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The why of neurological reflexes

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There is a natural tendency to think that things exist for a reason, especially in trying to understand evolution. The Darwinian concept of survival of the fittest leads people to wonder and theorize about peculiarities found in nature that seem to have no survival value. Of course, if they simply have no negative survival value the trait may endure forever, unchanging until there is some positive or negative value that attaches to the trait. I have read of wonderment that the appendix exists in modern man, a presumably vestigial part of the intestine, without an identifiable function, that occasionally leads to a potentially mortal condition. Thus, an appendix has a negative survival value, as best we understand, but small. Perhaps there is some benefit, in an as yet unknown immune or hormonal role.

As a neurologist I have puzzled for years over certain neurological reflexes. Is there some value in their existence? Of course I puzzle over the “major” reflexes, the ones that are used every day in clinical neurology, such as the deep tendon reflex or the Babinski reflex. Why should a muscle contract uncontrollably when tapped? Why should the large toe go up or down when the sole of the foot is stroked? These serve no identifiable functional role, but seem to have evolved in parallel with the nervous system. I’ve had a greater interest in the less commonly used reflexes like the palmo- mental and the corneo- mandibular but also in a genetic reflex that runs in my own family, photic-reflexive sneezing.

I had never heard of “sun sneezes” until a wonderful and entertaining letter was printed in the New England Journal of Medicine many years ago. Their editorial policy concerning letters to the editor was, I think, a bit more liberal than it is currently. “Sun sneezes,” more technically called, “photic-reflexive sneezing,” is a reflex sneeze precipitated by bright sunlight. It’s fairly common and although I had never heard of it before, many who I asked about it were well aware. I do not have this reflex, although I do sneeze a lot, but two of my three children have it. I never noticed that they had it until I shared my discovery from the Journal, and two told me that they had “sun sneezes” and my observation confirmed this.
This lack of observation on my part is something that is always in the back of my mind when seeing patients: “What am I missing?” “What am I not seeing?” I also wonder just why in the world such a reflex should exist. I’m sure someone else is wondering what its pathways are.

Occasionally I set myself an exercise. How many reasons can I find for a particular reflex? Usually the answer is zero. What is the survival value of a sun sneeze? What brain-spinal connections are short-circuited to cause the palmo-mental reflex, in which a mildly uncomfortable scrape of an object on the palm produces a contraction in the mentalis muscle (a chin muscle of little use) on the same side? When I think of sun sneezes and evolution, I imagine some poor guy walking out from the shade of a forest into the savannah, where it’s bright and sunny, sneezing and getting eaten by a lion. Perhaps sun sneezes are associated with faster reaction times, or better vision, allowing the sneezer to better detect or respond to a threat caused by the sneeze? Maybe sun sneezers taste bad or cause diarrhea and the sneeze is a warning to a would-be predator that eating this particular homo sapiens would be a bad idea. Or, perhaps sun sneezing might be viewed by animals as a boast, “Here I am, come and try to eat me,” and thus an indirect warning. Since this peculiar reflex runs in my family, although it may reflect my wife’s genes rather than my own, perhaps this reflex is associated with higher intelligence, greater diligence or have a survival value for the rest of the village. If this guy isn’t eaten, it’s safe to go out.

Pain reflexes serve an obvious purpose. When we touch something very hot, we withdraw the hand a very short time before the pain hits. We blink when something approaches the cornea. We don’t think about it. It happens on its own. And it’s clearly very protective. Blinking with corneal stimulation, as when a breeze blows into it, or a tiny foreign object is lodged on it, causing a blink and a tear to wash out the object or lubricate the surface is useful. The pupil contracts with light, which reduces stimulation of the retina, a good thing, but what advantage is there to have the pupil contract when focusing on a near object? Why should the ipsilateral testicle contract with a brisk stroke down the inner thigh of a man? It’s hardly protective, although maybe it was 20,000 years ago. The corneo-mandibular reflex involves forced eyelid closure (generally elicited by stimulating the cornea), which causes an immediate contraction of the contralateral pterygoid [jaw] muscles which pull the jaw to the side of the contracting pterygoids, another reflex in search of a utilitarian explanation, other than providing a question to stump neurology residents.

When I ponder questions like this, I tend to think of it akin to an IQ test, which I apparently do rather poorly on. It’s the way I feel when I confront a New York Times crossword puzzle. On the other hand, it makes clinical practice more interesting, and that might, indirectly, make me a better clinician. There are always questions to answer, and thinking is what we like to believe our brains were designed to do.

I think of Faraday, one of the great physicists and science teachers of all time. He gave six of the most famous lectures in science history, using over a hundred observations on a lighted candle to illustrate how science worked, to secondary school students and non-scientists. Faraday noted that observations should trigger two questions: “What is the cause?” “Why does it occur?”

Physics and biology are different. Evolution is the result of seemingly random occurrences, restrained by certain rules and refined by raw experience. Perhaps sun sneezes are linked to other phenomena that have survival value? Perhaps future scientists may answer these questions. Perhaps not. The answer may not matter. I am content to think about the questions, an endeavor which is always useful.

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The Location of the Aronson Tree
SUTCHIN R. PATEL, MD; ANTHONY A. CALDAMONE, MD

In last month’s journal, the article, “The Aronson Tree and the Roots of Brown’s Medical School” challenged the reader to find the location of the Aronson Tree. It is located at Brown University next to the entrance of the Arnold Laboratory on Waterman Street. The photograph at left can help further identify the *platanus* tree that was raised from a seedling that came from the original Tree of Hippocrates from the Greek island of Kos and planted by Dean STANLEY M. ARONSON, MD, the medical school’s founding dean.

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Is importation of drugs from Canada the answer?

KELLY ORR, PharmD; RITA MARCOUX, MBA, RPh

Increasing medication costs have driven patients to seek alternative avenues to traditional pharmacy distribution systems for filling their prescriptions. Widespread constituent frustration due to the cost of medications in the United States has resulted in a wave of state-sponsored legislation supporting the importation of medication from other countries, in particular Canada. Canada continues to attract the attention of United States residents as a cheaper, safer alternative outlet for their medication. Self-employed groups and municipalities are circumventing laws on importation and offering benefits that include medications from outside the United States. Patients are individually seeking prescription medications through pharmacy internet sites claiming to be Canadian in origin. While the cost of medications in foreign countries may be less expensive, there are many factors worth considering in regards to foreign acquisitions which include, but are not limited to, the safety and efficacy of these medications, including purchases from Canada.

The Food Drug and Cosmetic Act (FDCA) of 1906 and its amendments are the safety net for our current drug approval and distribution process. These laws work to strengthen the manufacturing and distribution systems to ensure that the supply of United States medication is safe and effective. The Prescription Drug Marketing Act of 1987 banned the re-importation of medications into the United States, with exemptions by manufacturers who manufactured the medication or for emergency use.1 The Drug Supply Chain Security Act of 2013 was passed in an effort to guarantee the pedigree of medications distributed through the system. This act requires entities participating in the distribution systems to have the ability to track and trace the pedigree of a medication from production through dispensing.2 These amendments were passed to ensure the safety of United States medications and minimize the counterfeit, adulterated, misbranded, reduced potency, or expired medications that might otherwise reach United States patients. Protection of United States patients from harm has not prevented the federal government from allowing the importation of medications from Canada. The Department of Homeland Security Appropriations Act of 2007 includes a provision that allows the importation of a Food and Drug Administration (FDA) approved medication from Canada. The provision stipulates that medication may not exceed a 90-day supply and the individual must carry the medication on their person. This act prohibits controlled substances or biologicals from being imported.3 However, the Controlled Substance Act does allow for a personal use exemption for controlled substances but a patient is limited to 50 dosage units which again must be transported on person, not shipped into the United States.4

The exemption allowing for personal importation of medications from Canada is of limited value for most United States patients. The demand for access to these less expensive prescription alternatives has been growing throughout the country. In December 2017, Kaiser Health News chronicled the growing number of entities, such as school systems, municipalities, and cities, that are quietly offering their employees the option of using foreign medications at a reduced employee contribution to healthcare by reducing deductibles and copays. Employers cited these cost savings as enabling the continuation of their employer-sponsored health plans.5 A Kaiser Family Foundation poll in 2016 reported 8% of respondents had or knew individuals who had used a non-United States entity for their medications.5 Currently nine states, Colorado, Louisiana, Missouri, New York, Oklahoma, Utah, Vermont, West Virginia, and Wyoming have submitted legislation to operate state-administered wholesale operations with the intention of importing medications from Canada and selling to pharmacies.6 Vermont’s bill was passed by the legislature but is currently being examined by the Governor’s office as to the implications of importation on Medicaid and other federally funded programs.7

For those patients with geographical limitations preventing personal importation, individuals across the country often look to obtain lower cost prescription drugs from Canada through internet sites. Concerns regarding the authenticity of “Canadian” drugs coming into the country via online pharmacies have been raised as legislative debate ensues in the states. The National Association of Boards of Pharmacy (NABP) conducted a review of 108 websites between July 1, 2016 and June 30, 2017 that included “Canada” or “Canadian” as part of their advertised name or URL. The purpose of this review was to validate that medications sold by these “Canadian”-identified websites originated from non-Canadian pharmacies that distributed medications that had not been approved by Health Canada. NABP’s review found 80 websites [74%] included language that their medications were not from Canada, they had not been approved by Health Canada nor were they legally sold.
within the country itself. The remaining websites omitted information regarding origin of the medication used to fill the prescriptions.

Fifty-four of the 108 (50%) online pharmacies included in this review provided India or a combination of India and other countries, such as Hong Kong and Singapore, as the country in which the medication was manufactured, or from where the internet site purchased their medications [which may be different than the country it was manufactured in]. Various countries were cited as the origin [location] from which the medication was shipped to the pharmacies; however, 22 (20%) listed unspecified locations abroad while 28 (26%) omitted origin of distribution altogether. These unidentified sources and origins of distribution increase the likelihood of counterfeit, adulterated and misbranded products reaching United States patients. Also, none of the 108 websites reviewed required a valid prescription and 29 (27%) of these internet-based pharmacies were dispensing controlled substances. This is increasingly problematic as healthcare professionals work to prevent the diversion of narcotics that is fueling the opioid epidemic in the United States. Each of the pharmacies reviewed in this report appear to be neither Canadian, nor operating within the confines of United States or Canadian law.

These NABP findings support concerns that have been raised regarding the authenticity of Health Canada products actually making it to the United States. The need for affordable medications is often balanced against the safety concerns presented by importation of medications. As an example, an online pharmacy named Canada Drugs was fined $34 million for importing unapproved drugs, including counterfeit oncology medications to the United States in April 2018. Though claiming to be Canada’s largest internet pharmacy, its drugs were sourced from around the globe.

NABP accredits United States internet pharmacies through the Verified Internet Pharmacy Practice Sites [VIPPS] program. Accreditation ensures that the proprietor is operating as a safe and legal pharmacy. Full criteria and listing of approved pharmacies can be accessed through the VIPPS website [https://nabp.pharmacy/programs/vipps/]. Approved pharmacies have met the criteria which reviews pharmacy practice standards, safety, quality, security, and legal compliance by the pharmacy. VIPPS accreditation seals will be displayed on internet pharmacy sites that have been reviewed and have met the NABP criteria. All future VIPPS applicants must first apply for a .pharmacy domain, also signifying the legitimacy of the internet pharmacy within its internet address.

VIPPS accreditation and .pharmacy recognition is an important tool for patients looking to utilize safe and legal online pharmacy services. As of June 2017, NABP reports that 95% of the approximately 12,000 pharmacy sites reviewed are functioning outside of recognized U.S. pharmacy practice standards and laws.

The focus on Canadian medication should be reviewed in context to the current United States health system. Health Canada is a universal health plan that does not include medication coverage. Residents of Canada acquire their medication through public and private plans that vary across the provinces, with some residents having no medication coverage. The cost of medication in Canada has been reported to be second only to those of the United States. The lack of a unified purchasing system eliminates the ability to negotiate deep discounts for their medications. The pharmaceutical cost per capita in Canada is 25% greater than those of the next country with a high expenditure per capita, Germany. Canada’s Patented Medicine Prices Review Board [PMPRB] does moderate increases on patented medication by ensuring that medication drug increases are not excessive. In addition, the provincial governments implemented policies in 2010 that reduced the cost of generic medications but Canadian generic prices still remain high. The PMPRB’s report, Generic 360, reported that generic cost in the last quarter of 2016 was slightly less than the United States but the seventh highest in the Organization for Economic Co-Operation and Development. The cost advantage to importation from Canada might be less advantageous as the United States market has shifted and currently has a generic prescription rate approaching 90%.

Federally, importation of foreign medications, otherwise commercially available in the United States, is prohibited under the FDA. As individual state governments and their legislators consider to legalize importation of Canadian drugs, systems must be in place to ensure medications being shipped to their wholesale sites are from verified sources within Canada. Additionally, the safety and integrity of medications being sourced from other countries cannot be guaranteed by individuals purchasing from the internet. Increased monitoring of medications being distributed through internet websites is needed to protect those seeking cheaper venues for their life-saving medications as internet pharmacies claiming to ship “Canadian” internet pharmacies are likely not dispensing prescription medications approved by Health Canada or legally sold in Canada. Lastly, economics analysis should be performed to ensure the cost of importation ultimately meets the demand for less expensive medications. As various states investigate wholesaler legislation being proposed, the cost of building the infrastructure to become a wholesaler, with little to no control on the negotiated pricing of products in Canada, may be a tenuous way to ensure long-term control of medication cost for United States’ patients.
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If you blinked, you missed it. For a year and a half, Rhode Island had a comprehensive answer to the plight of the homeless alcoholic. The Recovery Navigation Program (RNP) was born in the Venn diagram overlap of addiction treatment, housing, state politics, city policy, fire departments, hospitals and Medicaid. In theory, everyone would benefit. Medicaid would save precious dollars by keeping its members out of the hospital, addiction treatment would be more accessible, EMS would be unburdened from picking these people up on a daily basis, and intoxicated people would now be off the streets and out of the Emergency Department (ED).

But it didn't happen this way. Perhaps we should have realized from the outset that this position would be unsettling to those surrounding it. For the RNP to function, the Venn diagram itself would have to be radically redrawn. Our community wasn’t ready for this.

The Conception

In 1972, Rhode Island enacted a series of laws that decriminalized public intoxication. One particular law (23-1.10.10), detailed that someone “incapacitated by alcohol” be brought to a designated facility for emergency treatment.

At the time this facility was the State Detoxification Center, or Ben Rush, as it was commonly known. It was located on the Pastore Complex in Cranston [you know, where the DMV is now]. It was publically funded through the state with federal grants. Access to Ben Rush was easy, there was no insurance authorization, medical staff was on site and intoxicated people could sober up and then transition to a detox bed. Most importantly, they accepted people intoxicated directly from the street, and cared for much of the state’s homeless population, many of them hundreds of times.

In the 1990s Ben Rush was becoming increasingly expensive and federal grants were drying up, a phenomenon not unique to Rhode Island. As the state closed its only public detox facility, it privatized alcohol detox to many independent contractors. These facilities quickly developed practices and policies making it complicated to access their services from the street. However, being intoxicated and in public was still defined by law as a medical condition. Now effectively barred from the detox centers and without any other options, they wound up in our EDs, like orphans on the church steps.

The Long Birth

And come to the EDs they did. In 2015, at Rhode Island Hospital alone, 177 high utilizers [patients who made five or more visits for alcohol intoxication] totaled 2,812 visits. Twenty-two of these patients made more than 30 visits each. While staggering, these numbers underestimate the phenomenon because they do not include those who made less than five visits, nor do they account for visits where they were admitted or days as an inpatient in the hospital. Here we find the frequent user at his most prolific, with much of the health expense attributable to a few individuals.

National data on this phenomenon mirrors our experience in RI. An estimated 9% of all ED visits are alcohol related. Only 12% of these resulted in admission, and many of these visits might have been avoidable. “Avoidable” however, turns out to be a loaded word, and implicit in this conversation is the question of, “What is a necessary ED visit?” While this question could be applied to any chief complaint, most visits for alcohol intoxication could be avoided if an alternative existed.

Local policy makers have long recognized this. Substantial work leading to the RNP began in 2012 in a State Senate subcommittee. This committee sought solutions and included a diverse group of people representing public safety, hospitals, homeless services, ED doctors, substance abuse experts and others. A law was passed in 2012 (23-1.10-20) allowing for a three-year pilot project to take persons “incapacitated by alcohol” to an alternative care facility. The Providence Center won a contract to provide these services, and the Providence Catholic Diocese offered the use of its building above a homeless shelter [Emmanuel House]. $250,000 of state money was allocated for renovations of Emmanuel House. It looked like it was ready to go.

Then nothing happened. The problem was, as it always is, the funding. There was no money stream to provide the services projected to be around one million dollars annually. No single entity [hospitals, insurers, Medicaid] would financially benefit enough by keeping these people out of the ED to make it worth their while to fund it. At the same time everyone lamented the expense in treating this population in the ED. The economic problem of the homeless alcoholic was everyone’s and no one’s at the same time.

Meanwhile the Affordable Care Act and Medicaid expansion was growing. This population we were seeing in the...
EDs was changing from an uninsured to Medicaid predominance. Now, the difficult question of “Who is paying for this?” became easier to answer. RI’s state Medicaid office recognized its responsibility and expenses. Through a federal Medicaid waiver, the RNP was shaken from its slumber and given the infusion of funding it needed to keep the doors open.

By autumn of 2016, the renovations at Emmanuel House were finishing up, and the new staff was working out the clinical protocols. The RNP was to open 7 days a week between 11a.m. and 11p.m. A registered nurse would be on site, as well as an administrator, recovery coaches and social workers. Providence EMS staff toured the facility and protocols were developed to facilitate EMS transfers. Providence would join San Francisco as the only communities in the country to operate sobering centers that accepted intoxicated people from EMS.

Here’s how it would work: An intoxicated client would come in and be assessed by the nurse on duty. If the client passed a brief screening exam including vital signs and a glucose check, he or she would be allowed to rest until reasonably sober. During this time, periodic assessments would be made much like nursing rounds in the hospital. Upon sobriety, the client would be offered detox referrals, case management and shelter beds for the night. If a medical condition arose, EMS would be called to take the patient to the hospital. A physician was on call to handle any questions about client care. All this was funded en bloc from Medicaid. There was no billing for services.

The Short Life
The RNP opened on December 1, 2016 and was quickly in a fight for its life. One immediate issue was finding staff comfortable with this new model. A number of patients transported by EMS were being turned away for a variety of reasons. This reluctance to accept patients soured the relationship between EMS and the RNP’s nursing staff from the start. Very few people were admitted in those early months. Sometimes days would go by without an admission.

Eventually a core staff of nurses (including one who was also an EMT) served the RNP better. No longer were they looking for reasons to send the patient out, but they were looking for reasons to keep the patient there.

However, the damage with the fire department had been done. While the leadership within the fire department promoted the RNP, the EMS crews on the street continued to take potential clients to the EDs. Ultimately, the EDs were convenient. The RNP often was not. There was always a chance that the nursing staff would reject the patient, and they would be sent to the ED anyways. In the end a few dedicated EMS crews were invested in the mission of the RNP, and over time most of the slow trickle of EMS drop-offs came from these few crews.

While the struggle to bring patients in was developing, the struggle to place patients after sobering grew. At the outset, the Department of Behavioral Health, Developmental Disabilities and Hospitals set data points that would determine the success and safety of the RNP. One of the main benchmarks was the percentage of patients placed in detox services. However, the very barriers the private detox centers imposed after the closure of Ben Rush also affected the RNP [which ironically was the community’s response to these barriers].

The first barrier was the availability of beds. To determine bed availability, caseworkers would call each detox center individually, as there is no centralized reporting center. Frequently beds were available but new patients were not accepted until business hours the following day.

However, the most restrictive barriers were the “medical clearance” and insurance authorization policies imposed by detox centers. Frequently, clients were told to go from the RNP to the ED for medical clearance. To be clear, these were clients who would have otherwise been discharged to the shelter had they not wanted detox. Medical clearance is a nebulous term that means different things to different detox centers. Some wanted labs drawn, some wanted toxicology screens and some even required psychiatric evaluations before admitting patients. It also became apparent that “medical clearance” also meant “insurance authorization.” These centers want their patients vetted, able to pay and only during business hours.

Furthermore, very quietly, in January of 2018, the state detox contract for uninsured patients expired. Clients without insurance then had no detox program available to them at all. Still, at the RNP, we were held to the metric of placing these clients in detox.

As the RNP census grew to almost 500 in the first year, it became apparent that many of our clients were undocumented immigrants [not on Medicaid], walking in or coming by an outreach van. At the same time the budget for the RNP was running at $70,000 per month, all funded through Medicaid. Medicaid was not getting a return on its investment, and there were no other financial supporters. Hospitals, municipalities, businesses and nonprofits were supportive in its mission but not in funding.

