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INSIDE: Dr. Eleftherios Mylonakis is the senior author of a study on the discovery of novel antibiotics to battle 'superbugs.'

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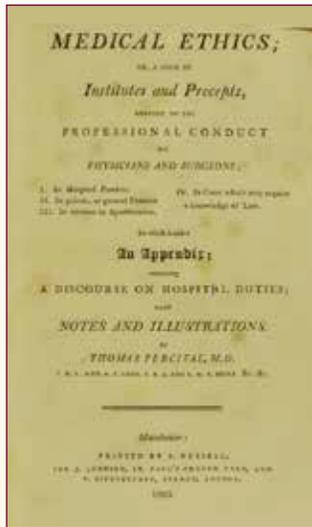
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RHODE ISLAND MEDICAL JOURNAL



7 COMMENTARY

Thinking too much
is bad for some brains

JOSEPH H. FRIEDMAN, MD

On Mentoring

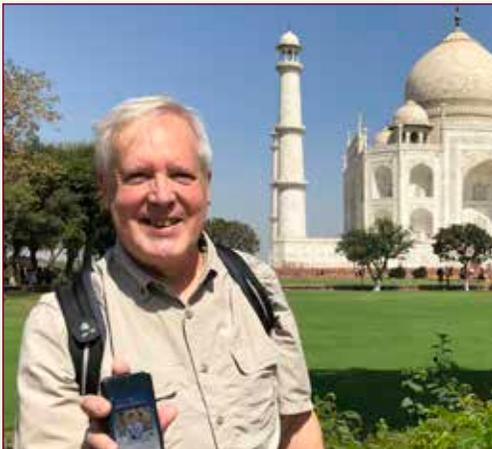
KENNETH S. KORR, MD

AMA Code of Ethics:
Roots, Revisions and
Relevance Today

HERBERT RAKATANSKY, MD

ED Doc for a Month

ERIC R. GOTTLIEB, MD, MS



14 LETTER TO THE EDITOR

On the Practice of Medicine

BARRY WEPMAN, MD

18 RIMJ AROUND THE WORLD

Agra, India

35 RIMS NEWS

Are you reading
RIMS Notes?

Opioid Prescribing
CME Event

Working for You

RIAFP Annual Meeting



41 SPOTLIGHT

Q&A: Clinical Faculty Advisory
Committee (CFAC) at the medical school

MARY KORR

RHODE ISLAND MEDICAL JOURNAL



IN THE NEWS



On the cover and p. 44: Dr. Eleftherios Mylonakis, chief of infectious diseases at Lifespan affiliates Rhode Island Hospital and The Miriam Hospital in Providence, and Charles C.J. Carpenter Professor of Infectious Disease at the Alpert Medical School, is the senior author of a study just published in *Nature* about the discovery of a new synthetic class of antibiotics that could one day help combat the alarming emergence of drug-resistant “superbugs.” [PHOTO: LIFESPAN]

- ELEFThERIOS MYLONAKIS, MD 44**
Study identifies new class of antibiotics with potential to fight “superbugs”
- PHYSICIAN COMPENSATION REPORT 45**
shows gender wage gap nationwide; increases in Rhode Island
- CENTERS FOR DISEASE CONTROL 47**
Emergency Department data show increases in opioid overdoses
- AMA SURVEY 48**
Patient clinical outcomes shortchanged by prior authorization

PEOPLE/PLACES

- 51 BROWN/WOMEN & INFANTS**
Ob/Gyn Department named among top medical schools by *U.S. News & World Report*
- 52 LIFESPAN HOSPITALS**
recognized as top performers in LGBTQ Health Care Equity
- 52 WOMEN & INFANTS’**
Prenatal Diagnosis Centers achieve ultrasound accreditation
- 54 JESUS SOSA, MD**
joins the Comprehensive Wound Care Center at Fatima
- 54 ALEKSANDRA PHILLIPS, MD**
named Medical Director for Psychiatry Services at Roger Williams
- 54 OBITUARIES**
Frances Bloom, MD
Dr. Elie J. Cohen
Arthur Burton Kern, MD
James B. Leach, Jr. MD



APRIL 2018
VOLUME 101 • NUMBER 3

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RHODE ISLAND MEDICAL JOURNAL (USPS 464-820), a monthly publication, is owned and published by the Rhode Island Medical Society, 405 Promenade Street, Suite A, Providence RI 02908, 401-331-3207. All rights reserved. ISSN 2327-2228. Published articles represent opinions of the authors and do not necessarily reflect the official policy of the Rhode Island Medical Society, unless clearly specified. Advertisements do not imply sponsorship or endorsement by the Rhode Island Medical Society.

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RHODE ISLAND MEDICAL JOURNAL

CONTRIBUTIONS

- 19** Why Aren't More Women in Academic Medicine Reaching the Top?
LAURA ALLISON WOODS, MPH'18, BS
TERRIE FOX WETLE, PhD, MS
KATHERINE M. SHARKEY, MD, PhD
- 22** Review of the public health risks of widespread cannabis use
JONATHAN BARKER, MD

CASE REPORT

- 26** Sister Mary Joseph Nodule as Presenting Complaint in First Diagnosis of Intra-Abdominal Malignancy
JORDAN J COHEN, MD
JAMIESON COHN, MD
GITA PENSA, MD
ROBERT TUBBS, MD

PUBLIC HEALTH

- 29** The Association Between Postpartum Healthcare Encounters and Contraceptive Use among Rhode Island Mothers, 2012–2015
ALEXANDER C. ADIA
QUINN P. MATOS
KARINE MONTEIRO, MPH
HYUN (HANNA) KIM, PhD
- 33** Vital Statistics
ROSEANN GIORGIANNI
DEPUTY STATE REGISTRAR

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Thinking too much is bad for some brains

JOSEPH H. FRIEDMAN, MD
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EINSTEIN PURPORTEDLY said that “insanity is doing the same thing over and over again and expecting different results.” This quote, although ascribed to the great physicist, is not actually his. However, the quote, which would certainly carry more weight if authored by Einstein, but possibly from Casey Stengel or Yogi Berra, is still relevant to a recent breakthrough in clinical brain research. Using new techniques, an explanation has been found to explain why people will, in fact, do the same thing over and over again, even though it doesn’t work. It also ties together recent functional magnetic resonance imaging (fMRI) evidence suggesting that thinking too much may damage white matter pathways. “It appears that thinking very hard about something may actually be bad for you,” reported the lead author of the fMRI study, Dr. Clouseau, in the *New York Times*. Using a new technique, Mass Electro-neurographic Connectome Analysis (MEnCA), one can follow bulk information processing pathways, when large enough and when provoked using certain techniques.

Advances in MRI have allowed scientists to image the brain in ways that markedly enhance our understanding of physiology in addition to structure. fMRI produces images based on



metabolism, so that an image can be interpreted as representative of brain activity. When the language center is active, listening, talking, or thinking about words or language, it “lights up.” The speech areas increase in activity, producing an increase in oxygen utilization, resulting in

increased blood flow, which is measurable. In addition to this physiological measure, brain connectivity has been imaged, via diffusion tensor imaging (DTI), allowing images to show pathways between one part of the brain and another. More recently, a technique has been developed that provides seemingly accurate, or at least reproducible, estimates for “traffic” flow between brain regions and the speed of information exchange. Using techniques that are too complex to be summarized here, we can track information flow, much as Doppler principles allow clinicians to measure blood flow, both speed and volume, in a non-invasive manner.

Imagine a song, playing over and over again, while probes pick up electrical activity and programs analyze it using the exact timing of the notes of the song, to isolate the “background noise” of the other brain activity, from those electrical responses to the song itself, presumably changing synchronously with the song (within milliseconds,

time locked). With this as the simplified foundation, a subject who has been working on a problem is asked to think about the problem. In the experiment, a video graphic image of a Rubik’s cube is displayed and the subject must, using computer-based tools, attempt to rotate the blocks to solve the problem.

Most subjects attempt the puzzle in 3–5 different ways, then settle on 2, which they repeat many times, varying their turns later and later as each “path” is laid down. When asked to alter their third or later rotation, they generally find themselves unable, as if transfixed, thinking that they had been on the correct path, making their errors later on. Using the new technology, it was found that the speed of transmission of impulses along the circuit increased with each successive similar attempt at a solution, and, most interestingly, the volume of information, measured as gigabytes of electrical impulses transmitted in the circuit, increased dramatically. In addition, electrical signals in nearby, but different circuits, not clearly related to the Rubik’s cube problem, were pulled in to the increasingly powerful circuit, causing a decline in information transfer in circuits not devoted to solving this problem. Why this happens is unclear. One theory is ephaptic transmission, a process in which adjacent axons, with breakdown in the myelin sheath, transmit impulses from adjacent neurons, which implies damage to the myelin. In support of this

theory, 7 Tesla MRI revealed evidence of mild white matter changes and DTI revealed a loss of connectivity in the adjacent “subverted” pathways and increased connectivity in the pathway directly involved in this Rubik’s cube problem-solving circuit. In non-technical terms, these pilot studies are consistent with the idea that once the brain attempts to solve a discrete problem using the same approach repeatedly, it causes structural changes that increase the likelihood that it will continue to use the same unavailing approach. In addition, the repeated attempts interfere with adjacent pathways, causing them to slow or weaken. This creates a high flow/low flow competition, a Bernouli-type effect, and the possibility of increasing damage to brain circuits.

The question of what happens to structures in the brain that receive the “excess,” or at least increased, neural transmission remains even more speculative. One theory posits the possibility that increased activity leads

to apoptosis, programmed cell death, induced by an inborn protective mechanism that keeps neurons from exploding. A competing hypothesis is that the nucleus ignavus, a minute structure only recently discovered, lying entirely within the vegan nucleus, containing the only neurons using gluten-amine as a neurotransmitter, may function as an electrical sink, a physiological safety valve, which draws off extra electrochemical energy before damage is caused. It had been long sought for by cognitive psychologists exploring the underpinnings of “cognitive sinks,” (see *Medicine and Health*, R.I. 84(4):98-99) the so-called black holes of cognition. These are people who, without intent, reduce the intelligence of those around them without apparent benefit to themselves. The underlying notion is that by attempting to solve a problem in the same way, regardless of the futility, causes physiological changes that make it increasingly difficult for the brain to change its approach. This,

in turn, reduces connectivity in other brain circuits attempting to solve other problems, thus making the person less able to solve other problems. The process may be related to the alterations that distinguish cognitive sinks from the rest of us.

This work also may explain why some people decline in intelligence, perhaps caused by thinking too much.

April fool! ❖

Author

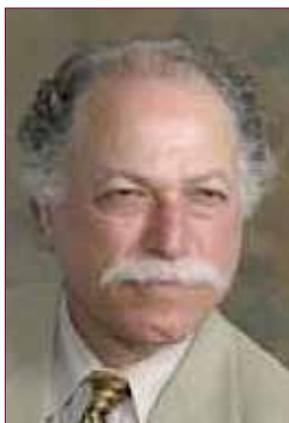
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[Disclosures on website](#)

On Mentoring

KENNETH S. KORR, MD

MEDICINE IS INCREASINGLY referred to as a team sport, driven by evidence-based guidelines and goal-directed therapies. And clearly these approaches have improved patient outcomes and quality of care. When it comes to the education and training of physicians however, there is also



something to be said for the merits of experience-based training. This is particularly true in the surgical and interventional subspecialties where technical expertise and on-the-spot clinical decision-making are learned at the hands of more senior physicians. Even in the non-procedural areas, medicine has always been a mentoring profession. Most of us have benefited from one-on-one learning situations, from clinicians with years of experience in the diagnosis and management of diseases, some of which we have rarely seen or have only read about in textbooks. Diseases like rheumatic valvular heart disease or congenital cardiac abnormalities, the subtleties of physical diagnosis or even the appropriate use of digitalis are knowledge and skills which we have gleaned from observing and emulating others.

When I reflect back on my own career, several physicians stand out as role models. There was the young cardiologist during my residency training who exposed me to bedside right

heart catheterization (Swan-Ganz) for the management of acute heart failure patients. That experience made me realize I could have a career that combined both procedural skills and intellectual decision making in patient care. During fellowship I worked closely with

two outstanding clinicians who were also accomplished academics and who guided me through the process of writing my first publications. And much later, caring for an esteemed and revered physician colleague, showed me by example what it was to be a patient with dignity.

