017. The class was the first to use the new center, which officially opened during a ceremony on July 6, 2017.

Providence VA Medical Center Opens Integrative Health and Wellness Center

PROVIDENCE – The Providence VA Medical Center opened a new Integrative Health and Wellness Center on July 6.

Located in the Providence VAMC's main hospital building at 830 Chalkstone Avenue, the center will include acupuncture, meditation, integrative health education, osteopathic manipulation, iRest Yoga Nidra, wellness massage, mindfulness, Qi gong/Tai Chi, Reiki and Yoga.

"Evidence shows that patients can benefit from taking care of both their minds and bodies, what we call 'Mind-Body wellness,'" said **DR. MARJORIE CROZIER**, a psychologist at the Providence VA Medical Center. "The Integrative Health and Wellness Center will help Veterans leverage body wellness to enhance mental health recovery, and leverage mental wellness to enhance physical recovery, depending on their needs." ❖

Recognition

Dr. John Buster inducted into ACOG Hall of Fame

JOHN E. BUSTER, MD, of Providence, a reproductive endocrinologist with Women & Infants Fertility Center and professor of obstetrics and gynecology at The Warren Alpert Medical School of Brown University, has been inducted into the Hall of Fame of the American College of Obstetricians and Gynecologists (ACOG). Dr. Buster was one of four inductees honored at ACOG's Annual Meeting in May for their "indelible mark" on the profession of obstetrics and gynecology.

Dr. Buster is a well-known international lecturer and has authored more than 200 scientific papers in the field of reproductive endocrinology and infertility. He served as director for the Society of Reproductive Endocrinologists and chair of its Practice and Fellowship committees. He has also served on the Fellowship Committee for the American Gynecological and Obstetrical Society and on the board for the American Society of Reproductive Medicine. ❖

Josiah "Jody" Rich, MD, MPH, wins Kahn lifetime leadership award

JOSIAH "JODY" RICH, MD, MPH, an infectious disease specialist at The Miriam Hospital for the past 23 years and the director and co-founder of the hospital's Center for Prisoner Health and Human Rights, has been honored with the 2017 Charles "Bud" Kahn, MD, Lifetime Leadership Award.

As a leader in efforts to combat opioid abuse, Dr. Rich serves as an expert advisor to Rhode Island Gov. Gina Raimondo's Overdose Prevention and Intervention Task Force. Dr. Rich, who lives in Providence, is also a professor of medicine and epidemiology at the Warren Alpert Medical School of Brown University.

William Corwin, MD, the interim chief medical officer at The Miriam, commended Rich "for being our social conscience, reminding us that we are not working hard enough to prevent 300-plus overdose deaths a year in Rhode Island."

The award, established in 2015, is named after Dr. Charles "Bud" Kahn, a retired endocrinologist who held leadership positions during his career at The Miriam. It is presented by The Miriam's Medical Staff Association. ❖

John Lonks, MD, named Outstanding Physician of the Year at Miriam

JOHN LONKS, MD, an infectious disease specialist, has been named the 2017 Charles C.J. Carpenter, MD, Outstanding Physician of the Year at The Miriam Hospital.

Dr. Lonks, of North Providence, is a graduate of the University of Medicine and Dentistry of New Jersey. He completed his residency at The Miriam and the Warren Alpert Medical School at Brown University and an infectious disease fellowship at Brown and several medical centers, including The Miriam and Rhode Island Hospital. He is certified in infectious diseases and is a researcher and associate professor of medical science at Brown.

The Miriam Hospital Medical Staff Association and hospital administration are sponsors of the award, which recognizes physicians, nominated by their peers, for outstanding contributions to medicine, leadership, professionalism and patient care.

The award is named after Charles Carpenter, MD, who served as The Miriam's physician-in-chief from 1986 to 1998 and became a leader in responding to the HIV/AIDS epidemic by establishing the hospital's Immunology Center. He has served as director of the Lifespan/Tufts/Brown Center for AIDS Research (CFAR) and as a professor of medicine at Brown. ❖

Jamsheed Vakharia, MD, receives teaching award at Miriam

JAMSHEED VAKHARIA, MD, a member of University Surgical Associates specializing in general surgery and minimally invasive laparoscopic surgery, has received the 2017 Riesman Family Excellence in Teaching Award at The Miriam Hospital.

The annual award recognizes a Miriam physician who teaches at The Warren Alpert Medical School of Brown University. He serves as a clinical assistant professor of surgery at Brown.

Dr. Vakharia, a Barrington resident, is a 1990 graduate of Aga Khan University Medical School in Karachi, Pakistan, who arrived at The Miriam in 1992 as an intern in surgery and completed his residency in 1998. He is a former Charles C.J. Carpenter, MD, Outstanding Physician of the Year honoree. ❖

Appointments

Ilse Jenouri, MD, named new Emergency Department medical director at Miriam

PROVIDENCE – The Miriam Hospital has appointed **ILSE JENOURI, MD, MBA, FACEP**, as medical director of the Emergency Department; it became effective July 1.