On August 8, 2017 Governor Gina Raimondo and Dr. Nicole Alexander-Scott, the director of the Department of Health, descended on the RNP with an entourage of politicians, advocates and TV crews. Quite ironically, the occasion was not related to alcohol abuse, but instead was the ceremonial signing of three bills addressing the opioid epidemic. The RNP was born into this climate. Public and media attention, funding, legislation and resources have been poured into the opiate epidemic. Alcoholism has taken a back seat (although it still kills more Americans than opiates), and the RNP fell victim to this. There is only so much money, media and attention that a community can give to substance abuse, and the RNP never developed the robust support that it needed in the shadow of opiates.
The Death of RNP

Death for the RNP came as it usually does for public health projects, in the form of decreased funding. In the spring of 2018, Medicaid, in a series of cost-cutting measures, changed the way it funded the RNP. Instead of bloc funds, it would create a billing structure so that the RNP would bill Medicaid clients for each visit. The problem was, undocumented immigrants made up 50 percent of the visits. Only able to bill for half the services, the RNP was doomed. It closed quietly on July 1st of this year. And with that our State’s innovative response to this national public health epidemic was quietly put to rest.

At the end it was open for only 18 months; 1,200 visits were made, about 30 percent of them by EMS diversion. There were no adverse medical outcomes. This was a success for all the clients served, just not for Medicaid.

When the state decriminalized public intoxication in the 1970s, it created a medical framework to deal with this problem. Now we are stuck in the medical model without the public infrastructure to address it as intended. At the RNP, we tried to demedicalize public intoxication. Instead we found out how difficult this was and how far reaching its ramifications are. If we are going to change this cycle for our patients, we are first going to have to change our community.

References

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Dr. Joseph H. Friedman and Dr. Charles Sherman reading RIMJ on their cell phones outside Black Lion Hospital, Addis Ababa University College of Health Sciences, Ethiopia, where they recently spent two weeks teaching. Dr. Sherman is also Program Co-Director of the fellowship in pulmonary and critical care medicine there.

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The Obstetrician/Gynecologist (OB/GYN): Revisiting the Past, Exploring the Present and Preparing for the Future

ROXANNE VREES, MD
GUEST EDITOR

The primary purpose of the American Board of Obstetrics and Gynecology (ABOG) is to, “advance women's health through the study and practice of Obstetrics and Gynecology.” Similarly, the American College of Obstetricians and Gynecologists (ACOG), a private non-profit organization with approximately 60,000 members nationally, is a strong advocate of high quality, evidence-based care, and fosters increased awareness among patients and providers of the ever changing issues facing women’s healthcare. Despite the guidance and support of these parent organizations, there have been significant changes to the field of women’s healthcare that has prompted close scrutiny of our specialty alongside residency training programs, to ensure that our current generation is adequately prepared for future practice.

A true landmark in the evolution of our specialty was the introduction of dedicated women’s hospitals. The first model, Lying-in hospitals, was established in Strasbourg, France in 1728. The development of similar hospitals followed in Great Britain and the United States with the primary goal of providing care to underserved populations. Women & Infants Hospital, the primary teaching hospital in obstetrics and gynecology and newborn pediatrics of the Alpert Medical School of Brown University, was founded in 1884 as the Providence Lying-In Hospital. At that time the hospital was used exclusively for maternity care and childbirth. While the hospital has undergone four location changes and rebranding in 1996 to become a part of the Care New England Health System, its core values of providing high quality, unbiased women’s health care have never wavered. What’s more, the institution has expanded its scope to include highly specialized services in breast care, infertility treatment, gynecologic cancer, pelvic floor disorders and prenatal diagnosis. Impressively, the Department of Obstetrics and Gynecology was recently ranked 11th in U.S. News & World Reports’ 2019 Best Medical Schools specialty rankings.

This month’s issue of the Rhode Island Medical Journal features timely and important perspectives on critical areas in the field of obstetrics and gynecology. “Prison: Pipeline to Preventative Health,” by DR. LUWAM Ghidei, SEBASTIAN Z. RAMOS, E. CHRISTINE BROUSSEAU, and JENNIFER G. CLARKE, highlights the important work that has been done at the local and national levels to improve access to necessary healthcare for incarcerated women, with particular emphasis on the remarkable accomplishments of Dr. Clarke, Medical Programs Director at the Rhode Island Department of Corrections, and her colleagues.

The Perspective article, “Current Threats to Contraceptive Access,” by DR. LEANNE FREE, KATHLEEN COHEN and REBECCA H. ALLEN, reflects on the very real and current threats to a woman’s fundamental reproductive health rights. While we recognize that the political landscape has great influence on access to contraception, we are hopeful that this discussion will bring to light the importance of all providers, not just Ob/Gyns, advocating for patients’ unrestricted access to family planning resources.

In response to the concerning trend of increased maternal mortality among high-resource countries such as the United States, DR. ERIKA WERNER and BRIDGET SPELKE examine the concept of the “Fourth Trimester of Pregnancy.” Their discussion implores all healthcare providers in Rhode Island, regardless of their chosen specialty, to seize the opportunity for maternal risk reduction and health promotion during pregnancy and beyond.

Similarly, in response to the current data on maternal deaths in our state, the featured article, “On the Future of Maternal Mortality Review in Rhode Island,” by DR. BRIDGET SPELKE, SEBASTIAN RAMOS, HOPE YU, MICHAEL COHEN and TANYA L. BOOKER, commends the Rhode Island Medical Society for its prior support of mortality review committees at the legislative level, while imploring our small state to take a big lead on both near misses and maternal death reviews.

The field of obstetrics and gynecology is rich, with a variety of subspecialties that have ultimately shifted the overall scope and practice of modern general Ob/Gyns. In the 1990s, greater than 90 percent of trainees chose a career as a general Ob/Gyn, as compared to 70 percent currently. As more and more graduates pursue fellowship training and are drawn to larger metropolitan areas, this creates shortages of providers...
and disparities in access to care in other locations. Rhode Island has certainly been impacted by this. Additionally, despite the changing landscape of our specialty, residency training programs have remained relatively unchanged. The article, “A Melting Pot of Medical Education,” by **DRS. MERIMA RUHOTINA and DAYNA BURRELL**, explores the challenges and solutions that exist for trainees and educators in a unique women’s Emergency Department. It highlights the importance of thoughtful integration of the education of our medical students and residents into our often fast-paced clinical environments.

As leaders in the field of women’s healthcare, we are poised at institutions like Women & Infants to transform the perceptions and expectations of the 21st-century specialist in general obstetrics and gynecology. Tackling important topics like those featured in this issue will enable our specialty and training programs to evolve and continue to meet the complex needs of our patients.

**Guest Editor**

Roxanne Vrees, MD, is Medical Director of Emergency Obstetrics and Gynecology at Women & Infants Hospital and Assistant Professor of Obstetrics And Gynecology at The Warren Alpert Medical School of Brown University.
Women detained in prisons, jails and juvenile centers represent an underserved population. In her highly acclaimed book *Jailcare*, Dr. Carolyn Sufrin explores how and why prison can paradoxically serve as a place where women find healthcare. As the rate of incarceration for women continues to increase, it is prudent to assess the current state of healthcare in correctional facilities and leverage this institution to link more women to care.

In December of 2017, women accounted for approximately 7% of the national detained population. While the rate at which women are incarcerated varies greatly from state to state, the number of women in prison has been increasing at a rate 50% greater than men since 1980. Notably, Rhode Island is the state with the lowest incarceration rate with 12 out of every 100,000 women incarcerated in 2014. As the smallest state with the lowest incarceration rate, Rhode Island is uniquely positioned to make large gains with optimization of healthcare for incarcerated women.

Incarcerated women disproportionately suffer from alcohol and drug abuse, sexually transmitted infections (STI), sexual and physical abuse, and mental illness, with rates of these conditions higher than those of incarcerated men. This paper will highlight the major disparities in women’s health care in the prison population nationally, the current interventions within the Rhode Island Department of Corrections (RIDOC), and the future steps needed to improve healthcare in incarcerated populations.

Ideally, healthcare in prison should serve as a safety net alongside a pipeline for preventative health to help women on the margins of society climb onto integrated, quality healthcare once they leave the system. The National Commission on Correctional Health Care (NCCHC) guidelines recommend several standards of OB/GYN care for detention centers including: systematic screening for gynecologic problems and pregnancies; initial health assessments including pap smears and pelvic exams; caring for the pregnant woman throughout her prenatal course; and assessing pregnant inmates for opioid use disorders. These encounters should strive to provide care and counseling that does not infringe on the reproductive rights of these women who are already marginalized when considering the poverty, addiction, violence, and racial oppression that characterize their lives. Importantly, this counseling should foster principles of reproductive justice allowing pregnant women to choose whether or not they desire contraception or if pregnant, continuation of a pregnancy, abortion, or adoption services.

The NCCHC recommends that correctional institutions recognize community standards for women’s health services. Accordingly, all women entering correctional facilities should be offered screening for sexually transmitted infections (STIs). In a 2008 study of women entering jail in Rhode Island, 33% tested positive for an STI at admission and 26% of all women had trichomoniasis. Detecting and treating women in correctional settings has an impact on community prevalence of these infections. For example, in 2011, correctional facilities accounted for up to 6% of reported syphilis cases in the United States. One correctional facility was able to demonstrate that prompt treatment of all syphilis cases in a jail can lead to a substantial decrease in the prevalence in the local community. RIDOC is currently working with the Rhode Island Department of Health (RIDOH) to offer urine-based STI testing to every woman who enters the facility, exemplifying the partnership between the RIDOC and the RIDOH in providing public health services to this population. In addition to STI screening, all women should be offered pregnancy testing within 48 hours of entering a correctional facility. According to the American College of Obstetricians and Gynecologists (ACOG), at any given time, approximately 6% to 10% of incarcerated women are pregnant and many first learn they are pregnant when they enter a correctional facility. In 2004, a federal survey found that 3% of women in federal prisons and 4% of those in state prisons were pregnant upon arrival. In a cohort of Rhode Island inmates, only 28% of sexually active women used birth control consistently and 83.6% had unplanned pregnancies. This speaks to the need of improving family planning services both inside correctional facilities as well as in the community. This population tends to have complicated pregnancies and is inconsistently provided counseling on options or access to termination services nationwide.

Women in prisons and jails disproportionately suffer from mental health disorders with up to 75% of incarcerated women having a mental health disorder. Additionally, more than 40% of female prisoners are found to abuse drugs at the time of their entry to correctional facilities. When incarcerated women with opioid use disorders are pregnant, they should be offered medication for addiction treatment (MAT) in correctional facilities. Although pregnant women...
incarcerated in Rhode Island have access to MAT, this is not a reality in most prisons and jails.7

Whether taken individually or as a whole, these disparities lead to poor outcomes and missed opportunities to address the healthcare needs of this marginalized population.11 The RIDOC has implemented multiple initiatives to address these disparities in an effort to foster incarceration as an access point for intervention. In Rhode Island, all women who are incarcerated have a medical intake that provides their medical history, medications and drug history, providing opportunities to address unmet health needs. A multidisciplinary team of healthcare providers, including nurse practitioners and physicians from various specialties provide necessary medical care. With respect to routine women’s healthcare, the RIDOC has onsite OB/GYN services, including prenatal care, contraceptive counseling, STI testing and treatment, breast and cervical cancer screening, and routine gynecologic care. Female inmates have access to LARC contraception, including hormonal implants and intrauterine devices as part of the RIDOC’s receipt of Title X funding for family planning and preventative health services, another example of the partnership between the RIDOC and the RIDOH. Since 2017, cervical and breast cancer screening has been facilitated by the Department of Health’s participation in the National Breast and Cervical Cancer Early Detection Program [NBCCEDP] funded by the Centers for Disease Control (CDC). This program provides low-income, uninsured, and underserved women access to timely breast and cervical cancer screening and diagnostic services.

As the rest of the nation contends with the opioid epidemic, prisons and jails have been identified as potential areas of access to addiction treatment. Rhode Island has been particularly affected by the opioid epidemic with rates of overdose deaths reaching 23.5/100,000, the 8th highest in the country.12 Rhode Island has been hailed as a model for how correctional facilities can offer therapies to incarcerated women. Specifically, a screening process during initial intake identifies inmates with opioid use disorders who are then offered treatment. Medication Assisted Treatment (MAT) programs such as those offered by the RIDOC are considered the most effective therapy for opioid addiction and Rhode Island leads the way in demonstrating why MAT should be the standard of care in correctional facilities.2,19

The antepartum period poses unique challenges in the care of incarcerated women. The RIDOC provides onsite obstetrical care by a board-certified OB/GYN. Their collaboration with Women & Infants Hospital, the 9th largest stand-alone obstetrical service in the country, allows for continuity of that care which also spans the peripartum and postpartum periods respectively. In the postpartum period, once they return to their correctional facility, inmates are allowed to express breast milk which may be provided to the infant by family members. Additionally, along with only 21 other states, Rhode Island outlawed the practice of shackling pregnant prisoners during labor and antepartum transport.3

While the RIDOC has set the bar high, barriers to providing comprehensive OB/GYN care for incarcerated women remain. Notably, the challenge of time is a factor, since the majority of women are only incarcerated for a short period. The Department of Corrections 2017 Annual Report shows an average pretrial length of stay of 23 days in Rhode Island, making it difficult to establish continuity of care and further perpetuating the cycle of loss to follow-up.13,20

Efforts are underway to improve the pipeline to continuation of care by collaborating with local healthcare organizations. An example of a successful model in continuity of care can be seen in the Human Immunodeficiency Virus (HIV) positive prison population in Rhode Island.11 A clear and direct pipeline to continuing HIV treatment and follow-up through strong collaborations with hospitals in the community, such as The Miriam Hospital, with expertise in the treatment of HIV, improved continuity of care with treatment post-release.21

The NCCHC recognizes that the number of female inmates is large and growing. Although delivery of quality healthcare that achieves community standards seems impractical in a system with limited resources, the RIDOC has made significant strides to comply with the standards of care that the NCCHC promotes. Similarly, correctional institutions nationwide have put forth initiatives to improve access to gynecologic care.10

There are many future opportunities that can help transition healthcare in prison into a pipeline to preventative care, starting from intake. The customized health form is an example of how newly incarcerated women should be screened (Table 1). Future endeavors could include engaging community providers to take care of these women once they leave the system. Correctional health services and women’s advocacy groups need to collaborate to provide leadership for the development of policies and procedures that address women’s special healthcare needs in Corrections with provision of pre- and post-release services.16

Perhaps a task force that encourages strong partnerships among public health, community, public assistance, and correctional agencies are needed to move forward with these initiatives. If gynecologic healthcare services are offered in correctional institutions in a streamlined manner with minimal barriers, healthcare in the prison setting may not only become comparable to standard community gynecologic care, but may, in fact, serve as a model to engage incarcerated women in their own health maintenance, truly establishing a pipeline to preventative care.
Taking a thorough history

- Inquiry into current women’s healthcare issues including the menstrual cycle, pregnancies, gynecologic problems, contraception, current breastfeeding, sexual and physical abuse, and a nutritional assessment.

Health maintenance exams

- Adherence to clinical practice guidelines for breast and cervical cancer screening.

STI screening

- CT/GC laboratory testing on women up to age 25, and when possible 35, and among pregnant women regardless of age, at receiving or as soon as possible unless the inmate is transferred from a facility where the testing was done. Facilities should review the yield of active syphilis screening within their institutions to determine whether laboratory testing is appropriate. Facilities should consider additional STI testing (i.e., HIV, Trichomonas vaginalis) for persons testing positive and newly diagnosed for CT/GC or syphilis.

Pregnancy test

- All women at risk for pregnancy should be offered a pregnancy test within 48 hours of admission.

Menopause

- Considering the aging of the prison population, correctional institutions need to address the unique health care needs of older women including menopausal symptoms.

Pregnancy counseling

- Comprehensive counseling and assistance are given to pregnant inmates in keeping with their desires in planning for their unborn children, whether they desire abortion, adoptive service, or to keep the child. It also addresses prenatal care and the nonuse of restraints during childbirth.

Contraception

- Women should be provided with nondirective contraception counseling, access to emergency contraception, and continuation of current contraceptive method while incarcerated.

Postpartum

- Correctional facilities need to facilitate contact visits for mothers with their infants to promote mother-infant bonding.

Breastfeeding

- Correctional facilities should make arrangements for postpartum women to either breastfeed or to pump, freeze, and transport breast milk for their infants.8

Postpartum depression

- Women who deliver while in custody and who enter a facility within 1 year of childbirth should be screened for and educated about postpartum depression and psychosis.

Parenting

- Counseling on parenting and child custody issues should be available.

Mental health

- Counseling and treatment needs to be available to address mental health issues including alcohol and/or drug use disorders.

Opioid use disorders

- Screen for opioid use disorders and offer MAT.

Counseling

- Considering the incidence of sexual and physical violence among the female inmate population, counseling to resolve issues of victimization and perpetration of violence against intimates needs to be available (e.g., conflict resolution and parenting skills).

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Unrestricted access to reliable and effective contraception empowers individuals to decide whether or not and when to become pregnant. The average desired family size in the United States is two children. In order to accomplish that goal, the typical woman will spend close to three years pregnant, postpartum, or attempting to become pregnant, and nearly three decades—more than three quarters of her reproductive life—trying to avoid an unintended pregnancy. To control their reproductive future, individuals must have a comprehensive understanding of and reasonable access to a range of contraceptive options. In 2011, the latest data available, nearly half of the 6.1 million pregnancies in the United States were unintended, meaning mistimed or unwanted, and most of these could have been prevented with better access to contraception. Unintended pregnancy rates are highest among poor and low-income women, women aged 18 to 24, and cohabiting women and are directly related to contraceptive access.

Effective, affordable contraception has immediate and long-term impacts on individuals’ right to plan their future, allowing improved caretaking of themselves and their families, as well as the ability to meet their educational, career, and financial goals. Furthermore, births resulting from unintended or closely spaced pregnancies can be associated with adverse maternal and child health outcomes such as delayed prenatal care, premature birth, and decreased rates of breastfeeding. Individuals may elect to use a wide variety of contraceptive methods over the course of their life, and when people are satisfied with their choice of contraception, they are more likely to use it effectively. Patients need to have full health insurance coverage for counseling and obtaining any contraceptive method they may safely pursue. However, the guarantee of contraceptive coverage is one that fluctuates with the political landscape. Unfortunately, disparities in reproductive health access, as well as threats by policymakers to restrict adequate provision of contraception, remain at the forefront of recent political debate, making it difficult for patients to freely choose a method they can use effectively and consistently. In this article, we will review the current state of contraceptive freedom in the U.S. and the myriad ways this human right is being threatened.

Since the mid-1990s, 28 states have required insurance plans to provide contraceptive coverage while federal rules applied in the remaining 22 states. This was expanded by the Affordable Care Act (ACA) in 2010; federal law now requires Medicaid, as well as most private health insurance, to cover comprehensive contraceptive care, as it was deemed a vital preventive health service for women by the Institute of Medicine. Importantly, this applies to coverage offered by employers that self-insure. Roughly 60% of insured workers in the U.S. are covered by self-insurers, and state laws are not allowed to regulate these employers, so the ACA’s regulation of these insurers was a big step toward ensuring contraceptive access. Rhode Island law requires that if insurers cover prescription drugs, they also provide coverage for Food and Drug Administration (FDA)-approved contraceptives. The ACA’s federal regulations are specific about requiring coverage for 18 different FDA-approved contraceptive methods, including emergency contraception and female sterilization. The ACA also stipulates that there can be no out-of-pocket costs to the patient. A major gap in these federal mandates is the lack of required coverage for male condoms and vasectomies. The ACA has spurred several states to not only match the federal regulations but to go further in requiring coverage for over-the-counter methods without a prescription, for extended supplies of contraceptives, and for male sterilization.

Despite these significant advances, the Trump administration attempted to pass regulations in October 2017 that would have made it much easier for employers to claim a religious or moral objection to providing contraceptive coverage for their employees. The courts blocked enforcement of these regulations based on the ruling that they are not in compliance with the ACA. Nonetheless, an older federal regulation still exists that does grant religious exemptions for a more strictly-defined group of employers. However, this does require that employees are able to receive contraceptive coverage from the same insurance company through alternative means.