Working in a medical school environment is perhaps the optimal mentoring experience both for the student and the teacher. As a newly minted assistant professor I met every Thursday afternoon with two 3rd year medical students. They presented cases they were following and we discussed differential diagnoses, pathophysiology and what the next steps would be as the cases unfolded. There was a lively give and take and while I like to think that I taught them a lot, it was also an opportunity for me to review disease entities which I hadn't thought much about since my Medicine Boards a few years earlier. In addition, they were each given small study assignments on some related topic (usually one where I also

needed the review) which they would come back and present the next week. Of course, it wasn't all case review or patient care. We also talked about career direction, the difficult balance of medicine and family life and even just good restaurants or places to go on vacation. In the small Rhode Island medical community, these relationships can come full circle as they did when many years later, my mother-in-law developed breast cancer and I sent her to the same 3rd year student who was now an accomplished surgeon specializing in breast cancer and partial mastectomy. And it was no small irony when 25 years later the student doing his office clerkship with me was the son of one of those two medical students.

Patients have for the most part been very receptive to the presence of students in the exam room. It is important to keep the focus on the patient, make them feel that they are the most important person in the room and not just there for the physician to make a "teaching" point. And increasingly as the clerkship progresses, the student/resident becomes more relaxed and confident and begins to interact more directly with the patient. That is perhaps as equally important as the case discussion which happens after the patient encounter.

Mentoring can be a rewarding experience for the mentor. We get as much as we give, or even more. In the rapidly expanding technologic environment of medicine, students and residents have

always been the ones to point out the quickest shortcuts to navigating the EMR or the best cellphone apps for drug compendiums and risk calculators. And then there is the obvious satisfaction of watching medical students progress clinically. Some stay on through the training programs as residents and fellows and develop their own teaching skills. Many go on to become well-respected physicians within the community and accomplished faculty colleagues. Each of them is the amalgam of countless clinical interactions with faculty, those little clinical pearls,

the nuances of the physical exam or the individual approaches to difficult patient discussions and decisions.

This issue of the RIMJ includes an interesting Q&A with members of the Clinical Faculty Advisory Committee discussing the mentoring process and opportunities for clinical faculty at the Alpert Medical School. I would recommend this article and accompanying links to anyone curious about becoming a clinical faculty mentor. Other than direct patient care, it can be one of the most rewarding experiences of your career. ❖

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LETTER TO THE EDITOR

On the Practice of Medicine

Thirty-nine years ago when I entered practice, the retiring doctor I had joined put his arm around my shoulders and told me he had seen the best days of medicine and he felt sorry for my generation of physicians. I remember thinking, what does he know? Now as I contemplate my own retirement and take stock of my career, I find myself echoing those exact sentiments! But then I realize that no matter what “they” do to the structural practice of medicine, no matter how many challenges we are forced to accept, no matter how our livelihood is impacted, there is one thing that can never be taken away from physicians, and this gets right to the core

of what being a physician is about. That, of course, is the privilege and duty to touch the life of another human being, and to be touched in return. This, for me, is the essence of being a physician, and, at the end of the day, what helps me look forward to tomorrow. So the next generations will have the best days of medicine as well.

Barry Wepman, MD

Dr. Wepman is an Ophthalmologist, practicing in South County, working under the aegis of Koch Eye Associates.

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AMA Code of Ethics: Roots, Revisions and Relevance Today

HERBERT RAKATANSKY, MD

A RHODE ISLAND DOCTOR recently had his license reinstated after successful treatment for an illness. The consent order issued by the Rhode Island Board of Medical Licensure & Discipline (BMLD) includes the following statement: “Respondent shall conduct himself according to the Code of Ethics of the American Medical Association.” Most of us have never read the Code and likely do not understand its origins and current importance in the lives of US physicians.



teaching of moral philosophy (in contrast to religious dictates). In the late 18th century, collections of aphorisms about the moral basis of virtue as applied to medical practice were the first ethics’ codes.

Dr. Thomas Percival

The revolution in thinking about codes of medical ethics started in The Manchester (England) Fever Hospital, a source of care for the poor in the late 18th century. In 1792 a controversy

Percival's revolutionary idea was that the profession of medicine as a collective had a primary duty to care for patients.

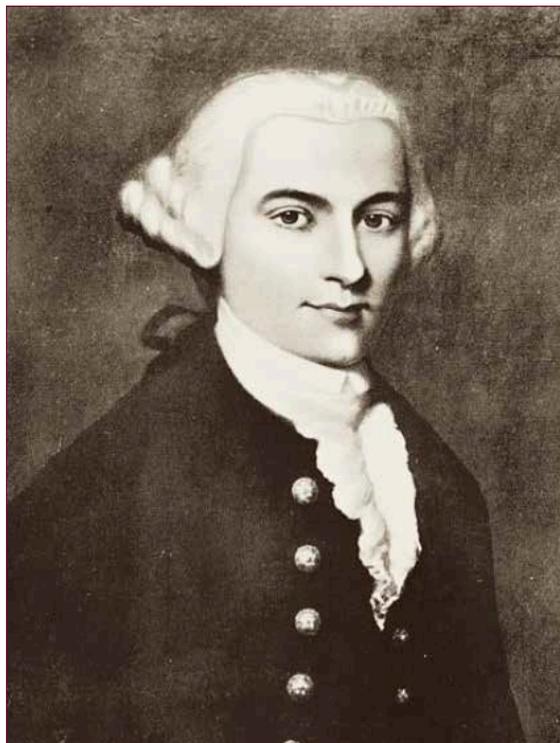
over staffing and operational issues came to a head and disrupted hospital operations. Hoping to avoid any further such disruptions, the trustees hired Dr. Thomas Percival (1740–1804) to write a Code of Ethics. Published privately for the hospital in 1794, this treatise “codified duties to patients and other practitioners.” It was published widely in 1803.

Early codes: Origin and evolution

The Hippocratic Oath (460–370 BC) was a personal pledge to adhere to certain principles such as confidentiality and “do no harm.” (In those days there was little chance of doing much good.) There was no consistent organized compendium of “ethics principles” applicable to all physicians.

For many years, up to and including the Middle Ages, the church defined the standards of morality. As the influence of the church waned during the Renaissance, the concept of moral philosophy in which virtue in life and basic human rights assumed increasing importance, influenced many areas including politics and the medical profession.

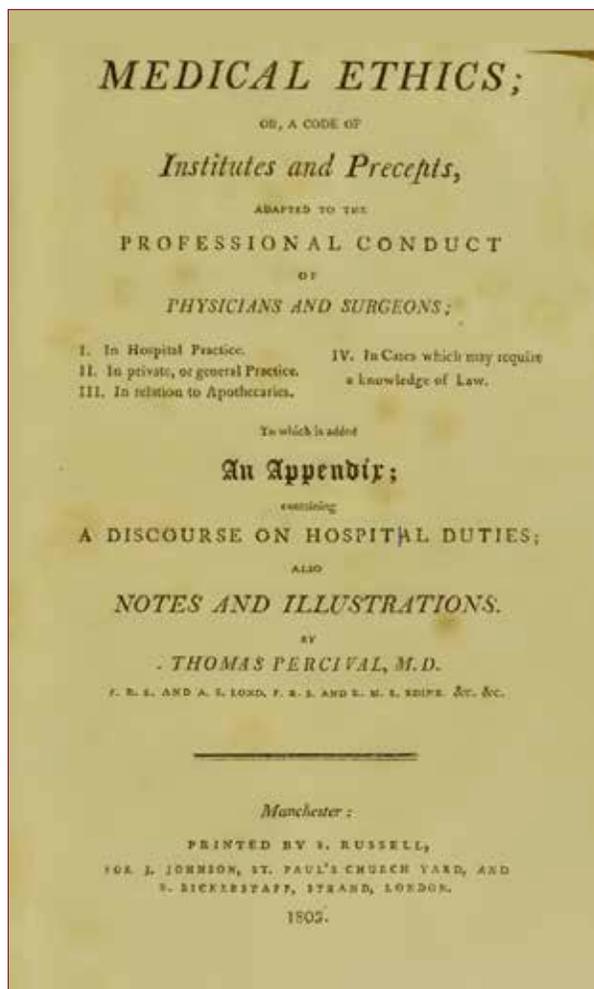
University education included the



Dr. Thomas Percival

Prior to Percival the ethical behavior of doctors was encouraged and supported by individual oaths or pledges to behave honorably toward patients. Percival’s revolutionary idea was that the profession of medicine as a collective had a primary duty to care for patients. This obligation of the whole profession as an entity was a duty above and beyond just the obligation that each doctor had to lead an honorable and virtuous life himself and therefore be honorable in his care of his patients.

It is hard to overstate the



Dr. Percival's Code of Ethics

importance of Percival's idea about the collective responsibility of the medical profession. He wrote that physicians, individually and collectively, hold the responsibility to advise the civilian trustees of hospitals about the necessary professional issues such as safety, proper ventilation and other issues that affect the care of the patients. Finances were addressed as well. Percival warned against saving money by using "cheaper drugs of inferior quality." He warned doctors, individually and collectively, "not to suffer themselves to be restrained by parsimonious considerations from prescribing...drugs even of high price when required in diseases of extraordinary malignancy (sic) and danger."

Percival's ideas were incorporated into many codes of ethics. For example, in 1810 the Boston Medical Association published a booklet titled "The Medical Police," which was based directly on Percival's treatise.

One other consequence of Percival's work is the concept that since medical ethics was a responsibility of medical organizations, those same organizations could and should enforce ethics principles. Only in 1889 did a Supreme Court decision (*Dent v WV*) definitively recognize that state governments had the right to regulate the practice of medicine. But the AMA Code is recognized by virtually every state licensing board as an adjunct to the state medical practice act, thus incorporating the Code into its regulations *de facto* if not *de jure*.

Rhode Island law defines 30 specific unprofessional behaviors. Additionally, the RI BMLD expects physicians to adhere to the AMA Code and so do most, if not all, medical institutions. The application for membership on the medical staff of our largest medical care system requires a signed statement that our behavior will conform to the AMA Code. Most courts and administrative bodies use the AMA Code as a reference standard.

The Rhode Island Medical Society (RIMS) was founded in 1812. In its charter, the state of RI gave RIMS the responsibility for licensing and discipline of doctors. RIMS, however, was not given specific criteria to do this and thus relied on the increasing recognition of "Percivalean" ethical standards.

That situation remained in place in RI until 1895 when a state Department of Health was established and assumed that responsibility. Currently the BMLD exercises those responsibilities. Louisiana had been the first state to establish a health department in 1855.

The AMA was formed in 1847 with the triple purpose of advancing science, medical education and ethics. The original AMA Code of Ethics was derived directly from Percival. We now regard that initial code as more of a guide to medical etiquette that omitted issues that today we consider basic. But it was revolutionary in establishing a national standard for ethical behavior for all doctors in the country. In 1855 the AMA decreed that the Code of Ethics applied to all constituent member associations. Dissidents in the AMA forced a revision of that restriction in 1903. By 1912, however, the "principles of medical ethics" were accepted and a Judicial Council was established to elaborate and enforce these standards. Since then we have had a nationally accepted set of defined ethical behaviors.

Interestingly, Percival's ideas were not generally accepted in his own country. England established the government-operated General Medical Councils in 1858 to license and discipline doctors. But there was no independent code of medical ethics developed by the medical profession to provide an ethics framework.

The modern concept of autonomy and informed consent, though discussed in the early 1900s, took root only after World War II as the participation of many German doctors as well as the German Medical Association in the Holocaust was revealed. What those doctors did from 1933 to 1945 was

both legal and ethical according to the Nazi standards of that time in Germany. Consonant with the “never again” stance toward the Holocaust, the patient-centered ethics standards of autonomy and informed consent are designed to thwart unethical policies and/or medical behaviors that might be instituted or encouraged by governments or other organizations.

AMA Code of Ethics

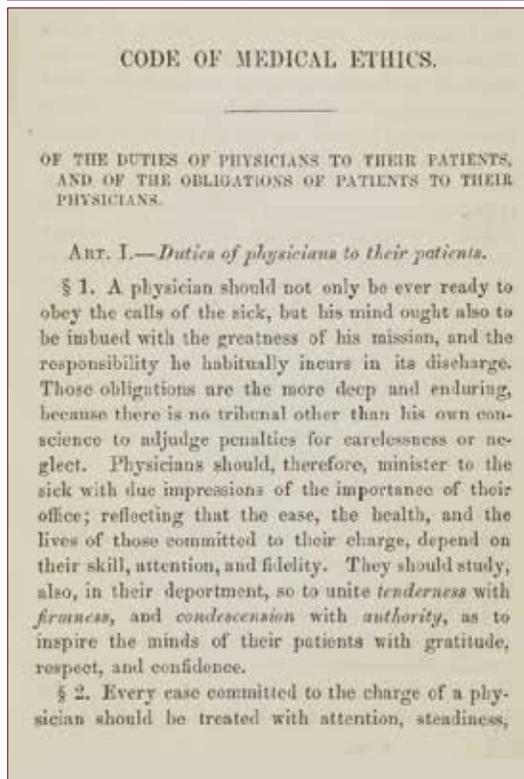
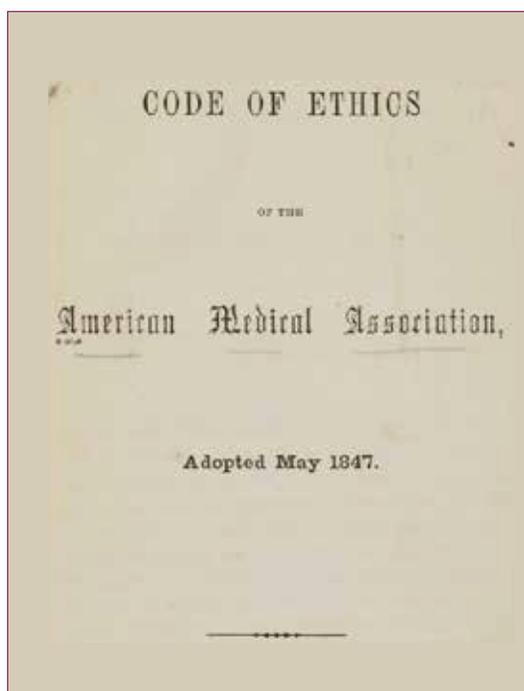
The Code consists of:

1.) Nine broad “Principles of Medical Ethics” ratified by the AMA House of Delegates. Amending them is intentionally procedurally difficult. First established in 1903, they were modified in 1912 and shortened in 1957 and since then revised in 1980 and 2001. The Principles form the basis for complete reports on specific topics.