Dr. Jenouri, who completed her residency in emergency medicine with The Warren Alpert Medical School, joined the medical staff of the hospital in 2002 as an attending physician. She has served as the associate medical director of the ED for the past six years.

"Dr. Jenouri is an outstanding clinician, educator, and administrator, and is well-prepared to move into the medical director role," said Brian Zink, MD, physician-in-chief of emergency medicine at Rhode Island, The Miriam and Newport hospitals, as well as the president of the University Emergency Medicine Foundation (UEMF). "She has served superbly as the associate medical director for the past six years."

Calling Dr. Jenouri "a leader in our medical community," he noted that she has served as co-chair of the Lifespan pharmacy and therapeutics committee, chair of The Miriam's emergency preparedness committee, and as a member of the UEMF board of directors and its residency advisory committee. She has been an oral board examiner for the American Board of Emergency Medicine for the past 10 years.

"I am honored to be named the medical director of the ED of The Miriam," said Dr. Jenouri. "Visits to the ED are at historic levels. People are drawn to the Miriam because of its top-notch medical expertise and the nurturing care they get from the entire staff. We will continue to work hard to maintain the high levels of quality that people have come to expect."

Over the past six years, annual patient visits jumped nearly 20 percent and are projected to reach 70,000 in 2017.

UEMF presented her an "outstanding physician" award in 2013. In 2009, she was a recipient of a teaching recognition award from the Warren Alpert Medical School, where she is a clinical associate professor.

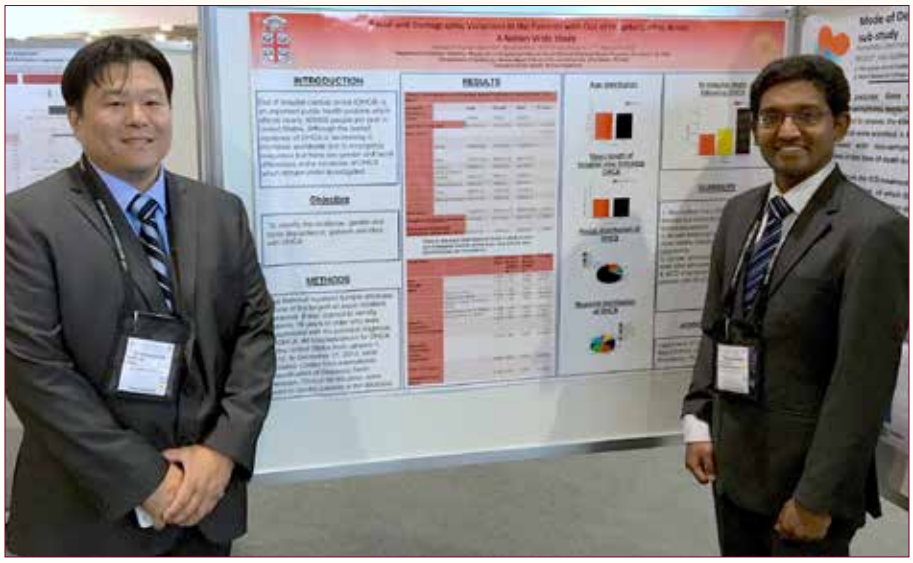
Dr. Jenouri succeeds Gary Bubly, MD, FACEP, who will assume the role of vice chair for clinical integration and innovation for UEMF. ❖

Dr. Maureen Phipps elected vice president of Foundation For Exxcellence in Women's Health

MAUREEN G. PHIPPS, MD, MPH, of Wrentham, MA, has been elected vice president of the Foundation for Exxcellence in Women's Health. Dr. Phipps is chair and Chace-Joukowsky Professor of Obstetrics and Gynecology and assistant dean for Teaching and Research in Women's Health at The Warren Alpert Medical School of Brown University, professor of epidemiology at the Brown University School of Public Health, and chief of obstetrics and gynecology at Women & Infants Hospital of Rhode Island and Care New England Health System.

The Foundation for Exxcellence in Women's Health was originally founded by the American Board of Obstetrics and Gynecology (ABOG) in 2004 to improve women's health through innovation in education, research, and technology. Today, the Foundation brings information and resources to ob/gyn physicians that they can use to impact care, through helping women stay healthy and strengthening and supporting families and communities.

Dr. Phipps' research focuses on improving the health of vulnerable populations. Her research interests include adolescent pregnancy, pregnancy outcomes, postpartum depression, prenatal care, contraception, and reducing disparities. She is an associate editor for the *American Journal of Obstetrics and Gynecology* and past chair of the American Congress of Obstetricians and Gynecologists Committee on Health Care for Underserved Women. ❖



Rhode Island Hospital physicians Dr. Anthony Chu, left, and Dr. Karuppiah Arunachalam, stand in front of a research poster they presented at the European Heart Rhythm Association CARDIOSTIM conference, held in Vienna, Austria, recently. The poster reported on the incidence, and demographic and racial variations in patients with out-of-hospital cardiac arrests for the year 2012-2013 based on the National Inpatient Sample database.