Maintaining adequate, unrestricted access to contraception in the future is also uncertain due to threats to publicly funded family planning services. Title X is the only federal grant program solely dedicated to providing low-income
clients with affordable, much-needed reproductive health care. This includes annual exams, cervical and breast cancer screening, contraceptive education and provision, and testing and treatment for sexually transmitted infections, including HIV. Today, more than 4 million Americans rely on affordable family planning services that are provided through Title X. In recent months, some politicians have increased their efforts to deny public funding to Planned Parenthood, a Title X recipient. As an organization, Planned Parenthood serves 32% of the 6.2 million women who obtain contraceptive care through some type of safety-net family planning center, and 41% of the 3.8 million contraceptive clients served through Title X. Defunding Planned Parenthood would radically jeopardize access to family planning care. Many of the policy attacks have stemmed from anti-abortion politicians targeting organizations like Planned Parenthood that offer comprehensive contraceptive care in addition to abortion services, despite the fact that Title X funds have never been allowed to pay for abortion care. Furthermore, publicly funded contraception helped to avoid 1.3 million pregnancies in 2015 and these unintended pregnancies would have resulted in 453,400 abortions. Without publicly funded family planning services, rates of unintended pregnancy and abortion would have been 67% higher.

Additionally, threats posed to restructuring Medicaid, including granting states greater authority to choose eligibility criteria, deciding what services to cover, limiting enrollees’ provider options, and imposing paternalistic restrictions on enrollee’s behavior, have significant consequences for family planning. Medicaid is central to the family planning effort in the U.S., not only because it accounts for three quarters of all public dollars invested in family planning, but also because it ensures enrollees access to qualified providers and advocates for reproductive health. In all states, if a woman is pregnant, she is eligible for Medicaid coverage of maternity care services, including prenatal and postpartum care until 60 days post-delivery. In many states, once those 60 days expire, a woman is no longer eligible for Medicaid coverage, and thus, no longer has access to family planning care and FDA-approved contraceptives. Often, this limited time frame of insurance coverage means providers must equip women with contraception either immediately or early in the postpartum period.

Because some patients are not able to attend their postpartum visit, providers frequently offer long acting reversible contraceptive (LARC) methods, including hormonal implants and intrauterine devices (IUDs), during the postpartum hospital stay – called “immediate postpartum contraception”. In order to ensure that women are able to make an informed decision and understand available alternatives, conversations regarding postpartum birth control plans should be initiated early and revisited often during the prenatal period. Despite its high efficacy and convenience, significant barriers exist for individuals seeking access to LARC. Only 23%-60% of women requesting an immediate postpartum IUD actually receive it. Part of the challenge to providing patients with LARC in the immediate postpartum period revolves around reimbursement. Before 2012, the majority of insurance carriers bundled obstetric reimbursement [prenatal care, delivery, and postpartum care] without providing extra reimbursement for immediate postpartum LARC insertion. This is in contrast to other methods of postpartum contraception that are prescription-based. However, due to increasing data supporting the benefits of immediate postpartum LARC, many states have begun providing extra compensation, however, this typically only applies to patients on Medicaid. Another important barrier to immediate postpartum LARC uptake stems from religiously affiliated hospitals. One out of every six hospital beds in the United States are in Catholic hospitals that do not allow placement of LARC for contraceptive purposes or postpartum sterilization. Clearly, more work is needed to ensure access to immediate postpartum LARC if patients desire it.

The federal policy requiring 30-day consent for Medicaid funded sterilization procedures puts forth yet another barrier to reproductive autonomy. In 1978, the U.S. Department of Health, Education and Welfare created new legislation that required a 30-day waiting period prior to surgical sterilization for women receiving Medicaid. It also prohibited pregnant women in labor and women under the age of 21 to consent to sterilization. This legislation was drafted in response to coercion and forced sterilization of minorities and women of low-socioeconomic status. Although well-intentioned, this mandate has actually resulted in new barriers to contraceptive access for low-income women.

Because the 30-day waiting period is only mandated for those patients receiving Medicaid, it predominantly affects those women whose lives are already filled with obstacles to free choice. It impacts an already vulnerable population and patronizes these individuals with the assumption that their choices about their own bodies are flippant and must be-chaperoned. Not only is it morally indefensible, it has become clear that this mandated waiting period negatively affects a woman’s ability to receive a desired sterilization procedure. In one study, only 52% of women desiring postpartum sterilization procedure were granted their request, and the primary reason women were unable to undergo postpartum sterilization was due to an inability to complete the federally mandated consent form at least 30 days prior to delivery. The American College of Obstetricians and Gynecologists states that postpartum sterilization is an “urgent surgical procedure” given the narrow window during which it may be performed and the serious consequences of failing to complete it.
For those patients who do not elect or are unable to receive immediate postpartum contraception, many must wait until the postpartum visit for initiation of contraception. However, reliance on the postpartum appointment to provide contraception creates a significant gap in the ability to provide egalitarian and effective contraceptive care. Approximately a third of women will not attend their postpartum visit, and non-attendance is associated with social and economic disadvantage.21 A recent study showed that 43% of women will resume intercourse within six weeks of delivery, indicating that waiting until the postpartum visit to provide contraception may be too late.22 Our healthcare culture must move towards an increased awareness on the postpartum period as a critical time in a woman’s life. In addition to being a time of joy and excitement, this “fourth trimester” is a period marked with considerable challenges. Truly supporting women during the postpartum period, rather than only offering a single visit almost two months after delivery, would undoubtedly have a positive impact on the number of women able to stay connected to health services and receive appropriate contraceptive care.

It is a personal decision and human right to decide when one would like to have a child. It is important for advocates of reproductive health to protect unrestricted access to contraception and ensure that personal choices about childbearing can be made freely and without coercion. There is a war being waged against contraception in this country. All health care providers must step up to the plate to protect patients’ rights to access contraception. This work can start with having regular, open discussions about reproductive life plans, contacting local, state and national representatives, and testifying at hearings for new legislation. Let us realize our power to create change and join the ranks of those fighting for reproductive justice.

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The Fourth Trimester of Pregnancy: Committing to Maternal Health and Well-Being Postpartum

BRIDGET SPELKE, MD; ERICA WERNER, MD, MS

ABSTRACT

The postpartum period is a time of significant challenge and need as women adapt to hormonal and physical changes, recover from delivery, experience shifting family responsibilities, and endure sleep deprivation, all while caring for and nourishing their newborn.1-4 It is also a period of significant maternal health risk. Recent data on U.S. maternal mortality indicate a shift in the timing of maternal deaths over the past 10 years, with the majority of maternal deaths now occurring postpartum, from one day to one year after delivery.5,6 Postpartum care also marks a period of transition, as women shift from pregnancy-centered care to interpregnancy and primary care, yet current systems of care are marked by poor coordination of care between providers and patient care settings.4,7 Suboptimal postpartum follow-up is particularly worrisome for women with chronic health conditions or pregnancy complications who face both short- and long-term health risks.8,9 Given known challenges and medical risks, the single, 6-week postpartum visit women receive is woefully inadequate in addressing maternal health needs. Postpartum visits often fail to address the unique postpartum needs identified by mothers1,3,4, inadequately connect women with primary care services, and have low attendance.1,7 Recognition of these unmet needs of “the Fourth Trimester” have led national organizations, including the American College of Obstetricians and Gynecologists (ACOG), to call for a restructuring of postpartum care to reduce postpartum and long-term morbidity and improve postpartum well-being.2,7,10 Rhode Island has several recent initiatives with the potential to improve outcomes for mother-baby dyads including the Baby Friendly Hospital Initiative (BFHI), the provision of long-acting reversible contraception (LARC) immediately postpartum, and the addition of HPV immunization postpartum. These initiatives remove barriers of access to care and provide vital women’s health services prior to discharge. The Fourth Trimester provides a rich opportunity for maternal risk reduction and health promotion at a time when women are motivated and engaged with health care.

ADDRESSING MATERNAL RISK POSTPARTUM

Maternal mortality in the United States is increasing and more than doubled from 1982 to 2012.5,6 Over this same period, the causes and timing of pregnancy-related deaths have shifted; deaths due to maternal hemorrhage and infection, which typically occur at the time of delivery, have proportionally decreased, while deaths from cardiovascular disease, which can result in more distant postpartum deaths, have increased.11 Postpartum deaths, which includes deaths between 1 day and 1 year after birth, represent more than half of all maternal deaths, and underscore the significant health risks faced by postpartum women.5,6 Though maternal deaths remain rare, 65,000 women experience severe maternal morbidity annually in United States, which increasingly occurs postpartum and is due to chronic medical conditions.11 Both maternal morbidity and mortality affect minorities disproportionately; black women experience maternal mortality 3-4 times more frequently than white women and experience severe maternal morbidity two times more frequently.5,12-14 Rising rates of postpartum morbidity suggest that women face significant unmet medical needs after delivery and has led to a renewed focus on care in the fourth trimester.1,2,7,10,15

A central role for postpartum care is maternal health risk reduction, both in the immediate postpartum period and long-term, yet the ability of current postpartum services to improve maternal outcomes is limited by only a single dedicated visit. Both providers and patients report that current postpartum visit schedules are inadequate.1,3,4 Towards the end of pregnancy, women are routinely seen in the office weekly, and more often if the pregnancy is complicated. In contrast, most women are seen only once in the first-year postpartum and not until 6 weeks after delivery. This gap in care is not biologically logical nor practical from a public health perspective. Newborns are seen within days of discharge from the hospital because of the physiologic changes that occur in the first few weeks of life. Similar changes are occurring to the postpartum woman, yet no similar appointments occur. Furthermore, even the currently recommended appointments are not always used. While increasing attendance at postpartum visits is a goal of Healthy People 2020, between 10 and 40% of women do not attend a postpartum visit 4-12 weeks after delivery7 with lower attendance rates reported among women in low-resource settings, contributing to health disparities.8,9,16
In a review of postpartum utilization, Chu et al describe the postpartum visit as an “opportunity to assess the physical and psychosocial well-being of the mother, counsel her on infant care and family planning, and detect and give appropriate referrals for preexisting or developing chronic conditions such as diabetes, hypertension or obesity.”

Most postpartum women will become pregnant again, though many will not see an ob/gyn until the subsequent pregnancy. As such, preconception counseling is also a vital part of postpartum care. Women should be advised of evidence-based interventions to reduce complications in subsequent pregnancies, such as daily baby aspirin for hypertensive diseases of pregnancy and 17-hydroxyprogesterone for women with a history of preterm birth. Medications which are appropriate to continue in pregnancy should be reviewed, and women should be encouraged to continue safe medications as prescribed. As is evident from the list above, postpartum care addresses immediate health needs and serves as the foundation for interconception health and well-woman care.

A central component of fourth trimester care is the need to arrange appropriate follow-up for chronic conditions and pregnancy complications and to communicate the implications of these risks to both the patient and the care providers who will be assuming their care. Lack of consistent communication between providers may contribute to inadequate recognition and under emphasis of these risks.

Suboptimal postpartum follow-up is particularly troubling when pregnancies are complicated by common morbidities such as diabetes or hypertension. For women with chronic health conditions, the postpartum period often calls for changes in disease management and a coordinated transition from obstetric to primary care or subspecialty providers – a process which is often untimely and inadequate, with only 69.6% of women with preexisting diabetes and 57.0% of women with hypertensive disorders attending a primary care visits within 1 year of delivery.

Pregnancy complications can serve as a “window to future health” due to their implications for the development of chronic disease. This is the case for hypertensive diseases of pregnancy [including gestational hypertension, preeclampsia, and eclampsia] and gestational diabetes (GDM), which both confer risks of future cardiovascular disease (CVD) and type 2 diabetes (T2DM). Preeclampsia remains a leading cause of maternal mortality and morbidity and ACOG recommends early postpartum follow-up for women with hypertensive disorders of pregnancy and counseling for recurrent preeclampsia in future pregnancies and long-term CVD risk. ACOG also recommends screening for diabetes 6 weeks and 1 year postpartum for women who had GDM [who are at risk for developing T2DM and CVD], yet a study of insurance claims data showed that only 56% of women with pregnancy complications attended primary care visits in the year following delivery. A single-center study of women with gestational diabetes found that women were three times more likely to completed recommended postpartum screening if they attended a postpartum visit, yet even at an academic institution with high rates of postpartum primary care visits (>80%), pregnancy complications were not associated with a postpartum healthcare visit and nearly 20% of women with pregnancy complications were never seen in the year following delivery.

For many women, pregnancy serves as the first encounter with the health care system in adulthood and as a result, obstetric providers may be the first provider to diagnose and address chronic health conditions such as hypertension, obesity, and substance dependence. While obstetric providers may manage pregnancy complications and chronic conditions independently during pregnancy, uncoordinated transitions from obstetric to primary care can result in women failing to receive care that may mitigate long-term risks for diabetes, hypertension, and cardiac disease.

**PROMOTING MATERNAL WELLBEING IN THE FOURTH TRIMESTER**

It is critical that women’s voices contribute to our understanding of postpartum health needs, voices. Surveys and focus groups tell us that women feel unprepared for the emotional, biological, and social changes that occur postpartum and less than half of women report receiving adequate information regarding postpartum depression, nutrition, physical activity and weight loss, or changes in sexual and emotional response. A disconnect is described between the areas of concern for clinicians, such as signs of infection or bleeding, and those of mothers, who experience significant disruption in their daily lives from symptoms considered “normal” by providers, such as sleep deprivation, discomfort and pain, and emotional changes. Considering this feedback is critical as we strive to improve health outcomes for women through a recommitment to maternal postpartum care. By listening to and anticipating women’s needs, the patient-provider relationship is strengthened, increasing the likelihood of postpartum follow-up. This commitment to patient-centered care should improve both maternal health outcomes and maternal and infant well-being throughout the life course.

Anticipatory guidance on common postpartum problems can be provided antepartum, including information on urinary incontinence, sleep changes, emotional response and sexuality, expected weight loss, and recommendations for exercise and healthy eating. As women are often uncomfortable broaching these topics themselves, providers should ask about common symptoms specifically during both postpartum and primary care visits during the first year. Written or multimedia aids like handouts, videos, or websites can provide women with postpartum resources that can be referred to after discharge, a request often voiced in focus groups.

Prior to discharge from the hospital, all women should receive counseling on warning signs and symptoms postpartum that should prompt medical attention and written instructions should be provided on who to contact with common postpartum problems. In qualitative studies, women report being unsure who to contact with questions
or concerns, particularly when questions arise that overlap provider expertise, such as those pertaining to lactation and medication use. The Association of Women’s Health, Obstetric and Neonatal Nurses (AWHONN) proposes a postpartum discharge education program which includes a patient handout with descriptions of warning signs and an education checklist for nurses to review with patients prior to discharge. While the initiative has been well received by nurses, efficacy studies are pending.

FORMULATING A POSTPARTUM CARE PLAN

While several studies document the unmet needs of postpartum women, few have established evidence-based approaches to improving maternal health outcomes. In their recent Committee Opinion on Optimizing Postpartum Care, ACOG recommended that patients and their obstetric providers formulate postpartum care plans during antepartum visits to identify, discuss, and plan for the postpartum transition period. In addition to identifying the members of the postpartum care team and providing written information on the timing of postpartum visits, this plan should include discussions on infant feeding, reproductive life plans and contraceptive needs, mental health risks of the postpartum period, pregnancy complications, chronic health conditions, and anticipatory guidance on common postpartum problems. When available, risk reduction strategies for future pregnancies should be reviewed with the patient and her primary-care provider. ACOG recommends early postpartum follow up for women with hypertensive disorders of pregnancy and those at high risk for complications. This includes first-time mothers and women with a history of depression and anxiety who are at higher risk for severe postpartum depression and may benefit from an early postpartum visit. Studies have also suggested that postpartum phone support can reduce depression scores.

Women choosing to breastfeed should be provided with community support resources, such as WIC, Lactation Warm Lines, and local breastfeeding support groups. Additional resources should be provided as women prepare to return to work, including prescriptions for breast-pumps and education on frequency and methods of breastmilk expression. While conditions suffered at higher rates by underserved women (like hypertension, hyperlipidemia, cardiovascular disease and type 2 diabetes) may improve with breastfeeding, those same women face the greatest barriers to sustained breastfeeding, including suboptimal social support and unpaid maternity leave which reduces the interval before returning to work. Identifying these breastfeeding challenges antepartum can enable patients and their care team to plan appropriately and identify available resources.

Formulated antepartum, the postpartum plan should be reviewed and updated prior to discharge and at subsequent postpartum visits. ACOG’s recommendations above are derived largely from expert opinion and stakeholder working groups and while emphasizing anticipatory guidance, improved care coordination, and frequent and clear communication around a shared plan of care should serve postpartum needs, research is needed to identify effective postpartum care strategies that serve to reduce maternal health risks and promote long-term wellbeing.

LOCAL INITIATIVES

Several recent initiatives have improved postpartum services in Rhode Island. In 2015, Women & Infants Hospital (WIH) achieved ‘Baby Friendly’ hospital designation after meeting the ‘Ten Steps to Successful Breastfeeding’ [http://www.womenandinfants.org/news/baby-friendly-designation.cfm]. BFHI is sponsored by the WHO and the United Nations Children’s Fund and recognizes hospitals that support breastfeeding mothers and promote evidence-based feeding practice for babies. In some studies, regions served by Baby Friendly hospitals report higher rates of breastfeeding initiation, particularly among low-resource women, though data is conflicting. Research is needed to determine if breastfeeding rates have increased in Rhode Island.

Rhode Island also recently secured approval from Neighborhood Health, a Medicaid insurance provider, to provide immediate postpartum LARC to patients in the hospital prior to discharge. Immediate postpartum LARC is highly effective at reducing unintended and short-interval pregnancies and ACOG strongly recommends that it be offered to women antepartum and provided immediately after delivery and prior to discharge. Immediate postpartum LARC circumvents postpartum access barriers at a time when the patient has high motivation to prevent unintended pregnancy. Furthermore, many women who planned to obtain an IUD postpartum, including those who do not return for a postpartum visit, never have it placed. Immediate postpartum LARC has been shown to decrease unintended births without increasing contraception bias and is cost effective from a societal perspective. This service is particularly important for populations at highest risk for short-interval pregnancies and least likely to receive postpartum care, like teenagers and low-resource women.

Finally, last year, WIH started an initiative to identify pregnant women eligible for the Human Papilloma Virus (HPV) vaccine series in order to offer women the first dose prior to discharge. HPV immunization prevents HPV infection and reduces rates of HPV-associated cervical cancer. At WIH, postpartum women are routinely assessed for MMR, Varicella, and pneumococcal vaccine eligibility, and offered appropriate immunizations prior to discharge. HPV vaccine is not recommended in pregnancy but identifying vaccine eligible women during pregnancy increases the likelihood that women will receive both recommended doses.

Each of these initiatives improves the quality of care provided to pregnant and postpartum women in Rhode Island; however, as is the case throughout the country, postpartum care remains fragmented and sub-optimally coordinated between care settings and among providers as patients shift from obstetric to primary care postpartum. Adoption of ACOG’s proposal for Postpartum Care Planning may serve to minimize current gaps in care.
CONCLUSION

Pregnancy is a time of high health care utilization and strong health motivation for women, and women’s regular interaction with the health care system during the antepartum period contrasts starkly with the fragmented maternal care provided postpartum. To sustain the opportunities for risk-reduction and health promotion identified prenatally, providers across all specialties must recommit to patient-centered care that reflects patient specific fourth trimester needs, supports the well-being of mothers and their infants and establishes care plans for management of chronic as well as pregnancy-related complications.

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The United States has the highest reported number of maternal deaths per 100,000 live births, or maternal mortality ratio (MMR), among high-resource countries and recent trends suggest it has increased by over 26% since 2000.\textsuperscript{1,2} Global trends reported by the World Health Organization (WHO) demonstrate that pregnant women in the U.S. face a mortality ratio that is at least four times higher than leading European countries and in 2014, the U.S. ranked 47th globally in maternal mortality.\textsuperscript{1} The most recent CDC estimates report a national pregnancy-related ratio of 17.3 deaths per 100,000 live births. According to the Rhode Island Department of Health, Center for Health Data and Analysis, the 2013–2017 maternal mortality rate was 11.2 deaths per 100,000 live births. For many readers, these statistics are nothing new. Over the past several years, media coverage, and ensuing public awareness of U.S. maternal deaths have reached new heights.\textsuperscript{3} The award-winning NPR/ProPublica series, “Lost Mothers,” brought the stories of just a few of the estimated 900 women in the U.S. who die each year during or within a year of pregnancy.\textsuperscript{3} Maternal mortality is considered an indicator of the overall health of a population. Two bills introduced in Congress reflect a growing desire to address these devastating outcomes.\textsuperscript{4,5}

Studies on U.S. maternal mortality reveal that most maternal deaths result from well-known causes, namely cardiovascular disease and stroke, thromboembolic events, hemorrhage, hypertensive disorders of pregnancy, and infection.\textsuperscript{5} Despite increased public awareness and well-described data on disease states leading to maternal death, the underlying and potentially modifiable root-causes of worsening maternal mortality remain largely unknown. This is perhaps most true when we consider inequities in maternal mortality.