2.) Conclusions (Opinions) are formulated by the Council for Ethical and Judicial Affairs (CEJA) about many specific issues. These Opinions make up the body of the Code and generally are what most persons consult. Take a look at them – we should know what we agreed to and what is expected of us.

3.) The analytical, complete reports supporting the Opinions either are published in the medical literature or are available directly from the AMA.

CEJA is composed of seven doctors, one appointed by the president of the AMA each year for a single 7-year term, one resident for a 3-year term and one medical student for a 2-year term and is supported by a highly qualified professional staff.



Original AMA Code of Ethics [National Library of Medicine]

The reports and Opinions are widely discussed by the membership and the House of Delegates during their formulation, but CEJA issues its Opinions and reports independently, without the need for approval by any other part of the AMA.

The Opinions have been recently revised to a more readable form. They are freely available on the AMA website, along with the Principles. The published reports are in the medical literature and the unpublished reports are available from the AMA.

An annotated version includes references to specific court and regulatory decisions based on the Code. It is available from the AMA in a print or e-book version that serves to document the actual, real-world effect of the Code. The physical weight of the print version (3 pounds, due to the numerous citations) suggests how extensive the Code’s influence over medical practice in the US has become!

The fact that courts and regulators accept these Opinions widely indicates societal acceptance of self-regulation by the medical profession. The doctor mentioned above, whose license was reinstated, benefited from the existence of ethics’ standards generated by the profession itself, as do we all.

A highly respected ethicist has stated: “Considered as a single body the...AMA Code constitute[s] the most comprehensive and influential statement of medical ethics extant.”

Thank you, Dr. Percival! ❖

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Disclosure

Dr. Rakatansky was a member of CEJA from 1994–2001.

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ED Doc for a Month

ERIC R. GOTTLIEB, MD, MS

LIKE ANY SELF-RESPECTING INTERNIST, I WAS RAISED TO have the appropriate disdain for the ED and all who reside there. My complaints usually came down to one of two things: (a) “Why did they admit this patient?” or (b) “Why did they, or did they not, get a CT?” However, you should not judge a man until you walk a mile in his shoes. That way, when you do judge him, you’ll be a mile away and have his shoes.

During my second year of residency, when I walked what seemed like a mile from the teaching wards and became an ED doc for a month, I realized a few things. First, we internists can be quite snotty. Second, ED docs know a lot of things that we don’t. And third, it changes everything to be the one who saw the patient when she walked or rolled in the door.

Let’s start with the admitting physicians I had to deal with. I had a patient one night who came in for an ulcerative colitis flare. I gave her fluids and pain medication, called GI, and admitted her to the medicine service. For a second, I basked in the glory of getting my patient admitted. The next day, I checked the chart to see how I had done. When the patient presented, she had been tachycardic to about 110. Although her rates quickly normalized, the admitting physician cynically wrote in her H&P something along the lines of, “most likely sinus tach, which resolved, but ED did not get an EKG.” Who cares? Then, in the progress note from the physician who took over the patient the next day, down in the copy-pasted plan section, it said again, “but ED did not get an EKG.” Yeah, we get it already.

As for that impressively broad knowledge, the ED docs know so much about eyes. I know next to nothing about eyes. In the ED, they have ophthalmoscopes in every room, and they seem to have at least some idea how to use them. In morning report, we had a lecture on eyes, and these kids knew how to tell a blepharitis from a conjunctivitis from a chalazion from a cornea. They were also well-versed in something else I had revealed in forgetting: obstetrics and gynecology.

Lastly, in the ED I learned what it means to be the first physician to see the patient. While I managed my share of

COPD exacerbations and cellulitis, I also encountered some ill-appearing patients whose labs and imaging all returned normal. Most likely, these patients could have gone home, but I realized that if a patient was in the fetal position when I met her, it is hard to discharge her in good conscience. Unless of course she subsequently displays the universal “texting sign.” However, I would also occasionally see the fetal position followed by the texting sign, followed again by the fetal position. Then I would just be confused. So I would reluctantly call my internal medicine friends, apologize for the weak admission, and tell them they have to take the patient because triage said so. Although back on the wards I still grumble about having to admit patients like her, I might quietly concede that I would have made the same decision that my colleagues in the ED did.

My experience in the ED helped me grow as a physician in subtle, but real ways. For one, the next time I opened my board review question bank, I took a deep breath and clicked on “ophthalmology.” In primary care clinic, I found myself considering what the ED would have done if the patient had gone there with the same complaint. Most importantly, though, the experience deepened my understanding of how a patient ends up under my care and why he brings with him what he does, whether it’s a CT scan, a couple of troponins, or a certain diagnosis. And somewhere in my differential, I now consider the possibility that the ED physician making the decisions is an internal medicine resident.

Author

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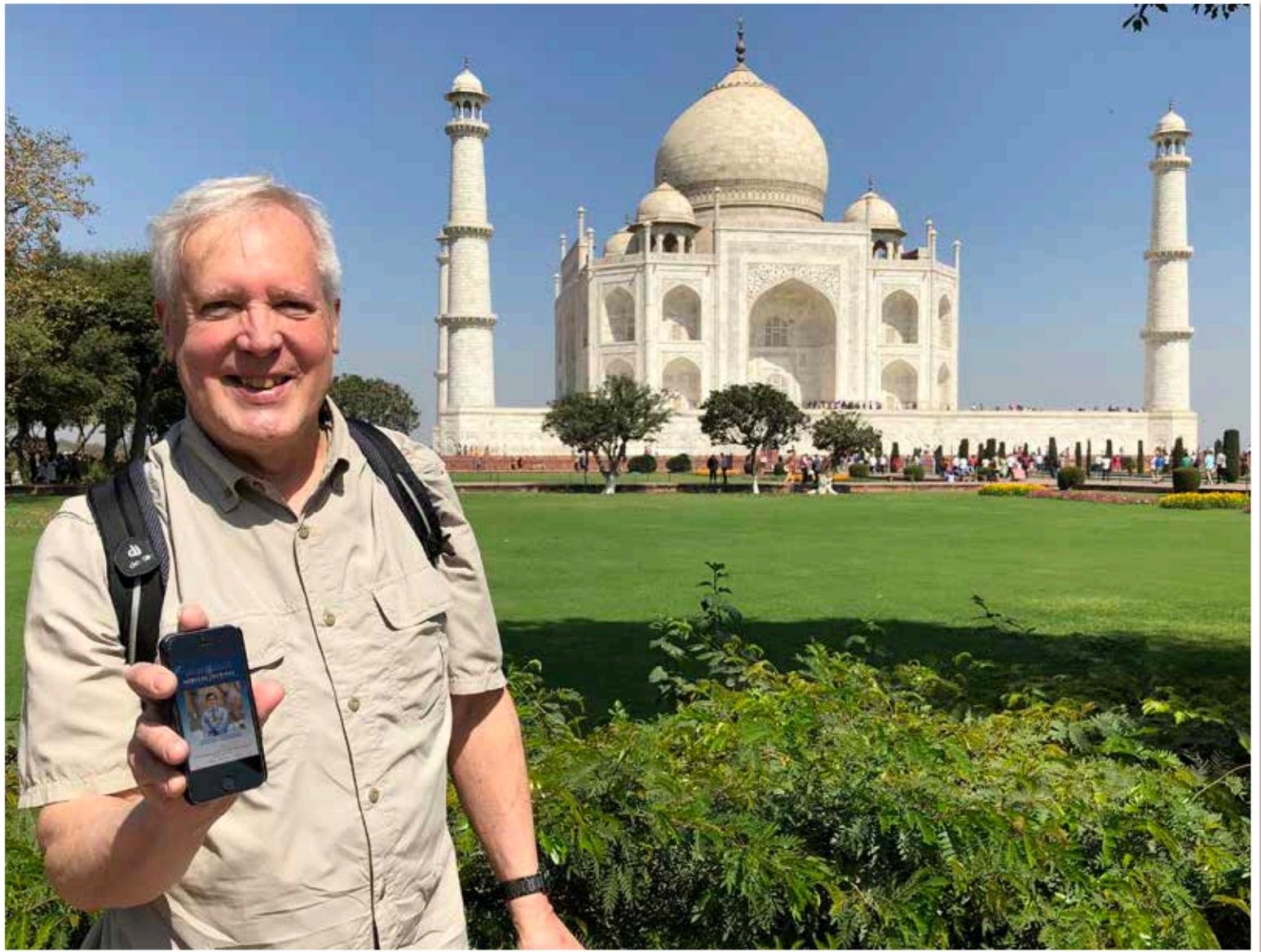
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Why Aren't More Women in Academic Medicine Reaching the Top?

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KEYWORDS: leadership, women, medicine, promotion, diversity, gender, mentorship

For the first time in history, women constitute more than half – 50.7% to be exact – of the United States medical student population.^{1,2,3} Despite strides made towards gender equality in the student body of medical schools, significant gender disparities remain in various fields of medicine. Disparities are particularly notable in academic medicine and medical leadership. Female physicians are less likely to hold full-time academic medicine positions compared to males, comprising only 37% of these roles.¹ Among those who hold full professor positions in academic medicine, only 13% are women.⁴

Several studies have found that women in academic medicine have lower incomes than their male colleagues, even when adjusted for factors such as age, specialty, education, experience level, and geography.^{5,6} A 2004 study conducted with 1,814 full-time medical faculty across 24 medical schools in the United States reported that the higher the position in academic medicine that a woman achieved, such as chair specifically, the more substantial the wage gap compared to male counterparts.^{6,7}

Even greater disparities in academic medicine exist for underrepresented minority (URM) groups. A recent study conducted in 129 national allopathic medical schools found that minorities are underrepresented in medical education, making up less than 17% of the total medical student population.⁸ These disparities are worse in academic medicine where URMs make up only 8% of medical faculty. Furthermore, women of minority races are less likely to be promoted to leadership positions in academic medicine as compared to women of other races, even when adjusting for factors including productivity, experience level, and education.^{8,9} The first appointment of an African-American woman to dean of a US medical school occurred in 1993 (Barbara Ross-Lee, DO, College of Osteopathic Medicine of Ohio University), 127 years after the first white woman was named dean of medicine in the US (Ann Preston, MD, Woman's Medical College of Pennsylvania) and almost 130 years after the first African-American woman graduated from a US medical school (Rebecca Lee Crumpler, MD, graduate of New England Female Medical College).¹⁰ Other factors that

could contribute to stalled advancement in female medical school leaders such as gender and sexual identity, and speaking English as a first language, remain virtually unexamined.