Appointments

G. Dean Roye, MD, named new chief medical officer at Miriam

PROVIDENCE – The Miriam Hospital has appointed **G. DEAN ROYE, MD**, a veteran surgeon at the hospital, as senior vice president of medical affairs and chief medical officer, effective August 7, 2017.

Dr. Roye joined Lifespan in 2000 as an attending surgeon for The Miriam and Rhode Island hospitals, with a specialty in laparoscopic and bariatric surgery. For the past four years, he has served as director of general surgery for the hospital and previously he was the director of the bariatric surgery program at Rhode Island Hospital.

A graduate of the University of Miami Medical School, Dr. Roye completed his residency in general surgery at the University of Alabama and his fellowship in laparoscopic surgery at the Warren Alpert Medical School of Brown University.

Throughout his career, he has devoted himself to training future generations of medical practitioners. That has earned him the "Dean's Teaching Excellence Awards" at the Alpert Medical School, where he is an associate professor of surgery, as well as the Riesman Family Excellence in Teaching Award at The Miriam. He is also an adjunct clinical assistant professor at Bryant University's physician assistant program.

"I'm honored to be appointed as The Miriam's new chief medical officer," Dr. Roye said. "My clinical experience as a surgeon and my administrative experience as the director of surgery will add value to my role as the chief medical officer. I'll have a seat at the table and be able to weigh in on system-wide solutions to problems and move things in a direction that I think are helpful."

He added that surgery is "in my DNA" and he hopes to continue to do so in his new role.

Dr. Roye succeeds William Corwin, MD, who served as The Miriam's chief medical officer from 2008 to 2013 and again, on an interim basis, since 2016.

Dr. Roye lives in the Edgewood section of Cranston with his wife and four children. ❖

Nicola Francalancia, MD, cardiac surgeon, joins Southcoast

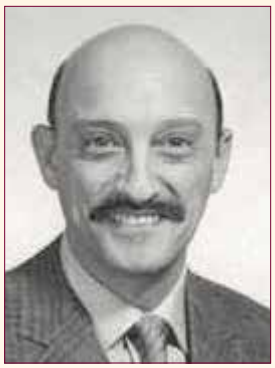
FALL RIVER, MASS – Southcoast Health announced on July 17 that **NICOLA FRANCALANCIA, MD**, cardiac surgeon, has joined Southcoast Physicians Group.

Prior to joining Southcoast Health, Dr. Francalancia was a member of Chicago-based Cardiac Surgery Associates and the Chief of Cardiovascular Surgery at MacNeal Hospital in Berwyn, Ill. He also concurrently served as Clinical Associate Professor of Surgery at Loyola University.

Dr. Francalancia holds undergraduate and graduate degrees in Engineering from The Pennsylvania State University and obtained his MD from The Johns Hopkins University School of Medicine. He completed residency in general surgery at Vanderbilt University Medical Center before completing a thoracic surgery fellowship at Deaconess Hospital/Harvard Medical School. He also completed a research fellowship in Cardiothoracic Surgery at the University of Pittsburgh and a clinical fellowship in Cardiovascular Surgery at the University of Toronto.

Dr. Francalancia is certified by the American Board of Thoracic Surgery. He is a fellow of the American College of Surgeons and is a member of the Massachusetts Medical Society and the Society of Thoracic Surgeons. ❖

Obituaries



DR. ERNESTO D'AGOSTINO, 93, of Narragansett, passed away peacefully on June 28. He was the husband of Judith (Papa) D'Agostino for 52 years. Born in Buenos Aires, Argentina, Dr. D'Agostino worked at South County and Newport Hospitals for many years before retiring. He was an avid beachgoer, world traveler and loved to read, but most of all he loved spending time with his family.

Besides his wife, he is survived by his children Gregory and Cristina D'Agostino and his loving grandchildren Abigail and Olivia Sweet.

Donations in his memory can be made to Hope Hospice & Palliative Care, South Team, 143 Main Street, Wakefield, RI, 02879.

GISELA WALTRAUD (BLASBERG) RYAN, MD, 85, died peacefully on July 11, 2017, at Southgate Assisted Living in Shrewsbury, Mass. She was the beloved wife of the late Dr. Robert M. Ryan. Born near Cologne, Germany, she was the daughter of the late Max Blasberg and Elfriede (Hindrichs) Conrads. She lived in Barrington for 36 years, and worked locally as a radiologist at several private practices and the Providence VA Medical Center.

She was an avid walker, skier, skater and bicyclist, enjoyed track and field, and danced at Festival Ballet, whose Nutcracker she attended regularly.

She is survived by her son, Michael Ryan, of Providence; her daughter, Maura E. Ryan, MD, of Chicago, and her sister-in-law, Sister Patricia Ryan, CSJ, of Brentwood, NY.

Gifts in her honor can be given to the JHC Hospice of Shrewsbury, Massachusetts at http://jewishhealthcarecenter.com/make-a-donation.