For over 20 years, obstetric journals have recognized the overwhelming disparities in maternal mortality faced by black and Hispanic women.\textsuperscript{7,8} The most recent reports indicate a pregnancy-related mortality ratio for non-Hispanic black women of 43.5 per 100,000 live births, compared to 12.7 for non-Hispanic white women.\textsuperscript{8} Many explanations for these disparities have been proposed including incidence of pregnancy-induced hypertensive disorders, compliance with prenatal care, and education attainment. However, the evidence supporting these explanations is inconsistent.

First, there are conflicting data concerning pregnancy-induced hypertensive disorders. A large, 10-year, longitudinal, population-based study in New York State found that preeclampsia rates were higher among black and Hispanic groups.\textsuperscript{9} In partial contrast, an analysis of National Vital Statistics System (NVSS) data demonstrated that while the prevalence of preeclampsia and eclampsia did not differ between black and white patients, case-fatality rates were 2-3 times higher in black women.\textsuperscript{10} Determining whether black women face an increased risk of developing a disease or rather, an increased risk of dying from it, has direct implications upon strategies developed to reduce maternal deaths. Are the data only for race/ethnicity, or also by economic class? If the latter, that should be included.

Second, suboptimal prenatal care has also been linked to disparate rates of maternal mortality. A 2010 study reported that black women were less likely to initiate prenatal care in the first trimester.\textsuperscript{7} However, in the same year, Berg et al. found that mortality ratios did not differ by timing of prenatal care initiation and in fact, among women who started prenatal care in the first trimester, black women still had higher pregnancy-related mortality ratios compared to their white counterparts. This suggests that optimal prenatal care is not protective against maternal mortality in black women.\textsuperscript{11}

Finally, the argument that limited educational attainment drives higher mortality rates among black women is also unsupported. Saftlas et al., studying risk factors for maternal mortality, demonstrated that educational attainment did not differ between cases and surviving controls in black women, whereas white women who had died had fewer years of education than controls. Educational attainment, therefore, appears to be a protective factor for white women but not for black women. Perhaps most alarming, Saftlas et al. demonstrated that the largest racial disparities in pregnancy-related mortality occurred among women with the lowest risk of maternal death: those who were married, of low parity, aged 20–29, highly educated, adherent with prenatal care, and delivering normal birth-weight infants at term.\textsuperscript{12}

While these examples represent only a few possible contributors to racial disparities in maternal mortality, they illustrate our profound lack of understanding regarding its drivers, particularly among black women. How is it that we have known about this problem for 20 years and still lack an answer? The answer lies in reliance upon data sources that preclude review of underlying disease states and medical care, as well as the contribution of globally recognized social determinants of health such as structural racism, poverty, and access to care. This detailed level of review is essential. As eloquently stated in Clark and Belfort’s call for national maternal mortality review,
The majority of studies on maternal mortality rely on administrative datasets and not focused review. This includes vital statistics data, ICD-10 codes on death certificates, and hospital billing databases. Disturbingly, a study comparing medical record review by an experienced critical care obstetrician with discharge diagnostic codes noted concordance in the cause of death only 52% of the time. If our best available data are incorrect nearly half the time, it is unsurprising that we have been unable to reduce disparities and improve maternal health outcomes.

Equally concerning, current data collection methods also inaccurately capture presumably simple, yet vital, data on the number of women in the U.S. who die each year from causes related to pregnancy and childbirth. When compared with focused review, administrative datasets underestimate maternal mortality by 20–87% and the lack of a nationwide approach to identification of maternal deaths has led to embarrassingly incomplete data. Given these limitations, Clark and Bedford propose that only focused review of maternal deaths, conducted by Maternal Mortality Review Committees (MMRC), can provide the data necessary to shape health policy and address factors that contribute to poor pregnancy outcomes.

We know from experiences in the U.K. and California that MMRCs identify strategies that lead to reductions in maternal mortality. To aggregate this data as a nation, we must first standardize MMRCs at the state level. The American College of Obstetricians and Gynecologists and the Society for Maternal Fetal Medicine have lobbied Congress over the past two years for passage of H.R. 1318, Preventing Maternal Deaths Act and S. 1112, the Maternal Health Accountability Act – two bills that would create a grant to help states establish or improve MMRCs. Thirty-two states currently have CDC-recognized MMRCs and an additional 13 are currently planning a review. Twenty states and jurisdictions have implemented standard data collection via MMRIA.

The Rhode Island Medical Society has a long renowned history of commitment to improving maternal health. In 1931, RIMS leadership established the nation’s first-ever Maternal Mortality Committee. Under their oversight, the state experienced a dramatic decline in maternal deaths. A 1977 article published in this journal, “A History of the Maternal Health Committee of the Rhode Island Medical Society 1931–1976,” details how, after pioneering maternal death reviews by obstetricians at the Providence Lying In Hospital, the Society continued to shape their committee towards the standards we expect today: regularly held reviews with representation from anesthesiology, pathology, the Department of Health, and obstetricians from across the state. As maternal deaths fell, the committee renamed itself the Maternal Health Committee, tackling broader maternal health challenges in years with few deaths to review. The article questioned the necessity of ongoing state review given the fortunate rarity of maternal deaths in Rhode Island. Though ultimately the committee was continued, meetings since the 1970s have been less regular and without a uniform approach to case identification and review. In recent years, due to legal concerns, the committee elected not to determine the preventability of deaths. A move in Rhode Island towards standardized CDC procedures would allow comparisons and conclusions to be drawn not only within our state over time, but also more broadly across southern New England, where larger pools of data are available. The value of regional review of maternal deaths is particularly important where, as in Rhode Island, state populations are small and patients cross state lines readily for care.

In this light, we propose the realignment of Rhode Island Maternal Mortality Review Committee procedures with two free and comprehensive resources. MMRIA (mmria.org), a protected data collection system, provides MMRCs with uniform methodology and data language for case abstraction, summary, and review and supports MMRCs in their identification of prevention strategies. Review to Action (reviewtoaction.org) provides step-by-step guidance for states seeking to establish fully-functional MMRCs. Thirty-two states currently have CDC-recognized MMRCs and an additional 13 are currently planning a review. Twenty states and jurisdictions have implemented standard data collection via MMRIA.

**Table 1. Six essential questions of Maternal Mortality Committee Review (Adapted from Review to Action)**

| 1. Was the death pregnancy-related? |
| 2. What was the underlying cause of death? |
| 3. Was the death preventable? |
| 4. What were the factors that contributed to the death? |
| 5. What are the recommendations and actions that address those contributing factors? |
| 6. What is the anticipated impact of those actions if implemented? |

"The current maternal mortality ratio may be the result of any number of highly disparate realities ranging from immigration policy, to racial disparity, to regionalization of care, patient transport, health care provider training, or certification. Alternately, it could reflect fundamental problems in the structure of the specialty itself. However, without data, we just do not know. Without this knowledge, we cannot effectively address this problem."13
CDC recommendations. Consistent with CDC’s Review to Action guidelines, this committee would develop a systematic approach to case identification and pursue case abstraction and review in accordance with the uniform data collection methods provided by MMRIA. As with its historical precursor, committee membership would be interdisciplinary, include broad geographic representation, and hold regularly scheduled reviews. Given the Rhode Island Department of Health’s (DOH) experience with Infant and Drug Overdose Death Reviews, and their existing role in identifying maternal deaths, consideration could be given to shifting the MMRC to their jurisdiction. This might allow funding, administrative, and personnel resources to be shared between existing review committees, defraying state costs, and would capitalize on the stability and longevity of state institutions. Finally, maternal mortality captures only the worst outcome among the much larger pool of women who experience severe maternal morbidity; consideration should be given to including review of our state’s more common near-misses.

In 1962, RIMS successfully lobbied the RI legislature to obtain legal protection for review committee transactions and case reports. It is time to take these further and secure through legislation not only the confidentiality and protection from subpoena of all committee materials and members, but also guaranteed access to all pertinent records. Further assuring the future of maternal death review in RI, we propose this legislation include state accountability for conducting ongoing and regular reviews.

According to the RI Department of Health Center for Health Data and Analysis, the maternal mortality ratio in Rhode Island is 11.2 per 100,000 live births. As obstetricians in Rhode Island, this number raises more questions than it answers. Were these deaths accurately reported? Were they pregnancy-related or accidental? And most importantly, could they have been prevented? A recent report compiling standardized data from state MMRCs found that 60% of their maternal deaths were preventable.19 By increasing our own capacity for maternal death review, Rhode Island would once again be poised to lead the country towards the elimination of preventable maternal deaths.

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A Melting Pot of Medical Education: Challenges, solutions, and opportunities for improving trainee feedback and education in the ED

MERIMA RUHOTINA, MD; DAYNA BURRELL, MD

INTRODUCTION
It is 6 p.m. on a Monday evening and you are a second-year Ob/Gyn resident at Women & Infants Hospital starting your shift. Following sign-out, you head down to the Emergency Department (ED). The electronic patient board is full and 20 patients are in the waiting room. Your supervising faculty includes two attending Ob/Gyn physicians, a nurse midwife, and a nurse practitioner. Your first-year colleague and a visiting Emergency Medicine resident are already hard at work. Additionally, there are three third-year Ob/Gyn clerkship medical students, one visiting fourth-year medical student, and a nurse practitioner student. In such a busy, high acuity, rapid turnover environment the question becomes: How will each of these learners receive the relevant education for their level of training? How will timely and comprehensive patient care be maintained? Recent research tells us that in the absence of adequate feedback "efficient learning is impossible, and improvement only minimal, even for a highly motivated subject." However, in this time constrained, unpredictable environment, how can proper feedback be integrated? There are very few dedicated women’s only Emergency Departments in the United States; however, parallels can be drawn to the clinical and educational environment in more traditional Emergency Medicine (EM) programs. The aim of our paper is to explore the unique nature of education in a highly specialized ED, highlighting the challenges of feedback and learning in this environment, and to provide potential opportunities for educational growth without compromising patient care.

EDUCATIONAL OPPORTUNITIES
The ED provides unique exposure to a host of educational opportunities. Students participating in an EM rotation have a higher level of involvement in the initial assessment and management of patients and are exposed to a great depth and variety of patient complaints when compared to their internal medicine counterparts. As represented by Edgar Dale’s Cone of Learning, students who are more engaged in a hands-on learning environment gain and retain more in their experience. Giving students an ability to see the whole scope of medicine and having them be at the forefront of patient evaluation provides an opportunity to build their clinical decision-making skills. Additionally, within the ED, medical, nursing and allied health staff of varying levels of experience and expertise work alongside one another. This allows learners to be exposed to an invaluable variety of lenses for clinical situations. Basic EM knowledge and skills learned throughout the clinical years provide a sound foundation for medical students, regardless of their intended career path.

CHALLENGES
Despite the many advantages of education in the ED, there are perceived pitfalls that may challenge optimal and effective teaching and feedback experiences. Emergency physicians are constantly multi-tasking with an average of 10 interruptions per hour. The brisk pace and unpredictable variability in workload can limit extended case discussions and sit-down rounds which may impact teaching and feedback. Additionally, educators are challenged to adapt to trainees coming from different educational levels and backgrounds with inconsistent longitudinal exposure. Pressures of teaching around the clock while maintaining tolerable patient wait times in a typically physically crowded space pose further hurdles. Increasing ED volumes and overcrowding limit the available time of faculty and residents to engage in frequent, timely and substantive feedback. In turn may lead residents to believe that training programs emphasize service over education.

EFFECTIVE STRATEGIES
So, how can we overcome the challenges of education in the ED setting? In order to create noteworthy interventions for feedback and teaching, we must ask: What teaching qualities are most valuable in this environment and does feedback really matter? Previous research shows that effective teaching in medicine requires flexibility, energy, and commitment amidst a busy background of clinical care. Thurghur et al surveyed medical students and residents in the ED to assess what learners want from their teachers. Learners

KEYWORDS: Emergency medicine, medical education, educational feedback
vocalized a preference for teachers who “give feedback,” “take time” and “use the teachable moment.” Students and residents surveyed were sympathetic to the challenges faced by their ED teachers and felt that providing the educators resources and methods for teaching in this busy setting would be beneficial. Students further recognize feedback as a core component of medical education and identify it as a strong indicator of clerkship quality. A study by Torre et al demonstrated that providing feedback in various forms was connected to students’ perceptions of high quality teaching during their internal medicine rotation. Feedback has been shown to improve clinical performance, clinician self-assessment accuracy, and patient satisfaction.

**PRECEPTOR MODEL**

The answers to ensuring a robust educational environment in the ED therefore lie in high quality educators with tools to enhance learning with limited time, and to ensure effective feedback. There are many proposed tools to elevate the learning experience, but perhaps the most applicable to the ED setting is the One-minute-preceptor (OMP) model. The OMP incorporates the five-step microskills model of learner-centered clinical teaching initially described by Neher and colleagues. This enables high impact clinical teaching alongside efficient and comprehensive patient care. Within this model, the educator uses a series of five steps to assess and teach the learner, and to provide directed feedback. The OMP begins with a specific patient presentation. In step 1, the learner is asked to commit to a direction, with the question often posed: What do you think is going on with this patient? In step 2, the learner is asked for supporting evidence for the differential diagnosis based on details from the history and physical, and asked to propose further diagnostics needed. Step 3 involves a moment for the educator to correct any mistakes and direct the learner on suggested improvements. Table 1, adapted from Parrot et al, provides an example of the use of the OMP model with a common clinical scenario in our ED setting. Note that the microskills do not have to be used in order, and incorporation of some skills more than once may enhance the learning experience.

In this scenario, a third-year medical student is presenting a 25-year-old female with right lower quadrant abdominal pain, vaginal spotting, nausea and emesis. In this clinical scenario, the five-step microskills safely permits high-yield education in the acute setting. This model can be utilized by all physician and non-physician providers, promoting a collaborative teaching model and facilitates a team-based interdisciplinary approach to each patient. Arming our educators in the ED setting with this and similar tools will have a profound impact on learner experience and education.

Although the OMP model incorporates feedback into each patient encounter, providing feedback to medical students...
and residents in a variety of ways improves satisfaction with the educational experience. Ideally, feedback is incorporated into medical student and resident rotations in a formal process at both mid-point and at the end of the rotation experience. These sessions benefit from being planned, and incorporates findings from multiple specific patient encounters. On a day-to-day basis in the ED setting, successful feedback takes place “on the fly.” As a positive, this real-time feedback occurs very soon after a specific patient encounter and allows for the learner and educator to engage on three points: what went well, what could have gone better, and how to improve. A downside of this feedback experience is that many learners do not recognize that they are receiving feedback in these brief, unplanned sessions.

So, how can this be improved? In a randomized, controlled study Yarris et al evaluated a feedback curriculum with training sessions for both faculty and residents in addition to a feedback card system designed to create specific, timely, face-to-face feedback. The card (Table 2) carried by the resident included areas for self and faculty evaluation and one targeted area for improvement. A reference was also provided to faculty on performance expectations for each level of training. The residents were given primary responsibility for initiating the feedback process and asked to turn in one card per shift for at least two-thirds of their shifts. A control group continued with their current method of feedback. The intervention was noted to significantly improve overall resident satisfaction with feedback. Additionally, significant improvement was noted with the overall quality, amount, and timeliness of feedback. This strategy engages learners in feedback which can improve teaching perception and clinical performance. Implementing similar methods into our fast-paced learning environment has the potential to improve the learner’s experience, reduce the perceived burden of service while maintaining an emphasis on education.

### Table 2. Feedback Card

<table>
<thead>
<tr>
<th>Date</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td></td>
</tr>
<tr>
<td>Attending</td>
<td></td>
</tr>
<tr>
<td>Resident Self-Evaluation</td>
<td></td>
</tr>
<tr>
<td>What went well today?</td>
<td></td>
</tr>
<tr>
<td>What can I improve?</td>
<td></td>
</tr>
<tr>
<td>Faculty Evaluation</td>
<td></td>
</tr>
<tr>
<td>Please discuss with the resident or medical student your impression of the strengths of their performance in the ED today and areas of improvement. Do you agree with their self-evaluation?</td>
<td></td>
</tr>
<tr>
<td>One specific learning issue or suggestion for improvement</td>
<td></td>
</tr>
<tr>
<td>Other comments</td>
<td></td>
</tr>
</tbody>
</table>

Adapted from Yarris, et al, Academy Emergency Medicine, 2011

### CONCLUSIONS

Academic medicine in the ED setting is unique. It is truly a melting pot of educators and learners from all backgrounds at various stages in their careers. This, coupled with a wide range of patient acuity, high clinical demands, and impressive breadth and depth of pathology, make the ED at times a challenging teaching and learning environment. However, while the ever changing landscape of patient care demands and growing educational needs are daunting, we believe that the above proposed strategies can be employed to overcome perceived barriers in education and feedback in our unique setting. The OMP model and feedback card system are both simple to remember, and easy to apply in the acute-care setting. In our women’s only ED, all providers can employ these strategies to empower learners and create an optimal educational environment. In doing so, we embrace the challenge of providing excellent care to our patients while ensuring a positive educational experience for our future generation of providers.

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ABSTRACT
In the last decade, reductions in HIV incidence have been observed across the United States. However, HIV continues to disproportionately impact gay, bisexual, and other men who have sex with men (MSM). In Rhode Island, rates of HIV diagnoses have decreased by 44% across all groups over the last decade. This success has been the result of close collaboration across multiple sectors. Different prevention approaches, including syringe exchange programs, community-based HIV testing, condom distribution, HIV care and treatment, and pre-exposure prophylaxis (PrEP) have all contributed to the decline in HIV diagnoses across the state. In 2015, Rhode Island became one of the first states to sign on to the Joint United Nations Programme on HIV/AIDS “90-90-90” campaign to end the HIV epidemic by 2030. Intensified and innovative initiatives are needed to improve progress in HIV prevention and treatment, especially in populations who are most at risk.

KEYWORDS: MSM, PWID, PREP, HIV, AIDS

INTRODUCTION
Approximately 40,000 new HIV infections are diagnosed in the United States (US) each year, with a disproportionate number diagnosed among gay, bisexual, and other men who have sex with men (MSM), people who inject drugs (PWID), and communities of color [1]. The lifetime risk of HIV diagnosis among MSM in the US is approximately 88 times greater than among heterosexual men, further, Hispanic/Latino and Black/African American MSM have two and five times greater lifetime risk, respectively, compared to white MSM [2]. The United Nations Programme on HIV/AIDS (UNAIDS) established clear goals for ending the HIV epidemic through its 90-90-90 campaign: 90% of persons living with HIV (PLWH) are diagnosed, 90% of those diagnosed are engaged in care, and 90% of those engaged in care achieve viral suppression by 2020 [3]. The success of treatment as prevention (TasP) in significantly reducing HIV transmission risk through viral suppression [4] has led to development of key policy goals such as the “90-90-90” campaign. These efforts, in combination with primary prevention interventions such as routine HIV testing and pre-exposure prophylaxis (PrEP), form a multi-faceted approach that is necessary to effectively address the HIV epidemic.

The Centers for Disease Control and Prevention (CDC) recently announced an 18% decrease in the overall annual incidence of new HIV infections in the US from 2008 to 2014 [5], including rate decreases of 56% among PWID and 36% among heterosexuals. MSM were the only group that did not experience an overall decline. An 18% decrease in HIV incidence among young (13–24 years old) and white MSM was offset by increasing incidence in other MSM subpopulations including MSM ages 25–34 years (35% increase) and Hispanic/Latino MSM (20% increase). Disparate trends in incidence across subpopulations and regions indicate a need for continued development and improvement of approaches for HIV prevention.

DISCUSSION
Addressing the HIV Epidemic in Rhode Island
The state of Rhode Island (RI) experienced a 44% reduction in the number new HIV diagnoses from 2006–2016 [6], well beyond the 18% decrease in national incidence seen during a similar period [5]. This was driven by significant decreases in the number of diagnoses across all reported risk groups, including MSM (33% decrease), heterosexuals (66% decrease), and PWID (approaching zero) [6]. These data highlight efforts across the state to promote engagement at every level of the HIV care cascade, a term encompassing the patient trajectory through diagnosis, engagement in care, and viral suppression. The RI HIV care cascade is presented in comparison with the national cascade and UNAIDS 90-90-90 targets in Figure 2.

Preventing HIV Transmission
Addressing the HIV epidemic requires tailored approaches for each risk group. Syringe exchange programs have been instrumental in reducing the number of new HIV diagnoses among PWID. The RI ENCORE program (Education, Needle Exchange, Counseling, Outreach, and Referrals), started in 1998, provides clean needles, HIV testing, education, and other support services to PWID. Syringes are also available without a prescription at local pharmacies and community locations through the state [7]. Community-based needle
exchange programs in RI distributed 60,000 syringes in 2015, with an additional indeterminate number dispensed through retail pharmacies [8]. These programs are critical to prevent HIV transmission given the ongoing opioid epidemic in the state [9]. Further, admissions to substance use treatment facilities increased 54% among patients reporting injection drug use from 2011 to 2014 [9]. Despite the ongoing regional opioid epidemic with historically high numbers of overdose deaths, the number of new HIV cases among PWID in RI has remained low. This is in contrast to other regions in the US, where opioid use has led to significant increases in HIV transmission [10].