There are additional disparities in representation for women who pursue leadership roles in academic medicine. In 2013–2014, women comprised only 16% of medical school deans and 15% of medical school department chairs.² A longitudinal study conducted over a 27-year span of the appointed medical school dean sample in the United States found that 38 of the total appointed individuals in deanships were women and 496 were men.¹¹ According to the latest report on “The State of Women in Academic Medicine” from the Association of American Medical Colleges (AAMC), women are underrepresented in all department chair positions, and there were additional disparities in certain specialties.⁵ For example, only 1% of surgery chairs were women in 2013–2014, even though 22% of surgical medical residents were female. Similarly, as illustrated in **Figure 1**, the highest proportion of women in chair positions was in the field of obstetrics and gynecology; 22% of women filled obstetrics and gynecological department chair positions. However, 83% of obstetrics and gynecology medical residents were women.⁵

Women climbing the career ladder in academic medicine face special challenges compared to other professions. Fewer medical school deans are female (16%) as compared to law school deans (20%), pharmacy deans (28%), university provosts (23.5%) and even university presidents (23%).^{12,13} Of the eight Ivy League medical schools, there are no female medical deans; however, half of the Ivy League universities have female presidents. Nancy Andrews, MD, made headlines for becoming the only female dean of a national Top 10 medical school in 2007 (Duke University School of Medicine), and out of 173 active medical schools in the United States (143 allopathic and 36 osteopathic medical institutions), only 14 deans were female in 2009.^{14,15}

Many theories have been proposed as to why disparities exist in academic medical leadership. A cohort shift may be a primary reason for why female physicians have not become academic medical leaders as frequently as men.¹⁶ The feminist revolution in the 1970s transformed the field of medicine.¹⁹ By the end of that decade, women made up 30% of their medical school classes, compared to 5% in 1950 and 7% in 1960.^{16,17} From then on, trends in the United States

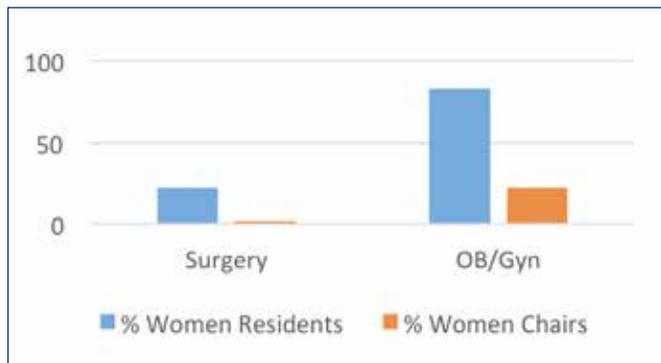
Figure 1. Gender Disparities in Women's Leadership Vary by Specialty

Figure 1 shows the disparities not only regarding gender in specialty selection, but where women leaders are present in these specialties.

towards accepting women into medical schools have shown a steady increase. However, even though numbers of female students were increasing in schools, disparities were prevalent for women in medicine achieving leadership positions. Some schools appointed their first female department chairs of medicine in the 1970s or 1980s; however, there are still schools that have never had a female department chair.^{16,18} In the 1980s, only two women (1.1% of deans) were deans of medicine, compared to 12 women in the 1990s (7.5%).¹⁹ Because physicians enter leadership positions somewhat later in their careers, there is an expected time lag, that may explain some, but not all, of the observed gender inequity in leadership. This time lag or cohort shift effect should diminish over time.

The leaky pipeline theory suggests that women are more likely to 'fall out' at various stages of the career ladder compared to men and therefore do not have the opportunity to pursue leadership positions.²⁰ Reasons that women may leave the career ladder at disproportionate rates include taking time off to start and grow a family, a limited number of adequate childcare options, and lack of schedule flexibility factors that disproportionately affect women.²⁰ The glass ceiling theory, while not specific to the field of medicine, states that women face barriers with advancement and hiring that grow out of the institutionalized culture of medicine itself. These systemic barriers may also include lack of equal support for women in regards to work and life balance.¹³

It is theorized that both unconscious and conscious biases against women contribute to disparities.²¹ As women are underrepresented in medical leadership, there are biases towards the notion that male colleagues may simply 'do the job better,' rather than that women may not have had appropriate support in the processes of hiring, promotion, and in maintaining leadership positions. Others posit that leadership disparities exist because women may simply not desire to achieve these positions in the same way men do.¹³

Where do things stand in Rhode Island? In the state's only medical school, The Warren Alpert Medical School of Brown

University, women have comprised approximately 45% of the entering medical school classes since 1993, and 49% of the 8-year Brown University Program of Liberal Medical Education PLME classes.²² In 1991, the Warren Alpert Medical School of Brown University became one of the first eight schools in the country to create an Office of Women in Medicine and Science (OWIMS), dedicated to the advancement of female students and faculty in medicine and science throughout the school. In 1987, only 1.3% of professors at the Brown Medical School were women.²² By 1993, 5% of full professor positions were held by women, and as of November 2017, 26.4% of professors and 28.6% of clinical professors in Brown's BioMed division were women (**Table 1**).²² There has never been a female dean at the Warren Alpert Medical School of Brown University, and three current chairs of medicine are female; Dr. Karen Furie, MD, MPH, of the Department of Neurology, appointed 2012, Dr. Maureen Phipps, MD, MPH, of the Department of Obstetrics and Gynecology, appointed 2013, and Dr. Phyllis Dennery, MD, of the Department of Pediatrics, appointed 2014. Clearly, progress has been made over the past 24 years, but there is work to be done.

How to we improve diversity of academic leadership, to include more women and more under-represented minority women? Recommendations that facilitate encouraging and promoting women include appointing diverse hiring committees, creating Offices of Diversity in medical schools, ensuring adequate representation of minority medical women in medical classes, and policies that support women and minorities in institutions. In addition, promulgating policies that

Table 1. The Warren Alpert Medical School of Brown University BioMed Academic and Clinical Faculty by Gender and Rank

Rank	Female		Male	
	N	%	N	%
Professor	51	5.2%	142	12.2%
Associate Professor	103	10.4%	157	13.5%
Assistant Professor	265	26.8%	204	17.5%
Instructor	7	0.7%	10	0.9%
Clinical Professor	10	1.0%	25	2.1%
Clinical Associate Professor	44	4.5%	112	9.6%
Clinical Assistant Professor	339	34.3%	392	33.7%
Clinical Instructor	68	6.9%	56	4.8%
Research	101	10.2%	65	5.6%
Total	988	100.0%	1,163	100.0%

Table 1 shows the current (November, 2017) distribution of academic and clinical faculty, and subsequent remaining disparities, at the Warren Alpert Medical School of Brown University in Providence, Rhode Island. Data as of 11/01/2017

improve the work-life climate for all students, but particularly for women students, will also encourage female physicians to seek, achieve and maintain leadership positions.

Understanding the factors that contribute to the lack of gender equity in academic medicine leadership is important, both to improve the environment for women training to be physicians and junior faculty, as well as to help mitigate disparities in medical treatment and healthcare outcomes between men and women.²³ Women in leadership positions are particularly well positioned to identify and address the needs of women physicians and medical students and to help them progress to leadership positions. It is imperative to establish support and resources, and to encourage connections between medical students and young physicians and academic leadership to help them “climb the ladder.” Entities focused on women in medicine, such as the Office of Women in Medicine and Science at the Warren Alpert Medical School of Brown University can contribute mentoring programs for young medical students and resident physicians, and relevant training seminars on topics such as promotion in medicine.²⁴ Ultimately, advocating for mentorship is essential because empowered women empower women.

Acknowledgments

The authors wish to thank Kathleen Haslam, Roland Hall, and Jean Marie Layton from the Warren Alpert Medical School of Brown University BioMed Faculty Administration for assistance in obtaining faculty data.

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Review of the public health risks of widespread cannabis use

JONATHAN BARKER, MD

ABSTRACT

This article is a review of the public health risks of widespread cannabis use based on a recent review of the literature. The purpose of this article is to help physicians better educate the public about the dangers of widespread cannabis products.

INTRODUCTION

Whatever your opinion is about the legalization of cannabis and practices of medical marijuana providers, there is no disputing that cannabis is not a harmless substance for everyone, and can lead to severe health consequences. The purpose of this article is to help doctors better educate the public about the dangers of widespread, untargeted cannabis products.

Doctors are trained to think in terms of health risks and benefits. The following is a review of the public health risks of widespread cannabis use:

1. Legalizing cannabis has been shown to increase the rates of motor vehicle accidents.

It is difficult to determine exactly how large of an impact drivers under the influence of cannabis have on the rate of motor vehicle accidents. There is no routine test that can be administered on the roadside for cannabis, such as the breathalyzer test for alcohol. However, one study showed that the rate of fatally injured drivers in the U.S. who tested positive for cannabis tripled from 1999 to 2010.¹ The study was based on six states, none of which are the two states that legalized cannabis.

A recent Canadian study found 11-12% of drivers admitted to emergency rooms in various provinces had used cannabis prior to driving based on blood samples.² The authors of this study derived a relative risk of greater than four based on these findings (95 % CI: 1.98–8.52).² Canadian data collected in 2004 indicated that 4% of Canadian adults have driven automobiles within one hour of consuming cannabis, an increase from 1.9% in 1996–1997.³ This study was a meta-analysis of observational studies investigating the association of cannabis consumption and motor vehicle accidents. The authors of this study note that surveys of young drivers in some jurisdictions show the rates of

driving under the influence of cannabis surpasses the rate of driving under the influence of alcohol. When alcohol is combined with cannabis, the effect is stronger than either drug alone.¹

Cannabis was legalized in Washington state in 2012.⁴ A study that looked at the percentage of drivers who tested positive for cannabis in Washington before legalization compared to after legalization found that an average of 19.1% of drivers tested positive for active THC from 2009–2012 (before legalization) compared to 24.9% of drivers who tested positive for active THC in 2013 (after legalization).⁴ The inclusion criteria for case selection of this study was blood toxicology results from all suspected impaired driving cases submitted by law enforcement officers in Washington state between the four years leading up to legalization (2009–2012) and 2013 (the year following legalization).⁴

The proportion of drivers in Colorado in a fatal motor vehicle crash who were marijuana-positive was 4.5% in the first six months of 1994, 5.9% in the first six months of 2009, and 10% at the end of 2011.⁵ There was a positive trend during the post-commercial marijuana period, after adjusting for the proportion of male drivers, the proportion of drivers 21–24 years old, and the proportion of drivers tested for drugs.⁵ In comparison, the proportion of drivers in the 34 non-medical marijuana states involved in a fatal motor vehicle crash who were marijuana-positive was 1.1% in the first six months of 1994, 4.2% in the first six months of 2009, and 4.1% at the end of 2011.⁵

Although Colorado passed medical marijuana laws in 2000, the medical marijuana industry became commercialized and began to grow rapidly in 2009 after the U.S. Department of Justice announced that it would not prosecute “individuals whose actions are in clear and unambiguous compliance with existing state laws providing for the medical use of marijuana.”⁶ The number of medical marijuana cardholders in Colorado increased from 4,800 in 2008 to 41,000 in 2009. By 2012, there were 532 licensed dispensaries in Colorado and over 108,000 registered patients.⁷

2. Cannabis use is a risk factor for mental illness.

Although most people who smoke cannabis don't become psychotic, there is evidence of a genetic link for those individuals who do become psychotic from smoking cannabis. For example, people with specific genotype polymorphisms

of the COMT gene (encoding one of the enzymes responsible for the metabolism of dopamine) and adolescent cannabis use were at increased risk for schizophreniform disorder.⁸

In a case control study, the odds ratio of being diagnosed with a psychotic disorder was 5.4 (95% CI 2.80–11.30, $p=0.002$) for those patients that used high potency “skunk” cannabis every day.⁹ This OR represents 103 patients (25%) who used skunk cannabis every day out of 410 total patients with first episode psychosis.⁹ In a longitudinal study looking at adolescent boys, investigators found a cumulative effect of weekly cannabis use on subclinical psychotic symptoms.¹⁰ This effect remained after adjusting for covariates. For each additional year adolescent boys engaged in weekly cannabis use, their expected number of subsequent psychotic symptoms rose by 21%.¹⁰ For each additional year adolescent boys engaged in weekly cannabis use, the predicted odds of experiencing subsequent paranoia rose by 133% and the odds of experiencing future hallucinations rose by 92%.¹⁰

The authors point out that by showing a positive association between individual cannabis use and subclinical psychotic symptoms over time, all pre-existing covariates that are time-stable are eliminated, thus dismantling the argument that psychosis in individuals who use cannabis is due to individual pre-existing differences. In other words, the longer the individuals in this study engaged in weekly cannabis use, the higher the likelihood that these individuals would develop psychotic symptoms.