MSM constitute the population at highest risk for HIV in RI. Consequently, RI public health organizations have launched several statewide initiatives to promote HIV prevention among MSM. These include community-based HIV testing with a focus on MSM and sex workers conducted by HIV/AIDS service organizations. The publicly funded RI Sexually Transmitted Disease (STD) Clinic at The Miriam Hospital Immunology Center opened in early 2012 with a focus on MSM. The STD Clinic offers a wide range of clinical services, including testing for HIV and other STDs, extragenital testing for gonorrhea and chlamydia, PrEP prescriptions, home-based HIV testing, and clinic- and community-based initiatives to promote education and routine testing among MSM and others at high risk for HIV acquisition.

Successful PrEP implementation is a public health priority in RI. The PrEP program operating on-site at The Miriam Hospital Immunology Center has prescribed PrEP to approximately 400 high-risk MSM since its inception in 2013 [11] with the number of new patients increasing steadily during that time. The RI Department of Health (RIDOH) also operates a robust condom distribution program focusing on sites serving MSM and young people. Other ongoing and planned efforts include engaging MSM who meet sexual partners on websites and smartphone applications (“hookup sites”) through advertising and outreach at these venues.
Promoting HIV Testing and Early Diagnosis

HIV testing has been incorporated across many different clinical and community settings in RI. The RI STD Clinic provides safety net HIV/STD testing services and reports the largest number of new HIV diagnoses in the state annually. From January 2012 through June 2017, the STD Clinic saw 9,078 patient visits and conducted 7,886 HIV tests [unpublished clinic data]. Routine HIV testing has also been successfully incorporated into many other clinical settings, including the emergency departments at many RI hospitals [12]. Education of healthcare providers, including primary care physicians, to promote HIV testing has likely also improved testing rates. Such initiatives focusing on providers at federally qualified health centers in particular have resulted in increased HIV testing in primary care settings. In the RI correctional setting, focused efforts have promoted HIV testing, comprehensive HIV care, and linkage to community care after release for over 20 years [13]. Other related efforts include partner notification services, which are coordinated by the RIDOH, to promote referral for testing and care among sexual and needle-sharing partners of individuals newly diagnosed with HIV. Despite improved accessibility of HIV testing, the number of new diagnoses has continued to decrease, suggesting that the decrease reflects true incidence and is not a result of changes in testing practices.

HIV Care and Treatment

For many PLWH, the majority of medical care is provided through The Miriam Hospital Immunology Center, a Ryan White-funded clinic and major Brown University teaching affiliate which cares for approximately 80% of the state’s HIV positive population. As RI is a small state, and over 80% of new HIV diagnoses occur in Providence County [6], the centralized nature of HIV treatment facilitates aggressive and early treatment for those who are newly diagnosed. The Immunology Center also co-locates supportive services, including behavioral health, psychiatry, addiction services, pharmacy, medical case management, outreach, women’s health, hepatitis C treatment, and peer navigation. The Center works closely with the local AIDS service organizations. The Ryan White CARE Program and the AIDS Drug Assistance Program (ADAP), available to all patients irrespective of ability to pay and with no waiting lists, have allowed vulnerable and uninsured or under-insured populations access to medications as well as important wrap-around services [e.g., mental health and substance use treatment] to overcome barriers to retention in care and medication adherence, and has resulted in high rates of viral suppression. The successes in RI have been the result of close collaboration and partnership across clinical, academic, community, and public health agencies.

Rhode Island Public Health Initiatives

RI passed unique state legislation in 1989 that requires all confirmatory HIV testing to be performed at the RIDOH state laboratory. The RIDOH conducts statewide HIV surveillance. Partnerships between RIDOH and community groups facilitate HIV prevention and care services for high-risk and underserved groups such as sex workers, victims of domestic violence, and LGBTQ youth. Communities of color are a prioritized group for community-based HIV testing and other outreach efforts. The RIDOH also maintains a Gay Men’s Sexual Health webpage which helps MSM identify gay-friendly doctors. The RIDOH Return-To-Care Program for PLWH who have fallen out of care works to re-engage them. This program actively solicits referrals from medical providers whose HIV-positive patients have missed medical appointments. RIDOH staff conduct field investigations and provide support for these individuals to re-engage in care. Other public health efforts include a robust partner notification program which works to engage partners of people newly diagnosed with HIV to facilitate early diagnosis.

Limitations

Although there has been a decline in new HIV diagnoses, this may not exactly represent true incidence given the delay between infection and diagnosis. Two other limitations may affect the generalizability of these findings. First, these analyses are unable to demonstrate a causal relationship between implementation of specific programs described above and the decreasing trend in new HIV diagnoses. Second, detailed data describing patient engagement, service delivery, and related metrics were not available for many of the programs described, which precluded further analysis of their impact. Other unidentified factors which were not discussed may have also contributed to reductions in the number of new HIV diagnoses. Despite these limitations, few prior studies have provided a large-scale overview of a statewide approach to end the HIV epidemic and demonstrated such a level of success.

PUBLIC HEALTH IMPLICATIONS

Next Steps and Future Direction

RI was among the first states in the US to sign on to the UNAIDS 90-90-90 initiatives, and cross-sector initiatives statewide have demonstrated success in improving HIV prevention and diagnosis efforts. However, further advances in these efforts are necessary to eliminate HIV in the state. HIV prevention goals in RI include improving routine, opt-out HIV testing across clinical settings, such as through structural efforts to integrate HIV testing models into routine care [e.g., prompts within the electronic medical record]. Medicaid expansion through the Affordable Care Act has also likely had significant impact. The number of new HIV diagnoses increased by 17% in 2014, the year after ACA implementation, likely reflecting higher case finding through improved access to care and HIV testing. [6]
The number of new HIV cases has decreased significantly in subsequent years [Figure 1] [6]

Maintaining access to currently available services is critically important in ensuring their ongoing success, especially given concerns related to the proposed budget cuts to federal and state funding related to HIV and other STDs. In 2016, the state government cut funds to the syringe exchange program in RI [8]. The RIDOH subsequently prioritized and re-established funding for this program. Continuing to provide accessible HIV/STD testing for vulnerable populations is also critical. The decrease in HIV diagnoses coincides with increasing diagnoses of other STDs (syphilis, gonorrhea, and chlamydia), which are at their highest levels in over ten years. Given the association between STDs and HIV acquisition [14], these conflicting trends suggest that HIV treatment and prevention approaches are nonetheless effective. Increasing numbers of other STD diagnoses may have resulted in part from increased testing and improved case finding. Regardless, addressing the HIV epidemic will require addressing the concurrent STD epidemic, as well.

Finally, we anticipate that ongoing efforts to improve access to care and prevention services will lead to further reductions in HIV incidence. New initiatives to promote online outreach and prevention are critically needed. Continued PrEP scale-up will likely continue to decrease HIV transmission among MSM. Emerging disparities in PrEP uptake suggest that public health interventions should focus on African American and Hispanic/Latino MSM, and current failures to retain patients in PrEP care indicate the need for improvements across the PrEP care continuum.

CONCLUSIONS

RI has experienced a 44% reduction in the number of new HIV diagnoses over the past ten years. While it is not possible to ascribe the decrease in HIV cases to one particular intervention or initiative, the statewide partnerships and approaches described here have likely yielded these successes. Intensified and innovative efforts are needed to further decrease the number of new HIV infections, particularly among MSM and communities of color. The remarkable reduction in new diagnoses seen in RI should provide a model for accelerating progress in HIV prevention and treatment in other settings.

References

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ABSTRACT

Churn, defined as a change in plan or a gap in insurance, is a problem in the United States that usually occurs as the result of changing life circumstances. Recent health reform perpetuates – rather than alleviates – churn because low- and middle- income individuals experience frequent changes in eligibility status. Our research asked: how common is churn in the non-group market and what are the health, financial, and emotional impacts on Rhode Island residents? This article draws examples from 31 life-history interviews and 188 enrollment observations conducted at Rhode Island’s health insurance exchange from 2014–2017. The findings demonstrate that churn persists, despite state efforts to maximize enrollment, and causes poor health outcomes, financial insecurity, and increased stress. We argue that efforts to reform health insurance enrollment policies should be grounded in qualitative understandings of why people lose coverage and should seek to minimize barriers to maintaining continuous coverage.

KEYWORDS: churn, insurance, Affordable Care Act

CHURN AND HEALTHCARE REFORM

‘Churn’ – defined as a change in plan or a gap in insurance – is a problem in the United States; it leads to gaps in coverage, financial strain, and high administrative costs. Between 1996–1999, 85 million people were uninsured at some point,1 with low-income, minority, and young adults at steeply increased risk of losing coverage. Changing life circumstances trigger instability in insurance coverage. These circumstances include job loss, income changes, an employer dropping coverage or switching insurance plans to save costs, changes in family status, or aging out of public or parental coverage.

The Affordable Care Act (ACA) achieved record increases in insurance coverage and lowered the uninsured rate by 2016 to 10 percent for persons under age 65. In states like Rhode Island that expanded Medicaid, coverage gains were even more dramatic.2 The uninsured rate in Rhode Island declined from 11 percent in 2012 to 5 percent in 2016.3 While the creation of marketplaces and the expansion of Medicaid has increased access to insurance coverage, recent health reform efforts have simultaneously institutionalized and normalized frequent changes in coverage as a feature of the health care system. The ACA requires periodic re-enrollment and ties eligibility and pricing to personal characteristics that change such as income, age, employment, household composition, and immigration status. Low-income adults experience frequent changes in insurance eligibility status, especially if they earn close to the 133% Medicaid eligibility threshold or if they face unstable employment.6,7

Some economists see churn as positive, creating opportunities to choose new coverage and thereby allowing consumers to select plans based on quality and price. Some policymakers even capitalize on churn as an opportunity to fill budget shortfalls by dis-enrolling people from health care.4 But many others are concerned about its negative impacts. Frequent changes in insurance status contributes to the burgeoning administrative costs at physician practices and disrupts continuity of care.5 Research has repeatedly shown that churn forces people to change physicians, seek care from the emergency department, switch, change, or skip medications and experience worse quality of care and health outcomes.6 People experiencing churn often forego preventative care and incur financially paralyzing health care bills more often than people with continuous coverage.1

METHODS

The qualitative methods employed in this research include ethnography, direct observation, and semi-structured interviewing. These are inductive methods from the field of medical anthropology that document actors’ perceptions and experiences. Researchers directly observed and documented people’s experiences enrolling in insurance coverage through HealthSource RI (HSRI), the ACA health insurance exchange in Rhode Island by shadowing enrollment assistants at community events and at the customer service center of HSRI. All prospective enrollees who received assistance from the staff that were being shadowed were asked to participate in the study; both Spanish and English enrollment interactions were observed. The project was approved by the Institutional Review Board (IRB) at Providence College and informed consent was obtained from enrollment assistants and people attempting to enroll. At the time of observation,
enrollees were asked to fill out a form if they were interested in participating in a follow-up interview; everyone who completed the form was contacted by the researchers for an interview. Semi-structured ethnographic interviews were then carried out with a smaller group of participants. The interviews focused on family background, work and education history, insurance coverage and health status.

RESULTS
Researchers directly observed the enrollment transactions for 188 households at the HSRI customer service center and community enrollment events between 2014–2017 and conducted 31 semi-structured interviews, recruited from the enrollment observations. Field notes from enrollment observations and interview transcripts were coded and analyzed thematically using the mixed-methods software, Dedoose. The authors used a grounded theory approach to generate codes from the data by looking for patterns and themes in the transcriptions. The authors compared codes, identified discrepancies, refined the codes, and then analyzed the entire data set. Investigators used a code of “churn” when a change in eligibility and coverage status occurred (the change could include change of plan, losing coverage, or moving between marketplace and Medicaid coverage). The authors then applied a subcode of emotional impact, financial impact, and health impact as appropriate to each instance of churn. The examples discussed below and in Table 1 were purposively selected by the authors as illustrative of the general trends identified in the data analysis.

Churn was expected to impact upwards of 40 percent of ACA enrollments. More recent reports from survey research show that churning was lower than expected on insurance exchanges, affecting 25 percent of enrollees in a given year. Though our study utilized a small, convenience sample, our research together with state data suggest that churn occurs more frequently in Rhode Island than nationally. A single point-of-time observation of people enrolling

Table 1. Consumers’ Perspectives on Churn

<table>
<thead>
<tr>
<th>Age, gender, insurance status</th>
<th>Reflections on churn</th>
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</thead>
<tbody>
<tr>
<td><strong>Emotional Impacts</strong></td>
<td></td>
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<tr>
<td>64-year old woman facing enrollment obstacles after job loss.</td>
<td>“[I feel] Bad. Real bad… I got laid off [and] ever since then it’s been Health Source, then it’s been unemployment, its major, major stress… oh my god, I’ve been a wreck…. maybe I’ll just have a freaking stroke and end it all.”</td>
</tr>
<tr>
<td>60-year-old woman enrolling in marketplace plan after COBRA ended.</td>
<td>“Isn’t their job [HSRI’s] to get people coverage, not to tell them to go without?”</td>
</tr>
<tr>
<td>39-year-old mother with husband and child experienced coverage gap.</td>
<td>“I did not have insurance for a month and that was terrifying with a 14-month-old.”</td>
</tr>
<tr>
<td><strong>Health Impacts</strong></td>
<td></td>
</tr>
<tr>
<td>23-year-old woman caring for her mother during insurance lapse.</td>
<td>“We had to push back a lot of her appointments for the health insurance. We had to keep pushing back and it was frustrating. We had to make one month’s dosage last for two months, because it was just way too expensive to buy it without the insurance.”</td>
</tr>
<tr>
<td>63-year-old woman and husband experienced a gap in coverage.</td>
<td>“I was supposed to go and see my dermatologist for my moles. I canceled that…. My husband had an eye doctor’s appointment. He canceled that. I had an eye doctor. I canceled that. I mean I canceled tons of them because I didn’t want to have to pay $150. My husband needs to have knee surgery. He’s been postponing it.”</td>
</tr>
<tr>
<td>47-year old woman with chronic health condition, experienced insurance gap.</td>
<td>“That was scary. I couldn’t get my treatments.”</td>
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<tr>
<td><strong>Financial Impacts</strong></td>
<td></td>
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<tr>
<td>60-year old woman, purchased a marketplace plan.</td>
<td>“It’s been a godsend. I literally have $5000 more in my pocket this year.”</td>
</tr>
<tr>
<td>54-year-old woman received health plan cancellation notice. Behind on premium payments after hours decreased at work.</td>
<td>“I feel real stressed out, very stressed out trying to meet these bills. You know we’re not making enough money with my job… I like the insurance that I have and I want to keep it. So I’m going to work hard to see if I can pay this bill. I know I got 90 days before they really shut me down.”</td>
</tr>
<tr>
<td>27-year-old female disenrolled from insurance due to seasonal income change.</td>
<td>“I just don’t want to end up having to pay that initial penalty. It’s like 90 dollars or something a quarter. But it would be less to pay that than it would be to pay for insurance.”</td>
</tr>
<tr>
<td>63-year-old woman and spouse.</td>
<td>“I had to take money out of my IRA and I had to pay taxes on it. So, not good. It hasn’t been good. Financially, it hasn’t been good.”</td>
</tr>
</tbody>
</table>
at contact centers and community events found that 45 out of 188 [24%] clients experienced gaps in coverage. However, these data underestimate the full extent of churn, given that a quarter of our data were gathered in 2014, the first year of ACA implementation. In the qualitative interviews, which were conducted several months after enrollment and provide a more longitudinal picture of enrollment experiences, 20 out of 31 [64%] interviewees experienced churn. State data corroborate the finding of frequent churn: according to HSRI’s annual enrollment report for 2017, only 19% of its 29,224 marketplace customers have remained continuously enrolled since 2014. 9 Contributing to churn, when we directly observed people attempt to enroll in coverage, we found that most applicants (89%) experienced barriers. The most common obstacles to enrolling in coverage were: bureaucratic barriers, affordability, changes in personal or family status, and knowledge about health insurance and the ACA. 9 Below, we elaborate on how these barriers to enrollment led to gaps in coverage and created health, financial, and emotional impacts in the lives of Rhode Island residents.

EMOTIONAL IMPACTS: CHURN COMPOUNDS DISTRESS

For many people who experience churn, gaps in health insurance coverage compound the emotional stress of moving, losing or changing a job, or family changes. A young woman became uninsured when Rite Care terminated her coverage when she turned 19. She described the stress she suffered when she got into two car accidents and the hospital billed her for care delivered during the coverage lapse. She was forced to seek regular care from the ER. Another woman described the stress of losing her job. In addition to being laid off, she needed to apply for unemployment and go through HSRI to apply for Medicaid. Even the fear of churn caused distress. An HSRI customer had recently changed jobs and her hours were reduced so she could not afford her current plan. She dreaded meeting with a customer service representative because she was afraid of changing plans and experiencing a gap in coverage. Others were angry about the broader system that allows churn and gaps in coverage. One woman’s COBRA coverage ended a week before the end of the month, leaving her with a week’s gap in coverage. When she called HSRI about this issue, a representative asked her how comfortable she was being without insurance for a week. For most, health insurance coverage offers peace of mind and security. In the midst of personal turmoil, however, churn adds another layer of instability and anxiety.

HEALTH IMPACTS: GAPS IN CARE

Because access to healthcare in the United States is predicated on insurance coverage, churn created negative health outcomes for those experiencing coverage gaps. Churn often forced people to forego meeting their health needs because they could not access affordable care. One woman suffered from a hernia but refused to visit a doctor. Frustrated after changing insurance plans so frequently, she dropped her plan and sacrificed her healthcare for several months until she could access insurance more easily when she became eligible for Medicare. Many clients cancelled or delayed appointments. Although the ACA required free preventative care, only people with coverage could access that care. One woman cancelled a dermatologist appointment for mole examination, giving up her screenings due to cost. Her husband also cancelled an eye appointment and knee surgery. A chronic Lyme patient missed five months of treatment, suffering from persistent fatigue and achiness. During a six-month period when her family was churned from the insurance rolls due to a system error, a young woman and her mother could not afford medical care. The family delayed her appointments for half a year. Without insurance, her mother could not afford her medication and was forced to ration one month’s dosage for two months. While insurance coverage expansions aim to improve health outcomes and access to care, churn between insurance plans and gaps in coverage exacerbate chronic conditions in need of consistent management and delay preventative measures, contributing to worse health outcomes.

FINANCIAL IMPACTS: TAXES AND INCOME INSTABILITY

Half of our respondents reported that the ACA led to increased financial security. They reported feeling less stress, saving money, and being able to see the doctor now when sick. But for the other half of our respondents, the ACA led to additional financial strain, especially when they were subject to churn. One common financial impact linked to income changes during the year was tax trouble [8 of 31]. Tax credits disappeared without explanation, the IRS required repayment of premium tax credits, and enrollees were given inconsistent financial information. One couple consistently received misleading information about their premiums and subsidies. A HSRI customer service representative told the family that they did not qualify for a subsidy anymore, after receiving one for a few months. The family subsequently struggled to pay their premiums and eventually lost coverage due to bureaucratic errors. They had to pay back their tax credit to the IRS for which they took money out of their IRAs, thereby accruing additional tax penalties for dipping into their retirement accounts.

When people experienced a change in income, their eligibility for subsidies often changed. Some people lost coverage because they could not afford to pay for coverage even with subsidies. At the end of the year, they were then also charged the tax penalty for being uninsured. Others experienced
increases in income that led to sizable bills at tax time when they owed premiums back and then opted to be uninsured the next year because it made more sense financially to simply pay the penalty. In addition, 8 respondents reported financial stress when a change in their life circumstances such as losing a job made paying their premiums or maintaining coverage more difficult. Though enrollees are required to report income changes, the exchange did not always respond with more affordable premiums – the system was not always sensitive enough to income fluctuations to allow for continuous coverage.

STRENGTHS AND LIMITATIONS

This study has several limitations. First, the subject recruitment procedures skew the results towards people who encountered problems in the enrollment process and thereby required in-person assistance. Second, the results are not generalizable. This is a qualitative study with a small sample conducted in Rhode Island which created a state-run exchange and expanded Medicaid. While other studies of churn use survey and administrative data to estimate the frequency of coverage loss in the health system, we employed the qualitative methods of direct observation and interviewing to learn how people experienced churn on an ACA insurance exchange. The findings are important because the ethnographic methodology centers the consumer perspective and shows how changes in eligibility and coverage impacted health, personal finances, and emotional status. We also found that despite state efforts to maximize enrollment, churn persisted.

CONCLUSIONS

Many economists assume that people who lose coverage do not want it or choose to go without. Our research suggests a very different reality, one in which people struggled to maintain coverage and confronted considerable bureaucratic hurdles. While expanding coverage has many positive benefits, churn does harm in people’s lives and so constructing health systems that rely on churn entails doing harm as a matter of policy [not to mention the added administrative costs for providers and payers]. As health reform policymaking moves to statehouses across the country in the wake of ACA rollbacks, health care providers should urge policymakers to minimize churn and seek ways to stabilize insurance coverage.

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Financial Implications of Physician Specialty Choice

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ABSTRACT

PURPOSE: To examine the approximated financial outcomes of physicians by specialty and to determine whether these correlate with mean USMLE Step 1 scores.

METHODS: Specialty-specific data from the Association of American Medical Colleges Careers in Medicine website were analyzed for total length of training, mean USMLE Step 1 scores, average hours worked per week, and median clinical practice salary for physicians. Hourly wage and estimated net worth at retirement were calculated. Coefficients of determination ($R^2$) were calculated to evaluate the relationships between hourly wage, annual salary, and estimated net worth at retirement with competitiveness as measured by USMLE Step 1 scores of matched residents.

RESULTS: Across all 37 specialties studied, the mean hourly wage was $136 ± $40, ranging from $78 (Geriatrics) to $249 (Neurosurgery). Mean weekly hours worked across all specialties was 54.6 ± 6.4, ranging from 43.4 (Pediatric Emergency Medicine) to 71.1 (Vascular Surgery). At retirement, the mean estimated net worth for all physicians was $4,517,600 ± $1,793,095, ranging from $1,927,779 (Child & Adolescent Psychiatry) to $8,947,885 (Neurosurgery). Step 1 scores, as a marker of specialty competitiveness, correlate with specialty compensation – the strongest association was with hourly wage ($R^2 = 0.6678$), then annual salary ($R^2 = 0.6424$), and finally by estimated net worth at retirement ($R^2 = 0.6158$).

CONCLUSION: In this study, mean Step 1 scores for each medical specialty were positively correlated with compensation, including absolute salary, hourly wage and estimated net worth at retirement.

KEYWORDS: residency, physician salary, competitiveness, hourly wage, retirement, estimated net worth, lifestyle

INTRODUCTION

Medical student specialty choices influence future clinician workforce composition. Understanding drivers in that selection process is important given multiple evolving factors within the current healthcare landscape, including population aging [11], shortages of certain specialties [12-15], expanding patient access [16], sub-specialization trends [17], increasing population [28], reimbursement model changes [29, 30], and physician professional satisfaction [31]. Residency positions in certain specialties go unfilled each year [25], frequently in specialties with lower salaries [19, 24] or in those with perceived lack of schedule control [45].

Multiple factors impact specialty selection by medical students [32-40], including compensation and lifestyle. Previous studies have demonstrated that increased medical student debt burden [18-23, 26, 27] has increasingly driven career choice based on anticipated specialty income [33-37]. In recent years, greater numbers of medical students have chosen specialties such as radiology and anesthesia, while fewer have chosen general surgery and family medicine [41-47]. Medical students’ perception of “controllable lifestyle” – primarily determined by workload, hours worked, and on-call schedule – has been demonstrated as a major determinant of specialty selection [39, 46].

The purpose of this study was to 1) evaluate financial outcomes of different specialties and 2) to assess if financial outcomes correlate with specialties’ match competitiveness as approximated by average USMLE Step 1 scores.

METHODS

This investigation evaluated all specialty data published on the Association of American Medical Colleges (AAMC) Careers in Medicine website [https://www.aamc.org/cim/] accessed in June 2016. Used primarily as a tool for medical student career decision making, the AAMC website aggregates the latest residency and specialty data. For every specialty, we recorded the listed total length of training [4], mean USMLE Step 1 scores [2], average hours worked per week [3], and median clinical practice salary for non-academic physicians [1].

To integrate compensation and workload, hourly wage was calculated by dividing median clinical practice salary by 49 weeks (mean number of weeks worked per year) [5] by hours worked per week. To better incorporate a measure of lifestyle, specialties were stratified into quartiles by hours per week worked. To assess long-term financial outcomes of the different specialties, estimated net worth at 65 years old (the average age of retirement) [6] was calculated. Estimated
CONTRIBUTION

net worth (assets – liabilities) at retirement were calculated by tracking the overall estimated net worth of each specialty by post-graduate year (PGY). We assumed all PGY1s were 26 years old (PGY40 = 65 years old); all specialties had the same $200,000 medical school debt [7]; a constant 6% student loan interest rate based off current federal direct loan rates [8]; zero loan payments made during residency [9]; loans paid off at a rate of 20% of annual salary until debt-free; a savings rate of 10% of salary once debt-free – which also encompasses relative expenditures; and an 8% savings interest growth rate.

Coefficients of determination ($R^2$) were calculated to evaluate the strength of relationships between hourly wage, annual salary, and estimated net worth at retirement to USMLE Step 1 scores of matched residents – a well-established surrogate of specialty competitiveness [10]. Microsoft Excel (Microsoft Corporation, Redmond, WA) was utilized for statistical analysis with a p-value of $p<0.05$ utilized for significance.

RESULTS

All 37 specialties and sub-specialties listed on the AAMC website that had both salary and weekly hours data available were included in the analysis. Of those, 22 specialties had mean USMLE Step 1 scores available for our analysis of competitiveness.

Specialties were ranked by hourly wage (Table 1). For all specialties included, mean hourly wage was $136 ± $40, ranging from $78 (Geriatrics) to $249 (Neurosurgery). Mean weekly hours worked was 54.6 ± 6.4, ranging from 43.4 (Pediatric Emergency Medicine) to 71.1 (Vascular Surgery).

Within hours worked per week quartiles, specialties were ranked by hourly wage (Table 2).

Specialties were ranked by estimated net worth at retirement age of 65 – highlighting the interplay between attending salaries and training duration opportunity costs (Table 3).

Specialty competitiveness correlates with measures of compensation (Figures 1–3) – he strongest association was with hourly wage ($R^2 = 0.6678$), then annual salary ($R^2 = 0.6424$), and then by estimated net worth at retirement ($R^2 = 0.6158$). The specialties above the fitted line compensate better than the trend suggested for their competitiveness, and specialties below the fitted line are compensated less than the trend predicted for their competitiveness.
Table 1. Hourly wage rankings

<table>
<thead>
<tr>
<th>Wage Rank</th>
<th>Specialty</th>
<th>Hourly Wage ($)</th>
<th>Hours/Week</th>
<th>Median Annual Salary ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Neurological Surgery</td>
<td>249</td>
<td>58.2</td>
<td>710,000</td>
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<td>2</td>
<td>Dermatology</td>
<td>202</td>
<td>45.4</td>
<td>450,080</td>
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<tr>
<td>3</td>
<td>Orthopaedic Surgery</td>
<td>200</td>
<td>57.0</td>
<td>559,137</td>
</tr>
<tr>
<td>4</td>
<td>Radiation Oncology</td>
<td>199</td>
<td>51.8</td>
<td>506,023</td>
</tr>
<tr>
<td>5</td>
<td>Gastroenterology</td>
<td>186</td>
<td>56.0</td>
<td>510,671</td>
</tr>
<tr>
<td>6</td>
<td>Radiology-Diagnostic</td>
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<td>167</td>
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<td>Thoracic Surgery</td>
<td>162</td>
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<td>500,000</td>
</tr>
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<td>Otolaryngology</td>
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<td>370,063</td>
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<td>320,816</td>
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<td>Allergy &amp; Immunology</td>
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<td>Physical Medicine &amp; Rehabilitation</td>
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<td>Rheumatology</td>
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<td>Mean</td>
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<td>135</td>
<td>54.5</td>
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Table 2. Hourly wage rankings by workload quartile

<table>
<thead>
<tr>
<th>Workload Quartile</th>
<th>Specialty</th>
<th>Hourly Wage ($)</th>
<th>Hours/Week</th>
<th>Median Annual Salary ($)</th>
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</thead>
<tbody>
<tr>
<td>1st</td>
<td>Dermatology</td>
<td>202</td>
<td>45.4</td>
<td>450,080</td>
</tr>
<tr>
<td>2nd</td>
<td>Radiation Oncology</td>
<td>199</td>
<td>51.8</td>
<td>506,023</td>
</tr>
<tr>
<td>3rd</td>
<td>Orthopaedic Surgery</td>
<td>200</td>
<td>57.0</td>
<td>559,137</td>
</tr>
<tr>
<td>4th</td>
<td>Neurological Surgery</td>
<td>249</td>
<td>58.2</td>
<td>710,000</td>
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</table>

1st Quartile Mean 121 47 278,176

2nd Quartile Mean 140 52 360,179

3rd Quartile Mean 139 57 387,717

4th Quartile Mean 146 63 448,880
<table>
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<tr>
<th>Net worth at retirement ranking</th>
<th>Specialty</th>
<th>Years of training</th>
<th>Debt at residency graduation ($)</th>
<th>Estimated net worth (thousands of $)</th>
<th>PGY-10</th>
<th>PGY-20</th>
<th>PGY-30</th>
<th>At retirement (age 65)</th>
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<tr>
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<td>(304)</td>
<td>90</td>
<td>1,223</td>
<td>3,668</td>
<td>8,948</td>
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<td>2</td>
<td>Orthopaedic Surgery</td>
<td>5</td>
<td>(270)</td>
<td>157</td>
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<td>Thoracic Surgery-Integrated</td>
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<td>(286)</td>
<td>76</td>
<td>888</td>
<td>2,642</td>
<td>6,428</td>
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<td>(44)</td>
<td>731</td>
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<td>74</td>
<td>772</td>
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<td>11</td>
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<td>(65)</td>
<td>632</td>
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<td>5,078</td>
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<td>Cardiovascular Disease</td>
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<td>4,931</td>
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<td>(286)</td>
<td>7</td>
<td>625</td>
<td>1,959</td>
<td>4,839</td>
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</tr>
<tr>
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<td>Emergency Medicine</td>
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<td>(239)</td>
<td>115</td>
<td>713</td>
<td>2,004</td>
<td>4,792</td>
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<td>(91)</td>
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<td>Obstetrics &amp; Gynecology</td>
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<td>(157)</td>
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Abbreviations: PM&R - Physical Medicine and Rehabilitation; Endocrinology, D&M - Endocrinology, Diabetes, and Metabolism
As numerous demographic, political, and economic trends shape healthcare access, quality, and costs, it is becoming increasingly important to understand how drivers of medical student specialty selection may help optimize future provider workforce composition. While previous studies have highlighted the influence of financial reimbursement [18-23, 26, 27, 32-40] and lifestyle [39, 41-47] as major factors on specialty selection, this is the first investigation to evaluate the interplay between financial reimbursement and average number of hours worked. This is additionally the first study to reveal that variance in match competitiveness for different specialties is directionally more strongly explained by variance in hourly wage—a metric integrating both remuneration and lifestyle—than annual salary alone.

As debt levels continue to rise [18-23], compensation structures evolve [29,30], and more women enter medicine [48], the combination of remuneration and lifestyle will continue to impact medical student specialty selection. Various studies [12-15] have forecasted future insufficiencies of primary care providers. Our data reveal that these providers not only receive some of the lowest salaries, but that hour-for-hour they also receive among the lowest hourly wages. The influence of both compensation and lifestyle may be reflective of a larger trend affecting young professionals in and outside of medicine [49-52].

One limitation of this study is the determination of specialty competitiveness solely by average USMLE Step 1 score. Ideally, the proportion of applicants to each specialty that matched into the specialty would have also been considered. Another study limitation is the quality of the original data aggregated on the AAMC website. The data represent previous years and may not perfectly reflect this year’s trends [1]. However, medical students turn to the AAMC and this same data for helping with career decisions. We therefore believe that this imperfect data was appropriate for present analysis, reflecting the latest material available to the primary audience. Although only non-academic physician compensation data was analyzed, academic physicians make up a smaller proportion of practitioners and consistently report lower salaries across specialties [55]. Additionally, the accuracy of projections for estimated net worth at retirement are limited by the accuracy of our underlying assumptions for age at PGY1, medical school debt, student loan interest rates and repayment patterns, retirement savings rates, and savings growth rates. However, as these assumptions were held constant between specialties, systematic error may only minimally affect the results of our inter-specialty comparisons.

Understanding how remuneration and lifestyle influence medical student specialty selection can help medical schools, graduate medical education programs, employers, legislators, and insurers craft appropriate incentives to attract aspiring physicians to certain specialties.

References

References 21–55
Oral Health Concerns and Connections to Mental Health among Rhode Island High School Students, 2017

ANTHONY PELLEGRINO, BS; TRAVIS VENDETTI, BS; TRACY L. JACKSON, PhD; SAMUEL ZWETCHKENBAUM, DDS, MPH

BACKGROUND

In the United States, mental illness and behavioral issues are among the largest sources of health care costs and significantly compromise youth and family well-being. In 2015 mental health and substance use disorders were the leading cause of disease burden, surpassing cancer and cardiovascular disease. The overall age-adjusted suicide rate in the U.S. was 24% higher in 2014 than in 1999. The U.S. also faces challenges pertaining to young people’s oral health. In 2015–16, more than half (53.5%) of 12–19-year-olds had experienced tooth decay, and 13.4% had untreated decay.

Both mental and oral health issues also are common in Rhode Island; among Rhode Islanders ages 10–24, suicide was the second leading cause of death in 2016. Dental disease is also prevalent among RI teens, especially those from low-income backgrounds. Almost 30% of teens with Medicaid-covered dental visits in 2017 required a filling to address a dental issue.

We present data for RI public high school [PHS] students on self-reported oral health concerns and describe potential connections to self-reported mental health status.

METHODOLOGY

The Youth Risk Behavior Survey (YRBS) is a biennial national survey of PHS students, developed by the Centers for Disease Control and Prevention (CDC) to monitor self-reported health behaviors and risk. A two-stage, cluster sample design obtains estimates representative of the state population. Schools are selected with probability proportional to enrollment size and then classes within are randomly selected. A weight is applied to each respondent to adjust for student nonresponse and to obtain a distribution of students by grade, sex, and race/ethnicity that approximates the state PHS population. In total 2,221 students from 19 PHs completed the YRBS, representative of 41,114 students statewide.

We focus on the following oral and mental health items:

- “How often were you self-conscious or embarrassed because of your teeth or mouth?

We present univariate descriptive statistics for oral and mental health items of interest. Chi-square tests were used to examine differences in feeling embarrassed by teeth (sometimes/most of the time/always vs. rarely/never) across demographic groups. Responses to the item: “In the last 30 days, how often did you go hungry because there was not enough food in your home”, was used as a proxy for socioeconomic status (SES), with those answering sometimes/most of the time/always categorized as lower-SES and those responding rarely/never as higher-SES. Next, chi-square tests were conducted to evaluate the association between oral and mental health. For this analysis, we constructed a three-level variable for oral health (never/rarely, sometimes or most of the time/always embarrassed by teeth). Logistic regressions were estimated to test the effect of oral health on mental health, controlling for sex, grade, SES, and race/ethnicity.

RESULTS

Overall, 21.1% of PHS students reported feeling self-conscious or embarrassed because of their teeth or mouth at least sometimes in the past 12 months. Specifically, 14.3% reported sometimes feeling self-conscious or embarrassed, 3.5% most of the time, and 3.1% always felt self-conscious or embarrassed. Female and lower-SES students were more likely than male and higher-SES students, respectively, to report being embarrassed by their teeth.

Analysis of mental health items revealed 29.4% of students felt sad or hopeless, 15.9% seriously considered attempting suicide, 13.6% make a plan about how they would attempt suicide, and 10.5% attempted suicide in the last year. Due to the strong association of gender and SES regarding feelings about oral health, we also explored the association between these items and mental health [Figures 1, 2]. Chi-square tests showed that females are significantly more likely than males to report negative perceptions of both
Table 1. Self-reported embarrassment by teeth/mouth among RI public high school students, by selected demographics

<table>
<thead>
<tr>
<th></th>
<th>Sometimes/Most of the time/Always embarrassed by teeth (N=8,337)</th>
<th>Rarely/Never embarrassed by teeth (N=31,177)</th>
<th>Total RI high school population (N=41,114)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Weighted n</td>
<td>Weighted %</td>
<td>Weighted n</td>
</tr>
<tr>
<td>SEX*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>5,150</td>
<td>26.9%</td>
<td>14,003</td>
</tr>
<tr>
<td>Male</td>
<td>3,017</td>
<td>15.1%</td>
<td>16,979</td>
</tr>
<tr>
<td>RACE/ETHNICITY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>4,772</td>
<td>19.8%</td>
<td>19,380</td>
</tr>
<tr>
<td>Black</td>
<td>699</td>
<td>22.4%</td>
<td>2,417</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2,016</td>
<td>22.7%</td>
<td>6,871</td>
</tr>
<tr>
<td>Other</td>
<td>681</td>
<td>26.6%</td>
<td>1,884</td>
</tr>
<tr>
<td>SCHOOL GRADE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9th</td>
<td>2,418</td>
<td>23.1%</td>
<td>8,070</td>
</tr>
<tr>
<td>10th</td>
<td>2,063</td>
<td>20.2%</td>
<td>8,153</td>
</tr>
<tr>
<td>11th</td>
<td>1,793</td>
<td>19.1%</td>
<td>7,612</td>
</tr>
<tr>
<td>12th</td>
<td>1,955</td>
<td>21.7%</td>
<td>7,055</td>
</tr>
<tr>
<td>WENT HUNGRY (SES)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sometimes/Most of the time/Always (Low SES)</td>
<td>2,367</td>
<td>38.4%</td>
<td>3,796</td>
</tr>
<tr>
<td>Rarely/Never (High SES)</td>
<td>5,850</td>
<td>17.8%</td>
<td>27,033</td>
</tr>
</tbody>
</table>

* Responses to item: “During the past 30 days, how often did you go hungry because there was not enough food in your home” was used as proxy for SES.  
**p < .05, significant difference between groups  
Note: numbers may not add up to column header due to missing data on some demographics.  
Source: Youth Risk Behavior Survey, 2017

Figure 1. Perceptions of oral health and mental health status, by sex  
Note: Error bars denote 95% confidence intervals. All differences except attempted suicide were statistically significant, p < .05

Figure 2. Perceptions of oral health and mental health status, by SES  
Note: Error bars denote 95% confidence intervals. All differences were statistically significant, p < .05

their oral and mental health (except attempting suicide). Those of lower SES were significantly more likely than those of high SES to report all poor oral health and mental health outcomes. The cross-sectional analysis revealed that a negative sense of one’s teeth is significantly associated with feeling sad or hopeless and having suicidal thoughts or actions among RI PHS students. The proportion of students who felt sad or hopeless was more than twice as high among students who reported most of the time/always feeling embarrassed because of their teeth versus those who never/rarely felt embarrassed (60.1% vs. 24.8%, Figure 3). Those who reported embarrassment from their teeth were also more likely than those who did not report embarrassment to have had suicidal thoughts and made suicide attempts in the past year. Results of multivariable logistic regression analyses indicated students who reported at least sometimes feeling embarrassment from their teeth had twice the odds of reporting all poor mental health outcomes compared to those who did not report embarrassment, after controlling for sex, race/ethnicity, SES, and grade (Table 2).
Approximately one in five RI students reported they felt self-conscious or embarrassed about their teeth/mouth “sometimes” or more frequently in the past year. Being self-conscious of one’s teeth/mouth was significantly associated with feelings of sadness/hopelessness and reported suicidal thoughts and attempts. The data observed among RI PHS students aligns with findings from prior studies. For example, a 2014 cross-sectional study of adults found greater anxiety and depression among those with lower levels of satisfaction with their orofacial appearance. While results show an association between oral and mental health concerns, the cross-sectional data preclude us from ascertaining causation. It is possible poor mental health affects perceptions of oral health, or that the two are associated due to unmeasured confounders such as family income level. 

Table 2. Adjusted logistic regression – association between embarrassment from teeth and mental health outcomes

<table>
<thead>
<tr>
<th>Oral Health</th>
<th>Mental Health Outcome</th>
<th>Adjusted Odds Ratio* (95% CL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling embarrassed by teeth/mouth</td>
<td>Feeling sad/hopeless</td>
<td>2.09 (1.41–3.09)</td>
</tr>
<tr>
<td></td>
<td>Considered suicide</td>
<td>2.31 (1.83–2.92)</td>
</tr>
<tr>
<td></td>
<td>Made suicide plan</td>
<td>1.93 (1.46–2.54)</td>
</tr>
<tr>
<td></td>
<td>Attempted suicide</td>
<td>1.98 (1.47–2.66)</td>
</tr>
</tbody>
</table>

Note: Displays the odds of reporting poor mental health outcome among those who reported at least sometimes feeling embarrassment from their teeth/mouth compared to those who did not report embarrassment from teeth/mouth adjusting for gender, grade, SES, and race/ethnicity.