In human laboratory studies, cannabis extracts including Δ^9 -tetrahydrocannabinol (THC) produce a host of transient positive symptoms including paranoid delusions, grandiose delusions, suspiciousness, conceptual disorganization, and fragmented thinking.¹¹ THC has also been shown in human laboratory studies to produce negative symptoms, such as blunted affect, emotional withdrawal, psychomotor retardation, lack of spontaneity, and reduced rapport.¹¹ Without proving a causal link, it has been noted that cannabis use is associated with more time in affective episodes and higher rates of rapid cycling in bipolar disorder.¹² Cannabidiol (CBD), on the other hand, lowers some of the THC-induced psychotic symptoms such as paranoia, THC-induced anxiety, and THC-induced verbal memory impairment.¹¹ CBD is the second most prominent cannabinoid in the cannabis plant and has drawn attention because of its potential antipsychotic effects.¹¹

3. Inhaled Cannabis use is a risk factor for respiratory infections.

Cannabis smoke can lead to loss of ciliated cells and hyperplasia of mucus-secreting goblet cells in the lung epithelium.¹³ These cellular changes cause reduced clearance of the respiratory tract and subsequent mucus accumulation with bacterial colonization.¹³ THC can affect the bactericidal and fungicidal activity of the alveolar macrophages as well, thus increasing the risk of respiratory infection.¹³

Marijuana contaminated with *Aspergillus fumigatus* and Gram-negative bacteria, has also been found.¹³

4. Cannabis use increases the rate of vascular disease.

Cannabis is the third most often identified drug of abuse involved in ischemic stroke, after tobacco and cocaine.¹⁴ An analysis of stroke in cannabis users was performed in Australia using survey data from a longitudinal cohort study.¹⁵ This analysis demonstrated that persons who used cannabis in the past year had 2.3 times the risk of stroke/transient ischemic attack (TIA) compared to persons who had not used cannabis in the past year (after adjusting for demographics, tobacco smoking, hypertension, heart problems, and diabetes).¹⁵ This study also found that using cannabis less than weekly during the past year was not associated with a significant increased risk of stroke/TIA, while using cannabis weekly or more frequently was associated with a adjusted IRR of 4.7 (95% CI 2.1–10.7, $p<0.001$) increase in the risk of stroke/TIA.¹⁵

Another study that looked at aneurysmal subarachnoid hemorrhages (aSAH) amongst cannabis users versus non-users in northern Manhattan found that the incidence of aneurysmal subarachnoid hemorrhages in the cannabis use cohort ages 25-34 was greater than two times that of the non-cannabis use cohort.¹⁶ This includes an incidence of hospitalizations for aSAH of 65.61 per 100,000 in cannabis users (ICD-9-CM codes 304.30 (cannabis dependence, unspecified), 304.31 (cannabis dependence, continuous), 304.32 (cannabis dependence, episodic), 305.20 (nondependent cannabis use, unspecified), 305.21 (nondependent cannabis use, continuous), and 305.22 (nondependent cannabis abuse, episodic) vs. an incidence of 30.78 of aSAH per 100,000 in non-cannabis users.¹⁶

The authors of another study that looked at hospitalized patients concluded that recreational cannabis use was associated with an odds ratio of 1.17 (95% CI: 1.15–1.20) of being hospitalized for an acute ischemic stroke.¹⁷ In contrast, there was an associated odds ratio of 1.76 (95% CI: 1.74–1.77) of being hospitalized for an acute ischemic stroke for tobacco users.¹⁷ The authors report that the mechanism behind cannabis-induced acute ischemic stroke is not fully understood. For example, there is evidence that cannabis has both vasodilatory and vasoconstrictive cerebrovascular effects.¹⁷

5. Cannabis use during pregnancy has been associated with increased risk of adverse birth outcomes.

THC crosses the placenta from mother to fetus, however, at much lower levels than the mother's serum levels.¹⁸ One Australian study that based its finding on the self report of birthing mothers found that women who use cannabis during their pregnancy have an increased rate of preterm labor (aOR 1.5, 95%CI 1.1–1.9; $P < .01$), delivering babies with low birth weight (aOR 1.7, 95% CI 1.3–2.2; $P < .001$) and with higher admissions to the neonatal intensive care unit (aOR 2.0, 95%CI 1.7–2.4; $P < .001$).¹⁹

Another study found that cannabis use (without concurrent tobacco use) was not associated with a significant difference in head circumference <25th percentile (aOR, 1.093; 95% CI, 0.613-1.949; $P = .763$) or birthweight <25th percentile (aOR, 1.442; 95% CI, 0.821-2.531; $P = .202$).¹⁸ Note the large P values with these associations.

6. Legalization of cannabis has been shown to increase cannabis exposure in the pediatric population.

In states that have decriminalized cannabis, the rate of calls to the poison control center involving cannabis exposure to young children increased by 30.3% calls per year from 2005 to 2011.²⁰ Comparatively, there was no increase in the call rate in states in which cannabis is not legal during the same time period.²⁰

In Colorado, the annual number of cannabis exposure cases for children younger than ten-years-old reported to the regional poison center (RPC) increased more than five-fold, from 9 in 2009 to 47 in 2015.²¹ During this period, Colorado had a 34% mean increase in RPC cannabis exposure cases per year (95% CI, 22%-47%; $P < .001$), while the remainder of the United States had an average increase in the annual case incidence of 19% (95% CI, 12%-27%, $P < .001$).²¹ This difference in Colorado annual case incidence versus the remainder of the United States from 2009 to 2015 had a P value of 0.04. 52% of the exposures in this pediatric population were due to edible products (51 of the 99 exposure cases).²¹ Known marijuana products involved in the exposure included infused edible products (48%): seventeen baked goods (cookies, brownies, and cake), ten candies, and two popcorn products.²¹

In January of 2014 recreational marijuana became legal in Colorado.²² The number of cannabis exposure calls for children nine-years-old and younger made to the Colorado Regional Poison Center per 100,000 population increased 135.6% (95% CI, 60.4-246.1, $P < .001$) from the two years prior to legalization (2012-2013) to the two years after legalization (2014-2015).²¹

7. Heavy cannabis use is associated with diminished lifetime achievements.

The percent of THC in cannabis has increased steadily, from 3% in the 1980s to 12% in 2012.²³ The CBD content has decreased on average from approximately 0.28% in 2001 to < 0.15% in 2014, resulting in a change in the ratio of THC to CBD from fourteen times in 1995 to ~80 times in 2014.²⁴ In Colorado, the percentage of THC in marijuana available for sale ranges between 19% and 30%, compared with the 3% to 6% of THC in marijuana available for research by the National Institutes of Health.²¹

Heavy cannabis use is associated with impairments in memory and attention that persist and worsen with increasing years of regular use, impaired school performance, increased risk of dropping out of school, lower income, and

greater need for socioeconomic assistance, unemployment, criminal behavior, and lower satisfaction with life.²³ Not surprisingly, adolescents who perceive a low risk to using cannabis have a higher rate of using cannabis.²³

According to 2014 statistics, the prevalence of students who used cannabis daily in the United States was 1% among eighth graders, 3.4% among tenth graders, and 5.8% among twelfth graders.²⁵ In comparison, when the study that monitored these statistics commenced in 1991, the prevalence rates of daily users were 0.2% among eighth graders, 0.8% among tenth graders, and 2% among twelfth graders.²⁵

CONCLUSION

Doctors must educate the public about the potential harm cannabis causes with heavy, and possibly moderate, widespread use just as they do about the dangers of tobacco use. Tobacco use has declined in the United States in large part because of the knowledge the public now holds about its adverse effects, as opposed to legislative action.

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Acknowledgments

I wish to thank Dr. Edward Silberman and Devra Barter, MS, for helping with the review process of this manuscript.

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Disclosures

The author reports no conflicts of interest. The author alone is responsible for the content and writing of this paper.

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Sister Mary Joseph Nodule as Presenting Complaint in First Diagnosis of Intra-Abdominal Malignancy

JORDAN J COHEN, MD; JAMIESON COHN, MD; GITA PENSA, MD; ROBERT TUBBS, MD

INTRODUCTION

The Emergency Department is often where the diagnosis of suspected malignancy is first made. As clinicians, we must have a high index of suspicion when patients present with complaints or physical exam findings that may be associated with cancer. Patients with abnormal lab results or imaging that is concerning for malignancy should be admitted or referred for close follow-up for further workup and definitive diagnosis.

CASE REPORT

An 81-year-old woman with a history of COPD on three liters of home oxygen, hypertension, hyperlipidemia, pulmonary fibrosis and stroke presented to the emergency department with a chief complaint of bleeding from her umbilicus. Earlier in the evening, she noticed a small trickle of blood from her umbilical region. She had never had bleeding from this location. By the time she arrived, the bleeding had stopped. She denied any associated symptoms of nausea, vomiting, diarrhea, melena, fatigue, weight loss, abdominal distension or pain, headaches, chest pain or loss of appetite.

The patient had a 100-year pack smoking history; she quit in 2009. Her mother died of breast cancer at age 60. She lives with her two daughters and requires assistance with bathing secondary to debilitating arthritis.

When she presented to the emergency department, she was in no acute distress, and her vital signs were blood pressure of 124/80, pulse of 78 beats per minute, temperature of 98.4 degrees Fahrenheit, respiratory rate of 18, and pulse oximetry of 96%. She had a normal exam except for a 2x2 cm erythematous nodule protruding from the umbilicus, which was non-tender and not bleeding (**Image 1**). Her lab work did not show any significant abnormalities, except for slight elevation of her alkaline phosphatase at 120. The urine culture was positive for *E. coli*. Due to the concerns raised by the umbilical nodule, a CT scan of the abdomen and pelvis was ordered. The CT scan showed an umbilicus soft tissue nodule, extensive peritoneal carcinomatosis, extensive hepatic and intraperitoneal metastatic disease, lung nodules, and bilateral adnexal masses, most consistent with primary ovarian versus sigmoid malignancy (**Images 2**

Image 1. Umbilical nodule



and 3). Her umbilical nodule was diagnosed as a Sister Mary Joseph nodule in the context of extensive intra-abdominal carcinomatosis. She was admitted to the hospitalist service for oncology consult, biopsy of the nodule and initiation of cancer treatment.

A liver lesion biopsy revealed a metastatic high-grade serous carcinoma, consistent with spread from the female genital tract/Mullerian primary. A CT scan of the chest showed a right upper lobe mass and three left basilar pulmonary nodules, concerning for metastatic disease. A non-contrast CT scan of the brain did not show any lesions. The patient was started on antibiotics for her urinary tract infection.

She was started on carboplatin/paclitaxel for stage IV cancer and offered palliative chemotherapy and debulking pelvic surgery. The patient did not tolerate chemotherapy and consequently died from complications of her extensive malignancy.

Image 2. Axial CT Abdomen/Pelvis image demonstrating SMJ nodule and metastatic disease

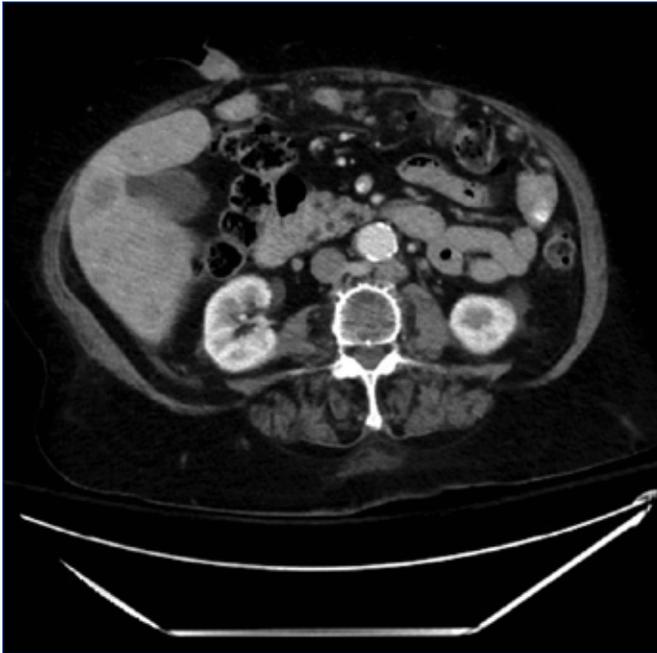
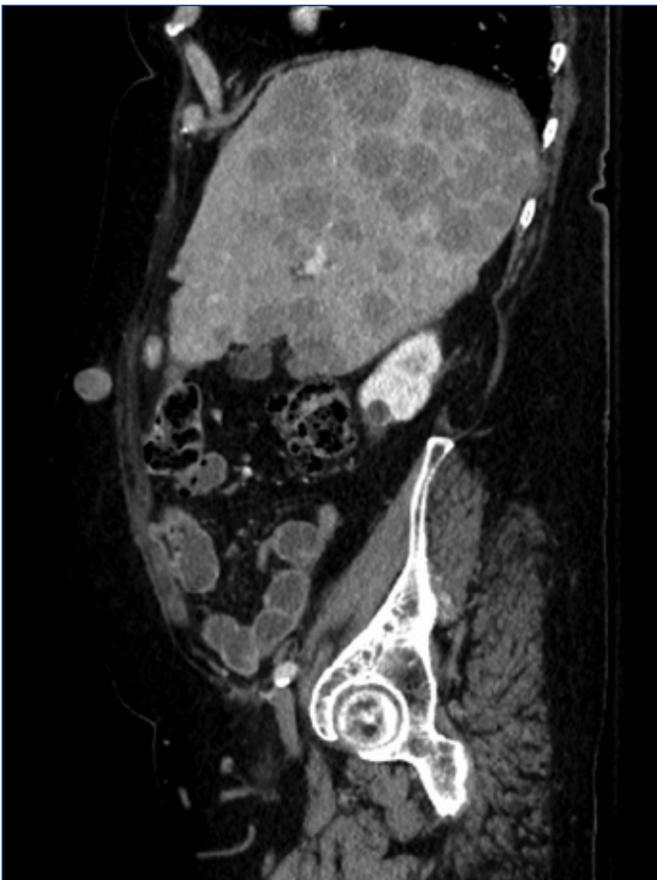