Acknowledgments
The authors thank Sadie DeCourcy, JD, Oral Health Program Manager, and Tara Cooper, MPH, Center for Health Data and Analysis, for their contributions to this manuscript.

References
5. RI Maintenance Management Information System (MMIS), Medicaid Claims Data, 2017.


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**Disclosures**

The authors have no financial disclosures to report.

**Correspondence**

Samuel.Zwetchkenbaum@health.ri.gov
Rhode Island Monthly Vital Statistics Report
Provisional Occurrence Data from the Division of Vital Records

<table>
<thead>
<tr>
<th>VITAL EVENTS</th>
<th>REPORTING PERIOD</th>
<th>12 MONTHS ENDING WITH FEBRUARY 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FEBRUARY 2018</td>
<td>Number (a) Number (b) Rates (c)</td>
</tr>
<tr>
<td>Live Births</td>
<td>880</td>
<td>11,603</td>
</tr>
<tr>
<td>Deaths</td>
<td>825</td>
<td>10,400</td>
</tr>
<tr>
<td>Infant Deaths</td>
<td>5</td>
<td>75</td>
</tr>
<tr>
<td>Neonatal Deaths</td>
<td>3</td>
<td>56</td>
</tr>
<tr>
<td>Marriages</td>
<td>224</td>
<td>6,994</td>
</tr>
<tr>
<td>Divorces</td>
<td>262</td>
<td>3,131</td>
</tr>
<tr>
<td>Induced Terminations</td>
<td>165</td>
<td>1,793</td>
</tr>
<tr>
<td>Spontaneous Fetal Deaths</td>
<td>65</td>
<td>885</td>
</tr>
<tr>
<td>Under 20 weeks gestation</td>
<td>61</td>
<td>819</td>
</tr>
<tr>
<td>20+ weeks gestation</td>
<td>4</td>
<td>66</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Underlying Cause of Death Category</th>
<th>REPORTING PERIOD</th>
<th>12 MONTHS ENDING WITH AUGUST 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AUGUST 2017</td>
<td>Number (a) Number (b) Rates (c)</td>
</tr>
<tr>
<td>Diseases of the Heart</td>
<td>154</td>
<td>2,523</td>
</tr>
<tr>
<td>Malignant Neoplasms</td>
<td>168</td>
<td>2,420</td>
</tr>
<tr>
<td>Cerebrovascular Disease</td>
<td>47</td>
<td>503</td>
</tr>
<tr>
<td>Injuries (Accident/Suicide/Homicide)</td>
<td>86</td>
<td>979</td>
</tr>
<tr>
<td>COPD</td>
<td>30</td>
<td>463</td>
</tr>
</tbody>
</table>

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

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

September 4, Tuesday
RIMS Physician Health Committee: Herbert Rakatansky, MD, Chair

September 11, Tuesday
American Medical Association Scope of Practice Partnership Membership Workgroup conference call

September 12, Wednesday
Primary Care Physician Advisory Committee
Board of Medical Licensure and Discipline
Governor's Overdose Prevention and Intervention Task Force: Sarah Fessler, MD, Past President

Primary Election Day!
September 13, Thursday
State Innovation Model (SIM) Grant Steering Committee: Peter A. Hollmann, MD, President-elect

September 17, Monday
Senator Whitehouse’s End of Life Care Initiative
OHIC Health Care Cost Trends Collaborative Project
RIMS Board of Directors Meeting: Bradley Collins, MD, President

September 18, Tuesday
RIMS’ Diabetes Prevention Program meeting

September 19, Wednesday
OHIC Public Hearing on Health Insurer Network Regulations

September 20, Thursday
Meeting with Rhode Island Acupuncture Association regarding legislation
Diabetes Prevention Program presentation at Anchor Medical Group: Diane Siedlecki, MD, Past President

September 21, Friday
Harm Reduction Coalition meeting
Department of Health Emergency Medical Services Regulations public hearing: Catherine Cummings, MD, RIMS’ Treasurer; Joseph Lauro, MD; Scott Pasichow, MD

September 22, Saturday
Council of New England State Medical Societies and New England Delegation to the American Medical Association meeting, Waltham, Mass.: Peter Hollmann, MD, Chair; Alyn Adrain, MD, Delegate
Chiropractic Society of Rhode Island Centennial Celebration, Newport: Steven R. DeToy, RIMS Director of Government and Public Affairs

September 24, Monday
OHIC Health Care Cost Trends Collaborative Project

September 26, Wednesday
Rhode Island Foundation Healthcare Planning Committee: Robert Corwin, MD
Meeting with Blue Cross Blue Shield of RI regarding Diabetes Prevention Program

September 28, Friday
RIMS Annual Member Convivium and Awards Presentation

The 2018 election season

The American electorate has been largely spectating since 2016 but will once again have a chance to reshape the political landscape locally and nationally on November 6.

Rhode Islanders will be deciding how to fill all of the 113 seats of the General Assembly — at least in theory. In fact, at last count 41 seats of those 113 seats — 11 in the Senate and 30 in the House — will have only one name on the ballot, and 39 of those unopposed candidates are incumbents. Voters will also decide on all five statewide general offices (Governor, Lieutenant Governor, Treasurer, Secretary of State, and Attorney General), and on both of Rhode Island’s seats in the U.S. House of Representatives. Rhode Island’s junior Democratic U.S. Senator Sheldon Whitehouse has a Republican challenger in the person of former Rhode Island Supreme Court Justice Robert Flanders.

Medicine’s role: RIMS encourages physicians to be politically informed and engaged, and, at the very least, to vote in every primary and general election to counter physicians’ unfortunate reputation as inveterate non-voters. That reputation weakens medicine’s hand at the State House and in Washington. Moreover, The Code of Medical Ethics teaches that physicians have a professional obligation to themselves and their patients to seize opportunities to improve society.

Besides voting, there are other ways of being involved. Certainly not everyone is cut out to run for public office, especially in these hyper-partisan, acrimonious times. The Rhode Island Medical Political Action Committee (RIMPAC) and the American Medical Political Action Committee (AMPAC) make it easy for every physician to be involved in the political process. Supporting RIMPAC and AMPAC means helping medicine convey a coherent message locally and nationally. Both PACs depend on regular solicitations.

Michael Silver, MD, is Chair of RIMPAC. Peter Karczmar, MD, is Treasurer. RIMPAC coordinates with other specialty medical PACs in Rhode Island to reinforce medicine’s values and priorities through the electoral process. RIMPAC and AMPAC need and deserve the support of every doctor.
It’s a new day.

The Rhode Island Medical Society now endorses Coverys.

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401-331-3207
The Rhode Island Medical Society continues to drive forward into the future with the implementation of various new programs. As such, RIMS is expanded its Affinity Program to allow for more of our colleagues in healthcare and related business to work with our membership. RIMS thanks these participants for their support of our membership.

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

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

RIPCPC is an independent practice association (IPA) of primary care physicians located throughout the state of Rhode Island. The IPA, originally formed in 1994, represent 150 physicians from Family Practice, Internal Medicine and Pediatrics. RIPCPC also has an affiliation with over 200 specialty-care member physicians. Our PCP’s act as primary care providers for over 340,000 patients throughout the state of Rhode Island. The IPA was formed to provide a venue for the smaller independent practices to work together with the ultimate goal of improving quality of care for our patients.
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Miriam Hospital receives $9.4M grant for antibiotics resistance research center

**The federal grant will create a Center for Biomedical Research Excellence (COBRE) to address the worldwide threat of drug-resistant “superbugs”**

**PROVIDENCE** – The increasing worldwide threat of drug-resistant pathogens will be the focus of a new research center to be established at The Miriam Hospital thanks to a $9.4 million grant from the National Institutes of Health (NIH).

The five-year grant to create an NIH Center for Biomedical Research Excellence (COBRE) will allow researchers at The Miriam Hospital; its Lifespan affiliate, Rhode Island Hospital; and Brown University to delve into the causes of antibiotic resistance and identify potential new drugs.

“Resistance to antimicrobial therapies is a national and international crisis that threatens clinical practice from primary care to the most advanced medical interventions like organ transplantation and cancer chemotherapy. Infections caused by antibiotic resistant bacteria are major problems in the community and in inpatient health care settings. According to data from the CDC, more than 2 million people suffer infections from antibiotic-resistant bacteria each year in the United States and at least 23,000 people die as a result,” said ELEFTHERIOS MYロンAKIS, MD, chief of infectious diseases at The Miriam Hospital and Rhode Island Hospital and the principal investigator for the new center.

“Despite this clinical and financial burden, the supply of new antibiotics from major pharmaceutical companies has diminished dramatically in recent years. New research from laboratories at academic institutions, however, demonstrates there are promising alternative approaches to understand antibiotic resistance and discover new antimicrobial agents.”

This is the second COBRE grant received by a Lifespan affiliate in as many months. In August, Rhode Island Hospital received an $11.8 million, five-year grant for a COBRE to study ways to curb the opioid epidemic sweeping across Rhode Island and the nation. In all, Lifespan affiliates are the main institutions for five ongoing COBREs, with total funding of more than $42.7 million.

The new Center for Antimicrobial Resistance and Therapeutic Discovery (CARTD) will foster the work of existing researchers while encouraging junior investigators to devote their talents toward this growing public health issue. Its multidisciplinary approach will build on existing research at The Miriam Hospital and Lifespan to create an innovative, state-of-the-art biomedical research center that can serve as a resource for other researchers and investigators in the region.

The following are among the up-and-coming researchers already identified as CARTD researchers:

**BETH FUCHS**, a researcher at Rhode Island Hospital and assistant professor at Brown, who will use laboratory roundworms to study methicillin-resistant *Staphylococcus aureus* (MRSA), one of the most commonly recognized drug-resistant pathogens, or “superbugs.”

She will investigate the potential treatment effectiveness of the anti-inflammatory compound auranofin and the medicinal herb extract shikonin.

**PETER BELENCKY**, assistant professor of molecular microbiology and immunology at Brown, who will study the impacts of antibiotics on a body’s microbial community, the microbiome, to better understand the mechanisms that promote drug resistance.

Mylonakis is a highly regarded researcher on antimicrobial resistance. Earlier this year, a team that he led published a study in Nature on the identification of retinoids as a new class of antibiotics in the fight against drug resistance. He is a clinical physician for Lifespan and Brown Medicine and the Charles C.J. Carpenter Professor of Infectious Disease at Brown’s Alpert Medical School.

The intent of federal COBRE grants is to establish leadership and mentorship by experienced researchers, overseeing and supporting the work of three to five junior investigators in thematic, multidisciplinary centers, until those researchers establish a body of work to enable them to secure their own independent funding. Over the possible 15-year span of COBRE’s three phases, this builds the institution’s capacity and expertise in a given area. Today’s announcement is for a phase one COBRE grant.

A letter supporting the application for the COBRE grant was signed by all four members of Rhode Island’s Congressional delegation.

“When it comes to addressing the largest public health issues of our time, some of the most important research is taking place right here in Rhode Island at Lifespan-affiliated hospitals,” said TIMOTHY J. BABINEAU, MD, president and CEO of Lifespan. “I’m proud that we have been able to recruit and retain renowned experts whose efforts are being rewarded with the resources they need to fight disease and illness. Our ability to secure these grants not only allows these researchers and their staffs to carry out their vital work but also helps support investment and jobs in Rhode Island’s growing knowledge and healthcare economies.”

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**IN THE NEWS**
JWU, URI now offering dual degree program in PharmD, PA studies

Johnson & Wales University (JWU) and The University of Rhode Island (URI) are offering a dual degree in pharmacy and physician assistant studies beginning this fall – the first such collaboration between public and private universities in the country.

URI Doctor of Pharmacy (PharmD) students can apply to JWU’s Master of Science in Physician Assistant Studies (MSPAS) program after completing their fourth year of the 6-year pharmacy program. Applications began in the spring.

Officials at both schools said the program breaks new ground in public-private partnerships and greatly expands career opportunities for students in the health professions.

“Bridging the public-private university divide is significant,” said Donald H. DeHayes, URI provost and vice president for academic affairs. “This partnership benefits both institutions and ultimately the health and well-being of Rhode Islanders.”

Up to two URI students will be accepted to the program each year, and upon completion, will graduate with a degree from each university: Doctor of Pharmacy from URI and Master of Science in Physician Assistant Studies (MSPAS) from JWU.

“This dual degree will certainly set these graduates apart from their peers, and provide unique opportunities for pharmacy students interested in direct patient care,” said E. Paul Larrat, dean of URI’s College of Pharmacy.

Christine M. Collins, director of pharmacy for Lifespan, sees great value in the dual-degree offering. “This partnership reflects what we see every day in the health care setting,” she said. “Medications are an important, but complex, component of care to help many of our patients get healthy and stay healthy. In our hospitals and ambulatory practices, pharmacists and physician assistants work together to give our patients the expertise of both. Graduates of this new program will have combined that expertise, strengthening the delivery of care.”

Johnson & Wales became the first university in the state to offer a master’s degree in physician assistant studies when it launched the program in 2014. Today, more than 70 students are enrolled.

“Pharmacy studies and physician assistant studies are a good educational fit, and graduates holding both degrees will bring a high-level of expertise to their care,” said George Bottomley, DVM, PA-C, director of JWU’s Center for Physician Assistant Studies.

There is great need for highly skilled health-care providers who can assess, diagnose, treat and prescribe, not only in Rhode Island but around the country. Graduates holding dual degrees could help fill that need in hospitals, private practices, community-based health centers and rural and underserved areas.

Pharmacy students will begin their physician assistant studies the summer after they are accepted to the program. The students will then alternate pharmacy and physician assistant coursework and clinical practicums, attending school year-round.

The dual degree will add one year to the PharmD timeline. URI students will pay tuition to JWU while enrolled in MSPAS clinical rotations.

The only other dual pharmacy and physician assistant degree programs in the country are offered at the University of Washington and the University of Kentucky, both public institutions.
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Partnership receives $2.5M to address substance use among gay/bisexual men

_The Miriam Hospital, Project Weber/RENEW and the Rhode Island Public Health Institute to collaborate on new initiative to serve at-risk black and Latino men_

PROVIDENCE – The Miriam Hospital has received a $2.5 million federal grant to partner with Project Weber/RENEW and the Rhode Island Public Health Institute to improve substance use and mental health treatment for gay and bisexual men. The five-year grant, awarded by the Substance Abuse and Mental Health Services Administration (SAMHSA), will help establish the first program in Rhode Island dedicated to providing substance use treatment services for black and Latino men, a group at high-risk for HIV.

According to state-by-state data from the U.S. Centers for Disease Control, Rhode Island had the ninth highest rate for drug overdose deaths in 2016. Moreover, barriers to substance use treatment disproportionately impact black and Latino men.

“This grant offers a great opportunity to expand our substance treatment services among gay and bisexual men, especially given the concerning opioid epidemic we are facing,” said PHILIP A. CHAN, MD, medical director of The Miriam Hospital’s STD Clinic.

MEGAN PINKSTON-CAMP, PhD, a psychologist with the Ryan White Behavioral Medicine program at The Miriam, said, “We are committed to addressing the overlapping substance use and mental health concerns by reaching out to and providing treatment in this underserved population. This new grant represents another facet of Rhode Island’s innovative approach to dealing with addiction and recovery, and builds on Project Weber/RENEW’s years of work advocating for the population of high-risk people.”

Project Weber/RENEW is a peer-based program providing harm reduction and recovery services to sex workers and high-risk men and women, including transgender people. The program has worked with clients at the intersection of substance use disorder and HIV risk for many years. The grant will enable Project Weber/RENEW to provide clinical services as well as expand its peer-based outreach and drop-in services.

The third partner is The Rhode Island Public Health Institute (RIPHI), which will evaluate and monitor the success of the new initiative and assist with outreach and programs. The institute is led by AMY NUNN, ScD, who has many years of experience working collaboratively with community leaders to address health disparities.

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RiDOH Health Equity summit focuses on building healthy and resilient communities

More than 700 community members, legislators, municipal leaders, members of the business community, and representatives from fields including public health, healthcare, law enforcement, and education gathered on Sept. 20th at the Rhode Island Department of Health (RiDOH)’s third annual Health Equity Summit to discuss how to build healthier, more resilient communities, and a healthier, more resilient Rhode Island.

In more than 60 different workshops, attendees examined how certain health issues affect specific communities differently, and how to partner with communities to address those health issues in ways that improve health and economic opportunities for all Rhode Islanders. The workshops at the Summit included sessions on healthy aging, transgender health, healthy housing, climate change, mental health, infant mortality, and gentrification, among dozens of other topics. The theme of the Summit was Building Healthy and Resilient Communities.

“No matter what you look like, what you sound like, where you live, or who you love, everyone deserves the chance to be as healthy as possible and to live in as healthy a community as possible,” said Director of Health NICOLE ALEXANDER-SCOTT, MD, MPH. “To make this a reality, we need to work together to build healthy and resilient communities that bounce forward after adverse events, such as those related to climate change, and that support healthy living for everyone. Today’s Health Equity Summit was a critical step in this process, and in coming together to put action to our talk about building a healthier, more resilient Rhode Island.”

Different health outcomes for different communities, also referred to as health disparities, exist throughout Rhode Island. For example:

• Teenagers living in rural areas of Rhode Island report some of the highest rates of drug, alcohol, and cigarette use in the state;
• Individuals who identify as lesbian, gay, or bisexual are diagnosed with depression at double the rate of Rhode Islanders who do not identify this way (44% have ever had a diagnosis of depression, versus 22%);
• The infant mortality rate for African-American Rhode Islanders is almost double the state average (11.2 per 1,000 live births, as opposed to 6.6); and
• More than half of Native American children in Rhode Island (54%) live in poverty.

Differences in health outcomes like these are the result of different community-level factors, such as exposure to marketing of unhealthy products, access to transportation and health services and care, education, job opportunities, social supports, housing, and discrimination. Factors such as these are described as the socioeconomic and environmental determinants of health.

Because health outcomes are overwhelmingly determined by these community-level factors, many of RiDOH’s public health interventions are now focused in communities, led by our communities. The most prominent example is Rhode Island’s Health Equity Zones (HEZs). HEZs are community-led Collaboratives in nine regions throughout the state that are working to address these underlying, community-level determinants of health. For example, the Washington County HEZ has worked to address mental health concerns among residents by providing evidence-based, mental health first aid and suicide prevention training to more than 1,000 police officers, clergy members, teachers, parents, and staff of youth-serving organizations. As a result of the HEZ infrastructure pulling the community together the Substance Abuse Mental Health Services Association awarded the Washington County HEZ, Healthy Bodies Healthy Minds a...
$2 million grant to reach zero suicides. A second example is the work of the Pawtucket and Central Falls HEZ to revitalize a dilapidated city building in Pawtucket to create affordable housing units, a job training program for youth, and a market and kitchen space with locally-grown fresh fruits and vegetables and healthy prepared foods, called Harvest Kitchen.

The keynote speaker at the Summit was EDWARD P. EHLLINGER, MD, MSPH, a former Minnesota Health Commissioner.

In addition to the wide range of communities and fields represented at the Summit, representatives from several State agencies participated in dialogues about how to improve health outcomes for the Rhode Islanders they serve. Those agencies included the Executive Office of Health and Human Services; the Rhode Island Department of Environmental Management; the Rhode Island Office of Veterans Affairs; the Rhode Island Department of Corrections; the Rhode Island Department of Children, Youth, and Families; the Rhode Island Department of Education; the Rhode Island Department of Behavioral Healthcare, Developmental Disabilities, and Hospitals; the Office of the Health Insurance Commissioner; and Health Source RI.

The Health Equity Summit was also an opportunity for Dr. Alexander-Scott to launch the 2019 President’s Challenge for the Association of State and Territorial Health Officials (ASTHO). As Rhode Island’s Director of Health, Dr. Alexander-Scott’s yearlong term as the President of ASTHO, which is the national organization for state health directors, begins this month, giving the opportunity to elevate Rhode Island’s leadership in health equity. The theme of the President’s Challenge mirrors the theme of the Health Equity Summit: Building Healthy and Resilient Communities. ASTHO will be working over the coming year with state and territorial health departments to help them implement initiatives that, similar to the HEZ initiative in Rhode Island, are focused on addressing the factors in people’s communities that most significantly impact health outcomes. The challenge is aligned with the National Association of County and City Health Officials (NACCHO) and the U.S. Surgeon General’s focus on community health and economic prosperity.
Swim Across America raises more than $220,000 to benefit women’s cancer research at W&I

More than 650 swimmers of all ages and skill levels participated in the ninth annual Swim Across America fundraising swim at Roger Wheeler State Beach in Narragansett recently, raising more than $220,000 to support research in Women & Infants Hospital’s Center for Biomarkers and Emerging Technologies (CBET), an initiative of the Program in Women’s Oncology, and the Department of Pathology and Laboratory Medicine.