Image 3. Sagittal CT Abdomen/Pelvis image of SMJ nodule and metastatic disease



DISCUSSION

An umbilical nodule may represent a benign umbilical hernia, or it may be the first visible manifestation of intra-abdominal malignancy. Presentation to the Emergency Department for a new umbilical mass is rare, but differentiating a benign from malignant nodule is critical. Umbilical metastases were reported as early as 1854 by Baluff and in 1860 by Nelaton; they were referred to as “trouser button navel”.¹ However, the English surgeon, Hamilton Bailey, was the first to coin the popular eponym “Sister Mary Joseph’s nodule” in 1949 in his textbook “Demonstration of Physical Signs in Clinical Surgery”.^{1,2} Sister Mary Joseph was a superintendent nurse at St. Mary’s Hospital in Rochester, Minnesota (now Mayo Clinic) and reportedly pointed out to Dr. Bailey her finding that patients with intra-abdominal malignancy often had an umbilical nodule.^{1,2}

The Sister Mary Joseph nodule is an umbilical mass that may be painful, firm, or ulcerated and may have serous, sanguinous, or purulent drainage.² These nodules tend to be small, 0.5 to 2 cm, but can get as large as 10 cm before presenting for evaluation. Patients who present with this nodule may have other symptoms of malignancy, including weight loss, abdominal pain, nausea, ascites, and bleeding per rectum.³ CT scan is often the first step to characterize the extent of the umbilical mass and to look for other lesions and a primary malignancy. In 14%–33% of SMJ nodules, a new diagnosis of occult malignancy is made.⁴ For patients with a known malignancy who present with this finding, 40% represent a recurrence of prior cancer.⁴ In men, the source is often gastrointestinal (gastric, colonic, pancreatic), while in women, it is usually gynecologic (ovarian, uterine). The common primary malignancies are gastrointestinal (52%), gynecologic (28%), stomach (23%) and ovarian (16%). A high percentage of the cases, 15-29% are from an unknown primary.³⁻⁵

There are hypotheses about the spread of malignancy to the umbilicus from direct spread from peritoneal masses, hematogenous spread, and lymphatic spread via embryonic remnants (round ligament of the liver, urachus or obliterated vitelline artery).^{6,7} Presence of an SMJ nodule is associated with advanced disease and a poor prognosis. Average survival is around 11 months with <15% survival reported at 2 years.² Therefore, it is critical to have a high index of suspicion when a patient presents with a new umbilical nodule, especially when there is a personal or strong family history of malignancy.

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The Association Between Postpartum Healthcare Encounters and Contraceptive Use among Rhode Island Mothers, 2012–2015

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BACKGROUND

Unintended pregnancies account for nearly 50% of all pregnancies¹. Compared to those conceived intentionally, children born of unintended pregnancies have worse outcomes in nutrition, abuse, and overall mortality². Mothers with unintended pregnancies report lower levels of happiness³, health, and mother-child relationships. We hypothesize that unwanted childbearing affects mother-child relationships in part because of the physical and mental health consequences of unwanted childbearing. Impaired mental health hampers women's interaction with their infants, and these poor neonatal relationships translate into poor mother-adult child relationships. Using the Intergenerational Panel Study of Mothers and Children – a 31-year longitudinal survey of a probability sample of 1,113 mother-child pairs begun in 1961 – we demonstrate that mothers with unwanted births have lower quality relationships with their children from late adolescence (age 18 and higher rates of anxiety⁴). Thus, postpartum contraception is important in preventing these harms. Contraceptive-specific counseling by healthcare workers increases both general contraception use and use of highly effective contraception⁵, raising the question as to which encounters offer opportune times to discuss postpartum contraception. To date, the literature has indicated that home visits during pregnancy⁶ and postpartum check-ups^{7,8} are associated with increased postpartum contraception use.

The purpose of this study was to examine the association between encounters with health care workers after pregnancy and the use of any postpartum contraception method and, specifically, highly effective methods in Rhode Island.

METHODS

We analyzed data from the 2012–2015 Rhode Island Pregnancy Risk Assessment Monitoring System (RI-PRAMS; n=4,687). PRAMS is a collaborative surveillance project of the Centers for Disease Control and Prevention (CDC) and state health departments, which collects state-specific, population-based data from mothers with a recent live birth⁹. PRAMS surveys are conducted through a mail or telephone survey 2–6 months postpartum. Mothers who participate in PRAMS self-report behaviors and experiences before, during, and shortly after pregnancy; this data is linked to birth certificate data and weighted to represent all women delivering live infants.

Postpartum healthcare encounters were defined as mothers having a postpartum checkup and having a home visitor service after delivery. Postpartum contraception use was determined using the following questions: “Are you or your husband or partner doing anything *now* to keep from getting pregnant?” and “What kind of birth control are you or your husband or partner using *now* to keep from getting pregnant?” We defined highly effective forms of contraception as female or male sterilization, IUDs, and implants. To identify disparities, socio-demographic characteristics and other pregnancy-related experiences were included in our analyses.

Analyses were performed using STATA 14.2 (STATA Corp, LLC.)¹⁰, which accounts for the complex survey design of RI-PRAMS. We assessed the healthcare encounter exposures and the included covariates' association with a) the use of any contraception method versus use of no method (Model 1) and b) the use of highly effective methods versus other or no methods (Model 2). We used backward stepwise logistic regression with an inclusion threshold set at a p-value $\leq .1$. Model 1 had 4,254 observations in the final sample (with 8.6% of observations excluded due to missing information) and Model 2 had 4,214 observations in the final sample (with 10.1% of eligible observations excluded due to missing information). Unadjusted and adjusted odds ratios (AOR) based on population-level characteristics are presented with 95% confidence intervals (CI).

RESULTS

Demographic characteristics are presented in **Table 1**. During 2012–2015, 84% of Rhode Island mothers used any method of postpartum contraception, and 34% of mothers used highly effective methods.

Use of Any Postpartum Contraception Method

Stepwise regression produced a model with the following covariates: age, marital status, Hispanic identity, age of infant, parity, WIC (the special supplemental nutrition program for women, infants, and children) program participation, and current breastfeeding status. Results from this model are presented in **Table 2**.

After controlling for all covariates in the model, mothers who had a postpartum checkup, compared with mothers who did not have a postpartum checkup, had increased

Table 1. Characteristics of Study Population

Characteristics	Weighted % (Unweighted n)
Age	
14-19	5.7% (236)
20-29	46.1% (1,975)
30 and Over	48.2% (2,331)
Education	
Less than 12 years	12.2% (464)
12 years	24.8% (955)
More than 12 years	63.0% (2,691)
Race	
White	64.9% (2,828)
Black	7.1% (339)
Other	28.0% (1,265)
Ethnicity	
Hispanic	24.1% (1,079)
Non-Hispanic	75.9% (3,395)
Infant Age	
Two or three months old	43.7% (2,056)
Four months or older	56.3% (2,485)
Parity	
First Child	42.0% (1,929)
Second Child or More	58.0% (2,551)
Marital Status	
Married	55.1% (2,666)
Unmarried	44.9% (1,876)
WIC Program Participation	
Yes	47.1% (2,058)
No	52.9% (2,469)
Current Breastfeeding	
Yes	46.1% (2,012)
No	53.9% (2,391)
Pregnancy Intention	
Intended	58.1% (2,741)
Unintended	41.9% (1,891)
Postpartum Depression	
Yes	11.8% (562)
No	88.2% (3,948)
Insurance Coverage During Pregnancy	
Private	59.9% (2,610)
Public	40.1% (1,609)
Postpartum Home Visitor	
Yes	36.4% (1,860)
No	63.6% (2,595)
Postpartum Checkup	
Yes	92.9% (4,239)
No	7.1% (296)
Used Any Postpartum Contraception	
Yes	83.9% (3,779)
No	16.1% (763)
Used Highly Effective Method of Postpartum Contraception	
Yes	33.6% (1,504)
No	66.4% (3,038)

Table 2. Unadjusted and adjusted odds ratios of any postpartum contraception use among Rhode Island mothers with a recent live birth, RI PRAMS 2012–2015

	Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI)
Postpartum Home Visitor		
Yes	1.31 (1.09, 1.58)	1.21 (.982, 1.48)
No	1.00 (ref)	1.00 (ref)
Postpartum Checkup		
Yes	1.63 (1.21, 2.20)	1.88 (1.35, 2.62)
No	1.00 (ref)	1.00 (ref)
Age		
14-19	1.36 (.904, 2.05)	1.57 (.956, 2.58)
20-29	1.35 (1.13, 1.61)	1.40 (1.13, 1.73)
30 and Over	1.00 (ref)	1.00 (ref)
Ethnicity		
Hispanic	1.91 (1.51, 2.40)	1.52 (1.17, 1.98)
Non-Hispanic	1.00 (ref)	1.00 (ref)
Infant Age		
Two or three months old	1.00 (ref)	1.00 (ref)
Four months or older	.956 (.806, 1.13)	.826 (.686, .995)
Parity		
First Child	1.00 (ref)	1.00 (ref)
Second Child or More	1.44 (1.21, 1.71)	1.50 (1.22, 1.83)
Marital Status		
Married	.906 (.761, 1.08)	1.31 (1.05, 1.64)
Unmarried	1.00 (ref)	1.00 (ref)
WIC Program Participation		
Yes	1.59 (1.33, 1.90)	1.34 (1.06, 1.69)
No	1.00 (ref)	1.00 (ref)
Current Breastfeeding		
Yes	.761 (.640, .906)	.806 (.667, .973)
No	1.00 (ref)	1.00 (ref)

odds of using any postpartum contraception method (AOR=1.88, 95% CI=1.35-2.62). Having a postpartum home visitor was not associated with increased odds of using postpartum contraception (AOR=1.21, 95% CI=.982-1.48). Mothers who were Hispanic, were married, were 20-29 years old, or participated in the WIC program had higher odds of using postpartum contraception compared to their reference groups, while mothers who were currently breastfeeding or had infants four months or older had lower odds of using postpartum contraception compared to their reference groups.

Use of Highly Effective Methods

The stepwise regression with inclusion set at p produced a model with the following covariates: previous pregnancy intention, Hispanic identity, age of infant, parity, WIC program participation, and current breastfeeding status. Results from this model are presented in **Table 3**.

After controlling for all covariates in the model, compared to mothers without a postpartum checkup, mothers with a postpartum checkup had higher odds of using highly effective contraceptive

Table 3. Unadjusted and adjusted odds ratios of highly effective postpartum contraceptive use among Rhode Island mothers with a recent live birth, RI PRAMS 2012–2015

	Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI)
Postpartum Home Visitor		
Yes	1.29 (1.12, 1.49)	1.09 (.923, 1.28)
No	1.00 (ref)	1.00 (ref)
Postpartum Checkup		
Yes	1.46 (1.10, 1.94)	2.06 (1.48, 2.85)
No	1.00 (ref)	1.00 (ref)
Ethnicity		
Hispanic	2.38 (2.04, 2.77)	1.64 (1.36, 1.97)
Non-Hispanic	1.00 (ref)	1.00 (ref)
Infant Age		
Two or three months old	1.00 (ref)	1.00 (ref)
Four months or older	1.40 (1.22, 1.61)	1.16 (.995, 1.35)
Pregnancy Intention		
Intended	1.00 (ref)	1.00 (ref)
Unintended	1.70 (1.48, 1.95)	1.50 (1.28, 1.75)
Parity		
First Child	1.00 (ref)	1.00 (ref)
Second Child or More	2.27 (1.96, 2.62)	2.24 (1.91, 2.62)
Current Breastfeeding		
Yes	.631 (.549, .725)	.768 (.656, .898)
No	1.00 (ref)	1.00 (ref)
WIC Program Participation?		
Yes	2.31 (2.01, 2.65)	1.55 (1.30, 1.85)
No	1.00 (ref)	1.00 (ref)

method (AOR=2.06, 95% CI=1.48-2.85). Having a home visitor after pregnancy was not associated with the use of highly effective methods (AOR=1.09, 95% CI=.923-1.28). Mothers who were Hispanic, had at least one previous live birth, did not intend to conceive their last pregnancy, or participated in the WIC program had higher odds of using highly effective contraception compared to their reference groups. Mothers who were currently breastfeeding were less likely to use highly effective postpartum contraception compared to their reference group.

LIMITATIONS

There are at least three limitations to this study. First, because PRAMS data are self-reported by mothers 2–6 months postpartum, there may be social desirability or recall bias. Second, even though we combined 4-year data (all Phase 7 years) to increase the sample size, some categories (maternal age 14–19 years, blacks, women without a postpartum checkup, etc.) still have small observations, which may produce less reliable results. Third, we cannot directly determine whether or not mothers received any

contraception-related counseling during the health-care encounters from the survey. Despite these limitations, this study provides important public health implications for the use of postpartum contraception among Rhode Island mothers.

DISCUSSION

A central finding of this study is that having a postpartum checkup was associated with higher use of both any postpartum contraception and highly effective methods, while having a postpartum home visitor was not associated with use of any method of postpartum contraception or use of highly effective methods. Overall, this research reveals a few opportunities to improve postpartum contraception use across the state.

With only 34% of Rhode Island mothers using highly effective methods, many women across the state face a substantial risk of contraception failure. Given the efficacy of counseling on increasing postpartum contraception use⁵, integrating counseling components into pregnancy-related programs may help to improve contraceptive-related choices across the state. In particular, home visitor programs after pregnancy can play an increased role in encouraging mothers to use more effective forms of contraception, especially for mothers without postpartum checkups. Given the lack of association between having a postpartum home visitor and use of any method of contraception and use of highly effective methods, there is an opportunity to implement

increased education regarding contraception and the efficacy of various contraceptive methods during these visits.

Prompting conversations regarding contraception options that, at the very least, encourage mothers to start considering these choices may help prevent the burden of unintended pregnancies on the mother, newly born child, and future children conceived unintentionally. Rhode Island should consider these options as well as others to reduce the burden of unintended pregnancy throughout the state.

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Rhode Island Monthly Vital Statistics Report

Provisional Occurrence Data from the Division of Vital Records

VITAL EVENTS	REPORTING PERIOD		
	SEPTEMBER 2017	12 MONTHS ENDING WITH SEPTEMBER 2017	
	Number	Number	Rates
Live Births	1,002	11,464	10.9*
Deaths	821	10,377	9.8*
Infant Deaths	5	70	6.1#
Neonatal Deaths	5	55	4.8#
Marriages	1,094	7,283	6.9*
Divorces	234	3,058	2.9*
Induced Terminations	113	1,895	165.3#
Spontaneous Fetal Deaths	91	797	69.5#
Under 20 weeks gestation	85	733	63.9#
20+ weeks gestation	6	64	5.6#

* Rates per 1,000 estimated population

Rates per 1,000 live births

Underlying Cause of Death Category	REPORTING PERIOD			
	MARCH 2018	12 MONTHS ENDING WITH MARCH 2018		
	Number (a)	Number (a)	Rates (b)	YPLL (c)
Diseases of the Heart	196	2,330	220.6	3,101.5
Malignant Neoplasms	188	2,224	210.5	5,502.0
Cerebrovascular Disease	49	443	41.9	482.5
Injuries (Accident/Suicide/Homicide)	99	907	85.9	14,538.0
COPD	54	489	46.3	407.5

(a) Cause of death statistics were derived from the underlying cause of death reported by physicians on death certificates.

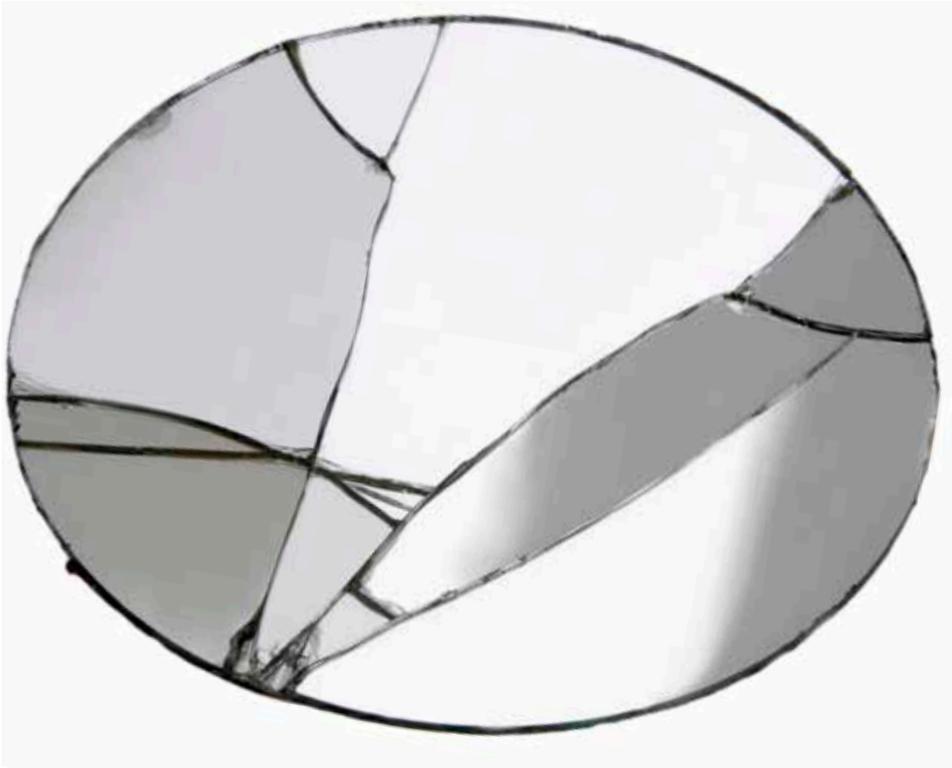
(b) Rates per 100,000 estimated population of 1,056,298 (www.census.gov)

(c) Years of Potential Life Lost (YPLL).

NOTE: Totals represent vital events, which occurred in Rhode Island for the reporting periods listed above.

Monthly provisional totals should be analyzed with caution because the numbers may be small and subject to seasonal variation.

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RIMS NOTES: NEWS YOU CAN USE

This issue sponsored by

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

Volume 1 - Number 21

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What's New

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

Membership Activities

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

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

Keeping You Posted: Opioids

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

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

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

This Date In History - 23 Years Ago

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

RHODE ISLAND MEDICAL SOCIETY, 405 PROMENADE STREET, SUITE A, PROVIDENCE RI 02908-4811
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RIMS NOTES

is published electronically on alternate Fridays.

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



Working for You: RIMS advocacy activities

March 1, Thursday

Legislative hearings
Harm Reduction Centers community discussion, Alpert Medical School
Senator Stephen Archambault fundraiser:
L. Anthony Cirillo, MD, RIMS staff

March 2, Friday

RI Business Group on Health:
Bradley J. Collins, MD, President,
Peter Hollmann, MD, President-elect

RI Medical Society 11th Hour CME Event

April 21, 2018

Your four hours of required CME in one convenient location – before the June 1, 2018 deadline.

Information/Registration

March 3, Saturday

RIMS Opioid Safe Prescribing CME Event:
Bradley J. Collins, MD, President

March 5, Monday

Board of Directors Meeting: Peter Hollmann, MD, President-elect

March 6, Tuesday

RIMS Physician Health Committee:
Herbert Rakatansky, MD, Chair
Meeting to discuss proposed Board of Medical Licensure and Discipline (BMLD) regulatory changes
Conference call with Illinois State Medical Society regarding electronic prescription mandate
Legislative hearings
Rep. Joseph Solomon fundraiser
Rep. Robert Phillips fundraiser

March 7, Wednesday

Rhode Island Parity Initiative Partnership meeting
Meeting with members of RIMS Harm Reduction Centers Workgroup

March 8, Thursday

Legislative hearings:
Martin Weinstock, MD
SIM Grant Steering Committee:
Peter Hollmann, MD, President-elect



RIMS President **Bradley J. Collins, MD**, speaking at RIMS' Opioid Safe Prescribing CME Event on March 3 at the Crown Plaza in Warwick. A second session was held on March 24.

Rep. Jean-Philippe Barros fundraiser
Rep. Marcia Ranglin-Vassell fundraiser
Chairwoman Hanna Gallo fundraiser

March 12, Monday

End of Life Conversation Project
OHIC Health Insurance Advisory Committee meeting regarding Care New England-Partners merger

March 13, Tuesday

General Assembly closed due to weather

March 14, Wednesday

Board of Medical Licensure and Discipline
Governor's Task Force on Overdose Prevention and Intervention
Department of Health Community Review on proposed Board of Medical Licensure and Discipline (BMLD) regulatory changes
Legislative hearings: Catherine Cummings, MD, RIMS Treasurer

March 15, Thursday

Mental Health and Substance Abuse Coalition meeting at RIMS
Chairman Walter Felag fundraiser
Legislative Hearings
Chairwoman Kathleen Fogarty fundraiser
Rep. Anastasia Williams fundraiser

March 16, Friday

Meeting with Anchor Medical Associates and Department of Health regarding Diabetes Prevention Program

March 19, Monday

Special House Commission on School Start Times: Susan Duffy, MD, RIMS Council Member

March 20, Tuesday

AMA House of Delegates Scope of Practice Summit in Chicago, RIMS staff

March 21, Wednesday

Conference call with Leadership Rhode Island
General Assembly and state offices closed due to weather

March 22, Thursday

Meeting with RI Quality Institute regarding provider directories
MMJUARI (Medical Malpractice Joint Underwriting Association) board of directors, RIMS staff
Legislative hearings
Rep. Stephen Casey fundraiser
Rep. Michael Morin fundraiser

March 23, Friday

Meeting with RI Primary Care Physicians Corporation regarding Diabetes Prevention Program (DPP)

March 24, Saturday

RIMS Opioid Safe Prescribing CME Event:
Bradley J. Collins, MD, President

March 27, Tuesday

Legislative hearings
Peter Neronha, candidate for Attorney General, fundraiser

March 28, Wednesday

Meeting with Senate leadership, Michael Migliori, MD, Public Laws Chair, and staff
Legislative hearings
Rep. Brian Newberry fundraiser
Rep. Raymond Johnson fundraiser

March 29, Thursday

RIMS' Harm Reduction Center Workgroup
RI ACEP (RI Chapter, American College of Emergency Physicians) legislative day
Legislative hearings

Rhode Island Academy of Family Physicians

The Rhode Island Academy of Family Physicians celebrated its 26th annual Primary Care Conference at the Warren Alpert Medical School of Brown University. The conference was a great success with over 85 physicians and medical students in attendance. With 15 educational sessions, three workshops, and a poster contest, the RIAFP thanks all of the local physicians who participated.



[Above] **Alfred Arcand, MD**, received the Physician of the Year award from RIAFP Past President **David Bica, DO**.

[Left] **Philip Salko, DO**, was sworn in as the new President of the RIAFP by President-elect of AAFP **John Cullen, MD**, of Alaska.



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

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



www.nhpri.org

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

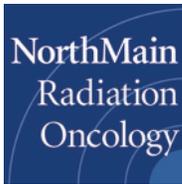


www.ripccpc.com

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



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Q&A: Clinical Faculty Advisory Committee (CFAC) at the medical school

MARY KORR
RIMJ MANAGING EDITOR

The **Clinical Faculty Advisory Committee (CFAC)** at the Alpert Medical School represents the clinical and clinician educator faculty, serving as their “voice” and liaison with the medical school community and leadership. CFAC is distinct from the Medical Faculty Executive Committee (MFEC), which represents medical faculty with academic appointments.



Linda Nici, MD

Catherine A. Cummings, MD

In the following Q&A, **LINDA NICI, MD**, current CFAC chair, and vice chair **CATHERINE A. CUMMINGS, MD**, articulate the group’s mission and the multi-faceted roles it provides its constituency.

Dr. Nici is Professor of Medicine, Clinician Educator, at the Alpert Medical School and Chief of the Pulmonary and Critical Care Section of the Providence VA Medical Center. Dr. Cummings is Clinical Associate Professor of Emergency Medicine at the Alpert Medical School and is affiliated with Miriam and Rhode Island hospitals.

Q: What is the role of the Clinical Faculty Advisory Committee (CFAC) and its relationship with clinical faculty and Brown?

A: The major roles of the CFAC are to be the “voice” of the clinical faculty within the Warren Alpert Medical School of Brown University and to advocate on their behalf to the Dean of Medicine and Biology.

The CFAC also has the responsibility of informing the clinical faculty of the benefits of their clinical appointment as well as programs that enhance their clinical knowledge and skills. The CFAC ensures a successful collaboration with the medical school to achieve its educational mission.

Another important role of the CFAC is to solicit nominees from the clinical departments for the **Dean’s Excellence in Teaching Awards**. These awards are given to clinical faculty for their

exemplary teaching in pre-clinical courses, core clerkships and clinical electives. These faculty members are recognized for their exceptional teaching and mentoring as lecturers, small-group leaders, and as hospital- and office-based preceptors.

Q: Can you discuss the role that clinical faculty provide in the education of medical students, residents and fellows at the Alpert Medical School?