The swim is organized by Swim Across America, a national organization dedicated to raising money and awareness for cancer research, prevention, and treatment. Swimmers included cancer survivors, patients and family members, physicians and staff from the Program in Women’s Oncology, the Rhode Island Masters Swimmers, high school and club teams, and Olympians.

College swim teams from across the region – including Providence College, University of Connecticut, Bryant University, Brown University, Roger Williams University, University of Rhode Island, Assumption College, Boston University, Northeastern, Connecticut College, and Holy Cross – attended, creating one of the largest groups of college athletes in an open-water swim in the country. Providence College was the top fundraising school, raising more than $30,000.
Zero Suicide initiative in Washington County receives $2M
Funding will help establish wide-ranging screening program for health care providers

WASHINGTON D.C. – On September 10, U.S. Senators Jack Reed and Sheldon Whitehouse, U.S. Representative Jim Langevin, and Rhode Island Department of Health Director NICOLE ALEXANDER-SCOTT, MD, announced $2 million in federal funding for South County Healthy Bodies, Healthy Minds’ Zero Suicide in Washington County program. The funding will help establish a new, wide-ranging program for health care providers across the region to screen for the warning signs of suicide and provide vital services to further assess and care for those at risk of suicide.

Washington County has the highest rate of suicide in Rhode Island.

To combat this problem, South County Healthy Bodies, Healthy Minds – one of the state’s ten Health Equity Zones – will use the $2 million from the Substance Abuse and Mental Health Services Administration to improve mental health care with the goal of eliminating suicides, hence the name “Zero Suicide.”

The program will include all major health care institutions in Washington County. It will set up a countywide leadership team with representatives from participating health care organizations and suicide survivors and/or family members. The program will train all staff at health care facilities, provide timely services, coordinate outreach to patients in need, and conduct routine reviews of suicide attempts to identify trends or opportunities for future prevention efforts.

“Zero Suicide is both a system and a culture change; it is also the most effective program proven to drastically reduce suicides in health care systems,” noted DR. ROBERT HARRISON, Project Director for the initiative. “Yale New Haven Health/Westerly Hospital is proud to collaborate with South County Health and every other major health care organization in the region to prevent the most preventable death-suicide- in Washington County.”

“We can mount this program in South County because of the strength of South County Healthy Bodies, Healthy Minds, a collaboration of healthcare providers, the school systems, URI, our community action agency, business partners and many other social service agencies,” said LOU GIANCOLA, President and CEO of South County Health.

“Making sure health care professionals have the training and resources to lend care and support to those fighting depression and thoughts of suicide will go a long way toward getting us to zero suicides,” said Senator Whitehouse.

Of people who die by suicide, 30 percent had recent contact with mental health providers, 45 percent – including 70 percent among older men – had recent contact with primary care providers, and 10 percent visited an emergency department. That is why the World Health Organization recommends that “health-care services need to incorporate suicide prevention as a core component.”

EXHIBIT
Trapped in the Middle: The Effect of Income and Health Inequality on the Middle Class in America

The Brown University School of Public Health and the Watson Institute for International and Public Affairs present: Trapped in the Middle: The Effect of Income and Health Inequality on the Middle Class in America, an exhibition by photojournalist JULIAN FISHER, MD, on view from October 1–December 14, 2018 at 121 South Main Street, Providence and the digital exhibit continues at 111 Thayer Street at the Watson Institute.

An Artist’s Talk and Opening Reception will be held Monday, October 1, 2018 at 4 pm, 121 South Main Street, 3rd Floor, Providence.

Dr. Fisher studied at Yale with Walker Evans. His work has appeared in the New York Times, Time, Newsweek, Life, and The Atlantic. He pursued a medical degree and is presently a neurologist on the Harvard medical faculty at the Beth Israel Deaconess Medical Center, Boston. He has returned to photojournalism for this project and is at work on a project to capture America’s history over the past half-century. He lives and works in Brookline, MA.
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Appointments

Jeremiah D. Schuur, MD, to head emergency medicine at Lifespan, Brown

PROVIDENCE – Lifespan and The Warren Alpert Medical School of Brown University announced September 6th that JEREMIAH D. SCHUUR, MD, MHS, FACEP, has been appointed physician-in-chief for emergency medicine at Lifespan and chair of the Department of Emergency Medicine at Brown. The announcement comes after a yearlong national search.

Dr. Schuur currently serves as chief of the division of health policy translation and vice chair of clinical affairs in the Department of Emergency Medicine at Brigham and Women’s Hospital. He is also an associate professor of emergency medicine at Harvard Medical School.

He will assume his new duties on December 1. He completed his residency in emergency medicine through Brown at Rhode Island Hospital, capped by a year as chief resident and assistant instructor at the medical school. Since 2007, Dr. Schuur has been at Brigham and Women’s and Harvard, where he rose through numerous progressively responsible leadership positions.

In 2010, he earned a certificate in executive leadership from Harvard Business School.

Dr. Schuur has focused much of his career on quality improvement and patient safety, leading these areas at his own hospital and medical school, advising others across the country as a member of numerous work groups and task forces, and conducting and publishing extensive research in the field.

He has won many awards for excellence in research and teaching, dating back to his residency and including recent recognitions, among them the Faculty Mentorship Award for the Brigham and Women’s department of emergency medicine and the Partners in Excellence Award from Partners HealthCare System in 2016.

He is a fellow of the American College of Emergency Physicians and has held numerous committee leadership posts within the organization, including current service as co-lead of E-QUAL, a national quality improvement network that the college has created as part of the Centers for Medicare and Medicaid Services Transforming Clinical Practice Initiative.

He earned his BA in history and biology at Williams College in Williamstown, Massachusetts, followed by his medical degree at New York University School of Medicine in New York City. He went on to complete a fellowship as a Robert Wood Johnson Clinical Scholar at Yale University, during which time he completed his master’s in health sciences and was an attending physician in the emergency department of Yale New Haven Hospital.

Dr. Schuur replaces Brian Zink, MD, who took a position at the University of Michigan Medical School last fall.

Sharon Marable, MD, joins Southcoast Physicians Group

LAKEVILLE – SHARON MARABLE, MD, MPH, FACP, has joined Southcoast Physicians Group.

Dr. Marable is a board-certified internal medicine physician. Her medical interests include prevention and wellness, women’s health care, community health promotion, policy and advocacy, public health, clinical quality improvement, chronic disease management and health administration.

She attended Wesleyan University in Middletown, Conn. for her undergraduate education, received her Doctor of Medicine degree from the University of Pennsylvania Perelman School of Medicine, and a Master of Public Health degree from Boston University School of Public Health. Additionally, Dr. Marable received advanced Preventive Medicine Fellowship training in Community Oriented Primary Care, and served as a United States Department of Health and Human Services Primary Health Care Policy Fellow.

Gofran Tarabulsi, MD, joins W&I Center for Obstetric and Consultative Medicine

Board-certified internal medicine specialist GOFRAN TARABULSI, MD, of Raynham, MA, has joined Care New England Medical Group (CNEMG). She is practicing at Women & Infants Hospital’s Center for Obstetric and Consultative Medicine and at the hospital’s Integrated Program for High Risk Pregnancy.

Dr. Tarabulsi received her medical degree from King Abdulaziz University in Jeddah, Saudi Arabia and completed her residency in internal medicine at West Virginia University in Morgantown, WV. She completed a fellowship in obstetric and consultative medicine at Women & Infants Hospital.

Dr. Tarabulsi’s primary interest includes medical disorders in pregnancy that may induce hypertensive disorders, cardiac disease, and diabetes during pregnancy, as well as providing preconception counseling for women with chronic conditions including thyroid disorders and autoimmune rheumatological diseases. Her research interests include preeclampsia and the long-term effect on kidney function, as well as gestational diabetes.

People / Places
Appointments

SCH names Dr. Bob Dyer to Board of Trustees

The South County Health Board of Trustees welcomed new member Dr. Bob Dyer, a dermatologist from South County Dermatology at their most recent meeting on August 27.

When asked, Dr. Dyer said he was honored to be offered a seat on the Board.

“I see it as an opportunity to expand my knowledge beyond the specialty area of dermatology and management of my practice, and to contribute to the continued success of the Hospital during these challenging times,” said Dr. Dyer.

Dr. Dyer said he will initially listen to fellow Board members and management team to be able to make the most educated and thoughtful contributions what he calls a “critical stage in the life of South County Health.”

“I would like to see the Hospital continue to survive and flourish despite the challenges the institution faces in today’s rapidly changing healthcare environment. One challenge is for our small community hospital to maintain its positive culture and stellar reputation while preserving some degree of independence and at the same time remain financially stable in the current volatile environment,” said Dr. Dyer.

“Doctor” was not always a part of Bob Dyer’s professional title. After graduating from the University of Rhode Island, Dr. Dyer worked as a biomedical engineer and then as a support specialist in what, at the time, was a burgeoning field of personal computers. He then spent 20 years as a firefighter in the city of Warwick, RI. During his tenure as a firefighter, Dr. Dyer earned a master’s in business administration with a concentration in Finance from URI and a master’s in Economics from Brown University. Dr. Dyer graduated from the Warren Alpert Medical School of Brown University in 2007. While attending medical school, Dr. Dyer also earned his master of public health degree with a concentration in Quantitative Methods from Harvard University.

After completing his dermatology residency, Dr. Dyer opened his own practice – South County Dermatology – in East Greenwich. Since then, his practice has grown to six providers, over 35 employees, and four locations.

Outside of his practice and the SCH Board of Trustees, Dr. Dyer serves as Chief of Dermatology at Harvard University Health Services, treasurer of the Rhode Island Dermatology Society, member of the American Academy of Dermatology, American Society for Dermatologic Surgery, the Dermatology Foundation, the Skin Cancer Foundation, the American Medical Association, and the Rhode Island Medical Society.

Dr. Maureen Phipps named president-elect of American Gynecological & Obstetrical Society

Dr. Maureen Phipps named president-elect of the American Gynecological & Obstetrical Society. Her term will begin September 2019 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.

“Women & Infants Hospital is proud to congratulate Dr. Phipps on this prestigious new appointment,” said Rick Majzun, FACHE, president and chief operating officer of Women & Infants Hospital, a Care New England hospital. “We are confident that her dedication to women’s health will serve AGOS, health care professionals, patients, and the nation well.”

The American Gynecological & Obstetrical Society (AGOS) advances the health of women by providing dedicated leadership and promoting excellence in research, education, and medical practice. The AGOS is an organization comprised of individuals attaining national prominence in scholarship in the discipline of obstetrics, gynecology, and women’s health.

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.

Malavika Prabhu, MD, maternal-fetal medicine specialist joins W&I

Maternal-fetal medicine specialist Malavika Prabhu, MD, of Boston, has joined Care New England Medical Group (CNEMG). She is practicing in Women & Infants Hospital’s Division of Maternal-Fetal Medicine and at the hospital’s Integrated Program for High Risk Pregnancy.

Dr. Prabhu is board-certified in obstetrics and gynecology, and board-eligible in maternal-fetal medicine. She is an assistant professor of obstetrics and gynecology at The Warren Alpert Medical School of Brown University. She recently completed her fellowship at Massachusetts General Hospital after her residency training at the University of Washington and medical education at Stanford Medical School.

Dr. Prabhu’s clinical interests include maternal cardiac disease, infectious diseases, management of fetal anomalies, clinical obstetrics including operative vaginal deliveries, and opioid use in the pregnant and postpartum population. 
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 surgical recovery or long-term rehabilitation*
- Around-the-clock, licensed nursing care
- Providing clinical resources in a comfortable setting that feels like home
- A mission and focus to helping residents get well and then get home as quickly as possible

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

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

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

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

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

The Rhode Island Network

Brookdale Center of New England
Brookdale Cumberland
Brookdale Smithfield
Brookdale Greenwich Bay
Brookdale Pocasset Bay
Brookdale Sakonnet Bay
Brookdale East Bay
Brookdale West Bay
Brookdale South Bay

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Recognition

Dr. Saied Calvino receives national award for work on decreasing cancer care disparities

ABDUL SAIED CALVINO, MD, a board-certified surgical oncologist with Roger Williams Medical Center, is the recipient of the 2018 Carol Friedman Award, given annually to recognize outstanding achievement in cancer care.

The honorees are chosen by the Centers for Disease Control and Prevention, Comprehensive Cancer Control Branch. Dr. Calvino is one of only two honorees to receive the award nationally this year.

This year’s theme was excellence in addressing cancer disparities. Dr. Calvino was recognized for his work since 2016 to increase colorectal cancer screening and education in Rhode Island’s Hispanic community. In 2016, Dr. Calvino and his colleagues at Roger Williams launched a community outreach and navigation program for Hispanics in Rhode Island, who represent 15% of the state’s population. The goals were to increase screening rates, decrease incidence, and increase early diagnosis. Colorectal cancer is the third leading cause of cancer death in Rhode Island.

Over a 19-month period, 398 patients were enrolled in the Roger Williams’ program with a colonoscopy completion rate of 93%. In that group, 155 patients (42%) required polypectomy, and 57 (15%) patients underwent surgery for colorectal cancer. Post-colonoscopy survey was uniformly positive across all participants and 76% said that they would not have completed colonoscopy without the program.

Another goal of the program was to educate underserved communities about colorectal cancer treatment and prevention. Dr. Calvino and his program coordinator Gisela Gomes worked with Hispanic, Southeast Asian, and Native American communities to hold more than 20 outreach events in collaboration with organizations like the American Cancer Society, Partnership to Reduce Cancer in Rhode Island, the Rhode Island Latino Cancer Control Task Force, reaching hundreds of individuals in these communities.

Dr. Calvino is a board member of the Partnership to Reduce Cancer in Rhode Island, chairing the Screening and Detection Work Group. He also serves on the Rhode Island Department of Health’s Colorectal Cancer Screening Program Advisory Committee. Dr. Calvino is an Assistant Professor at Boston University.

Abdul Saied Calvino, MD, to be initiated as a Fellow of the American College of Surgeons

ABDUL SAIED CALVINO, MD, will be initiated as a Fellow of the American College of Surgeons at the convocation ceremony to take place at the organization’s upcoming national meeting Oct. 21 at the Clinical Congress in Boston.

Dr. Calvino completed his surgical internship and residency at the University of Illinois at Chicago. He also finished a two-year ACGME-accredited fellowship program in Complex Surgical Oncology at Roger Williams Medical Center.

He is a board-certified general surgeon and part of a select group of surgeons who are board-eligible in complex surgical oncology.

During his time at the University of Illinois, he spent dedicated research time investigating inflammatory pathways in pancreatic cancer. He is the recipient of the best research presentation at the Rhode Island Chapter of the American College of Surgery research forum.

His clinical research focus is in quality outcomes research and disparities in cancer care. He has been an author on multiple peer-reviewed articles and is a member of multiple scientific societies, including the American College of Surgeons, the Society of Surgical Oncology, and the Americas Hepato-Pancreato-Biliary Association.

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www.cdc.gov/tobacco/data_statistics/fact_sheets/cessation/quitting/index.htm
Recognition

**Dr. Margaret Howard honored by American Psychological Association with 2018 Leadership Award**

MARGARET HOWARD, PhD, of Cranston, division director of the Center for Women’s Behavioral Health and director of the Day Hospital at Women & Infants Hospital, was recently presented with the American Psychological Association’s Committee on Women in Psychology 2018 Leadership Award.

The award reads, “In recognition of her evidence-based and infant-inclusive, high-quality model of delivering mental health services to women experiencing postpartum depression. Dr. Howard is recognized as an outstanding leader within the Brown University medical system. Her work has become a standard of care in Rhode Island and is being replicated across the northeast and other regions of the country. She has authored numerous publications and presentations, nationally and internationally, on the need for specialized models of care to meet women’s needs during the perinatal transition. Dr. Howard is a role model to trainees and faculty as a woman in a senior leadership position, and an exemplary mentor for mentees who seek her wisdom long past their formal relationship. Her innovative contributions have fostered understanding of women’s lives and improved the status of women. She is truly a distinguished leader for women in psychology.”

Dr. Howard, a member of Care New England Medical Group, is the associate fellowship director for the Brown University/Women & Infants Hospital Women’s Mental Health Fellowship. She is also a professor of psychiatry and human behavior [clinical] and medicine [clinical] at The Warren Alpert Medical School of Brown University.

Dr. Howard received her PhD in clinical psychology from Southern Illinois University and completed her internship and postdoctoral fellowship at Brown University. Her primary clinical and research interests are postpartum depression, depression and anxiety disorders during pregnancy, trauma, OCD, and novel treatment approaches in both prevention and treatment of perinatal mood disorders.

**CharterCARE Provider Group of RI awarded highest recognition by APG**

CharterCARE Provider Group of RI, LLC, the independent practice association affiliated with CharterCARE Health Partners, has been awarded Elite Status on the America’s Physician Group (APG) 2018 Standards of Excellence survey for the third year in a row. APG (formerly known as CAPG) is the leading association in the country representing physician organizations practicing coordinated, capitated care.

The annual APG survey is offered to more than 300 APG members in 43 states, the District of Columbia and Puerto Rico. This year, 122 medical groups, health systems and IPAs participated in the voluntary survey, covering 12.9 million commercial lives, 3.2 million Medicare Advantage lives, and 3.7 Medicaid lives. Participants earn their survey rankings based on their performance in delivering risk-based, coordinated care. Elite Status is the highest recognition awarded by APG.

Working with local Medicare Advantage, commercial, Medicaid and exchange plans, CPGRI and the CharterCARE system are dedicated to demonstrating how coordinated care can benefit patients in Rhode Island in terms of better outcomes, better quality, and a better healthcare experience.

CharterCARE Provider Group of RI, made up of 500 physicians and other providers, is managed by Prospect Medical Systems, which develops, implements and manages a full range of support services. Prospect Medical Holdings, Inc. is the parent company of Prospect Medical Systems and CharterCARE Health Partners.

**Drs. Boardman, Gettle receive EMRA awards**

The Emergency Medicine Residents’ Association (EMRA) award recipients for the 2018 fall cycle included: **DR. TIMOTHY BOARDMAN**, 2020 resident graduate from Brown University, winner of the EDDA Travel Scholarship; and **DR. CAMERON GETTLE**, 2019 resident graduate from Brown University, winner of the Resident/Fellow Health Policy Elective in Washington, DC.

**OFFICE SPACE AVAILABLE**

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

Inquiries to Newell Warde, mwarde@rimed.org
DR. WILMA SYLVIA (FRIEDMAN) ROSEN, 89, passed away on July 7, 2018. She was the first woman psychiatrist at Butler Hospital and served there over 40 years. She also provided therapy to artist students at RISD’s Office of Counseling. Her life story was an inspiration to many she counseled and mentored as a clinical professor at Brown Medical School.

She completed her medical degree at Temple Medical School at a time when quotas restricted admission of Jewish women. That combined love and fascination with helping people find their identity and reflecting the beauty of the individual was expressed through her compassion for adolescence and artists, helping patients find second chances, and her thoughtful portraits.

Her mentorship of women physicians gave her great pride. She was deeply honored to be an artist member of the Providence Art Club where she spent many happy years as she slowly and reluctantly retired from Butler and RISD and rediscovered her own identity.

She is survived by her two daughters, Allyson Rosen and Liz Grinspoon, her grandchildren, Susanna Aufrichtig, Jacob Lehrer, and Emma and Zach Grinspoon. She is also survived by her sister, June Chernetz, and her children Gwyn, Lynn, George, and his wife Deborah Keller.

BERNARD P. ST. JEAN, MD, 70, passed away September 3, 2018 at home, surrounded by his family after a brief battle with cancer. He is survived by his wife of 38 years, Michele “Mickey” (Rusnak) St. Jean.

Dr. St. Jean had worked at Kent Hospital for many years, serving as Chief of Surgery from 1991-1994 and 1997-2009. He loved the hospital and willingly served on many committees.

His three passions in life were; medicine, family and food. Besides his wife, he is survived by his children, Nicholas B. St. Jean (Amanda), Corina M. St. Jean and Alicia B. Craig (Nicholas); a sister, Carolyn M. St. Jean-Gogan (Peter); grandchildren, Camden, Finn, Kailyn and Riley; and a nephew, Craig.

In his memory, donations may be made to Hope Hospice and Palliative Care or Our Lady of Mercy Church Outreach Services.
Financial Implications of Physician Specialty Choice

ADAM E. M. ELTORAI, PhD; ASHLEY SZABO ELTORAI; MD; CAROLINA FUENTES, BS; WESLEY M. DURAND, BS; ALAN H. DANIELS, MD; SHIHAB ALI, MD


22. AAMC Tuition and Student Fees Reports. https://services.aamc.org/tsreports/select.cfm?year_of_study=2014


55. Association of American Medical Colleges (AAMC) Careers in Medicine: https://www.aamc.org/cim/