A: The clinical experience is arguably the heart of a medical student’s education. It is the opportunity to apply the “book” knowledge and learn the art of medicine. Medical students’ career choices are often determined by their clinical experience, and therefore cultivating and nurturing talented clinical faculty should be one of our highest priorities.

Clinical physicians are measured and compensated according to productivity. However, we do this work for our altruistic sense of obligation to the profession and to “give back” to those who did this for us.

Q: Would you describe the educational and teaching opportunities available for clinical faculty on the medical school campus, in the hospitals and especially in the outpatient setting in physicians’ offices?

A: There are many diverse teaching opportunities for clinical faculty. Some are listed below. For a complete listing, see the CFAC website at: brown.edu/about/administration/biomed/clinical-faculty-advisory-committee.

There are core clerkships opportunities in years 3-4 by discipline (required clerkships in internal medicine, pediatrics, family medicine, surgery, obstetrics and gynecology, psychiatry, and neurology). In addition, there are numerous opportunities to precept students on elective specialty clerkships.

The Doctoring Program is a required course for all first- and second-year medical students. The students spend one half-day a week in an office working alongside a physician-mentor who guides their every step. The students observe and practice crucial clinical skills, such as medical interviewing, history taking, physical examination, and professional conduct that they first learned in small-group settings at the medical school.



Clinical faculty member **Caroline Troise, MD**, center, Clinical Assistant Professor of Medicine, working with medical students.

The Medicine in Action Program (MIAP) is an early professional development opportunity for Program in Liberal Medical Education (PLME) undergraduate students and Brown medical students. It offers students the chance to spend some time (generally for one-day visits or for a morning/afternoon) observing Brown medical faculty and alumni in a variety of health care settings.

The Whole Patient Program is for PLME first-year undergraduate students. It emphasizes the significance of the doctor-patient relationship and attempts to demonstrate to students the importance of treating the patient's illness as opposed to treating the disease. A guest physician presents along with his/her invited guest patient. Recognizing the limited medical knowledge of the undergraduate students, the program does not attempt to address topics from a clinical perspective. Rather, it stresses the role of empathetic understanding in the practice of medicine.

The Whole Physician Program focuses on life as a medical student and as a physician through panel presentations.

The Women in Medicine & Science Mentoring Program promotes connections between women medical students early in their educational and professional studies, with women physicians based at Brown-affiliated hospitals and in the community. Through

informal meetings with their mentors, students can learn about a medical specialty, a field of healthcare delivery, or a specific career choice from the perspective of a woman physician. This is also an opportunity for students to consider ways of shaping their career goals in medicine.

Faculty who are interested in teaching medical students in years 3 and 4 should indicate their interest to the Associate Dean for Medical Education (Allan Tunkel, MD, PhD: alan_tunkel@brown.edu), who can discuss specific opportunities with individual faculty to teach medical students in the inpatient and outpatient settings.

The Office of Diversity and Multicultural Affairs Mentoring Program seeks to pair under-represented in medicine (URM) minority medical students with URM faculty to help ensure the success of under-represented students by increasing a sense of community and support for students. Mentors are expected to meet with the mentees twice during the semester (minimally once in person) and to provide guidance on an as-needed basis. Mentors are also invited to participate in community building events hosted by the Office of Diversity and Multicultural Affairs.

The Outpatient Precepting of Medical Students & Residents in the Family Care Center Teaching Practice is a program that allows faculty members to provide one-on-one and small-group

teaching to family medicine residents and medical students who are caring for a broad range of healthcare issues in a model family medicine teaching center in an underserved multi-ethnic community. Faculty can be scheduled for half days most days of the week or on select evenings.

Q. How does one become clinical teaching faculty: who is eligible and what is the process?

A. All details regarding appointments and promotions can be found on the CFAC website at: brown.edu/about/administration/biomed/clinical-faculty-advisory-committee/criteria-appointmentpromotion-0

Q. What do you see as the biggest challenges in recruiting clinical faculty?

A. The biggest challenge is support. Our world is filled with "unfunded" mandates and overwhelming requirements on physicians' time and resources. Teaching takes time and costs money in terms of productivity. Clinical physicians are measured and compensated according to productivity. However, we do this work for our altruistic sense of obligation to the profession and to "give back" to those who did this for us. Members of the CFAC are committed to nurturing and supporting the clinical faculty and by doing so, allowing them to share their knowledge and craft with the next generation of clinicians.

Q. What is the time commitment for a physician?

A. As you can see from the above descriptions, the time commitment is quite varied.

Q. How do patients react to students?

A. The overwhelming response of patients is positive. They often see this as their opportunity to teach and have an impact on the development of a great physician. ❖



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Study identifies new class of antibiotics with potential to fight “superbugs”

Eleftherios Mylonakis, MD, leads team of researchers from Brown, Emory and Northwestern Universities, Massachusetts Eye & Ear Infirmary and Massachusetts General Hospital

PROVIDENCE – An infectious disease researcher and physician at Lifespan is the senior author of a study just published in *Nature* about the discovery of a new class of antibiotics that could one day help combat the alarming emergence of drug-resistant “superbugs.”

ELEFTHERIOS MYLONAKIS, MD, PhD, chief of infectious diseases at Lifespan affiliates Rhode Island Hospital and The Miriam Hospital in Providence, and Charles C.J. Carpenter Professor of Infectious Disease at Alpert Medical School of Brown University, led a multidisciplinary team of researchers searching for drugs to target bacteria that have developed a resistance to conventional antibiotics. Their pioneering methods and discovery of a new synthetic class of antibiotics is the subject of a paper published online in *Nature* this week.

Their research led to the identification of two synthetic retinoids, both of which demonstrated the ability to kill MRSA (methicillin-resistant *Staphylococcus aureus*), a type of staph bacteria that is resistant to several antibiotics. Retinoids, which are chemically related to Vitamin A, are used to treat a variety of health problems, including acne and cancer.

“This is an emergency,” Dr. Mylonakis said, citing a World Health Organization (WHO) projection that “by 2050, superbugs will surpass cancer as the global No. 1 killer. This is a frightening situation. It affects more than individuals in the hospital or the very ill or the very old. It affects everybody.”

Dr. Mylonakis collaborated on the study with researchers from Massachusetts Eye and Ear Infirmary, Massachusetts General Hospital, Brown University, Emory University and Northwestern University. He said that teams like his are stepping in to fill a void left by the major pharmaceutical companies, which for a variety of reasons have not invested in the development of new antibiotics for many years.

“In a simplistic way it’s a math problem,” said Dr. Mylonakis. “It takes the bugs an average of two years to develop resistance to antibiotics. It takes more than 10–15 years of work to get an antibiotic into clinical practice.”

Dr. Mylonakis said drug-resistant staphylococcus is of great concern for several reasons: it’s omnipresent in the environment and on our skin, is highly virulent, and can cause serious blood, bone and organ infections.

The research team developed novel ways to screen a remarkable 82,000 synthetic compounds to identify those that would serve as effective antibiotics but not be toxic to humans. Ultimately, 185 compounds were identified that decreased the ability of MRSA to kill laboratory roundworms.



Eleftherios Mylonakis, MD

Of those, two, both synthetic retinoids, were selected as the best candidates for further study. One of the original compounds and a completely novel, more active derivative were effective when tested on a mouse thigh infected with MRSA.

Sophisticated computer modeling and other studies showed that these retinoids impair bacterial membranes. Moreover, these compounds kill so-called MRSA “persister” cells that are drug-resistant dormant cells that are not susceptible to current antibiotic therapies. The ability of the drugs to make bacterial membranes more permeable also appeared to be a factor in why they worked well in tandem

with an existing antibiotic, gentamicin.

Chemists at Emory University, as part of the research team, modified the retinoids to retain maximum potency against MRSA, while minimizing toxicity.

“The molecule weakens the cell membranes of bacteria, but human cells also have membranes,” says **WILLIAM WUEST**, associate professor of chemistry and a member of the Emory Antibiotic Resistance Center. “We found a way to tweak the molecule so that it now selectively targets bacteria.”

The computer modeling was led by **HUAJIAN GAO**, the Walter H. Annenberg Professor of Engineering at Brown University and one of the study’s authors. The powerful computer simulations demonstrated a powerful route toward understanding the molecular interactions between the screened compounds and bacteria membrane and determining the energy barriers for their penetration and embedment inside the membrane.

“This has been a very exciting multidisciplinary project,” said Gao.

DR. FREDERICK AUSUBEL, study co-author and professor of genetics at Harvard Medical School and Massachusetts General Hospital said, “The development of new classes of anti-microbial compounds will be critical for combating the ever increasing incidence of antibiotic-resistant infections.”

“The results were extremely positive. We are extremely optimistic,” said Dr. Mylonakis. But he added, “This is still years away from coming to clinical trial.”

The study was supported by National Institutes of Health grant P01 AI083214, National Science Foundation grant CMMI-156290 and National Institute of General Medical Sciences grant 1R35GM119426.

<http://nature.com/articles/doi:10.1038/nature26157>

Physician compensation report shows gender wage gap nationwide; increases in Rhode Island

SAN FRANCISCO – Doximity released its second annual *Physician Compensation Report*, one of the most comprehensive surveys of U.S. physician compensation, on March 14. This year's study found that doctors saw an average 4 percent wage increase nationally from 2016 to 2017. However, compensation varied significantly across metropolitan areas, between genders and across medical specialties. The report is based on more than 65,000 verified U.S. physician respondents, making it one of the largest studies available on physician pay in the United States.

"Considering the increasing concern about potential doctor shortages, having a clear understanding of physician compensation is more relevant than ever," said Nate Gross, MD, co-founder of Doximity. "As the largest online medical network in the U.S., Doximity has unmatched insight into issues that affect the medical community, including compensation trends and disparities."

Key findings include:

Physician Compensation by Metro Area

- The five metro areas with the highest average annual salary in 2017 were: Charlotte, N.C.(\$402,273); Milwaukee(\$398,431); Jacksonville, Fla.(\$379,820); Indianapolis, Ind. (\$378,011); and San Jose, Calif.(\$376,585).
- The five metro areas with the lowest average annual salary in 2017 were: Durham, N.C. (\$282,035); Ann Arbor, Mich.(\$302,692); Baltimore(\$304,002); New Haven, Conn.(\$308,262); and Rochester, N.Y.(\$312,503).
- From 2016 to 2017, the metro areas with the largest increase in physician compensation were: Charleston, S.C. (11.6 percent or \$33,182 more); Milwaukee (7.3 percent or \$52,601 more); Austin, Texas (7.2 percent or \$45,605 more); San Francisco (6.9 percent or \$58,184 more); and Las Vegas (6.7 percent or \$47,256 more).

Physician Compensation by Medical Specialty

- The five medical specialties with the highest average annual salary in 2017 were: neurosurgery (\$662,755); thoracic surgery (\$602,745); orthopedic surgery (\$537,568); vascular surgery (\$476,300); and plastic surgery (\$473,212).
- The five medical specialties with the lowest average annual salary in 2017 were: pediatric infectious disease (\$191,735); pediatric hematology and oncology (\$208,524); pediatric endocrinology (\$214,911); pediatrics (\$221,900); and preventive medicine (\$231,838).

Physician Gender Wage Gap

- In 2017, the national gender gap for physicians increased as female doctors earned 27.7 percent less (\$105,000

"All health care stakeholders should be aware of the differences in compensation for men and women across the country. Compensation inequity can directly affect where and what physicians choose to practice, which could ultimately affect patient access."

— Christopher Whaley, PhD, the report's lead author and adjunct assistant professor at the University of California, Berkeley School of Public Health.

than their male counterparts. The disparity in 2016 was 26.5 percent, when female doctors earned \$91,284 less.

- Similar to 2016 findings, there remains no medical specialty in which female doctors earn more than male doctors. Additionally, women earn less than men in all of the top 50 metro areas.
- From 2016 to 2017, the metro areas with the **largest increase in gender wage gaps** were: Charleston, S.C. (8.6 percent increase); Ann Arbor, Mich. (8.2 percent increase); Riverside, Calif. (8.0 percent increase); **Providence, R.I. (6.4 percent increase)**; and Indianapolis (6.1 percent increase).
- In 2017, the metro areas with the **largest gender wage gaps** were: Charleston, S.C. (female physicians earn 37 percent or \$134,499 less); Kansas City, Mo. (32 percent or \$131,996 less); Nashville, Tenn. (32 percent or \$118,706 less); **Providence, R.I. (31 percent or \$108,796 less)**; and Riverside, Calif. (31 percent or \$115,991 less).
- In 2017, the medical specialties with the largest gender wage gaps were: hematology (female physicians earn 20 percent or \$78,753 less); occupational medicine (20 percent or \$59,174 less); urology (20 percent or \$84,799 less); orthopedic surgery (19 percent or \$101,291 less); and gastroenterology (19 percent or \$86,447 less).

"All health care stakeholders should be aware of the differences in compensation for men and women across the country," said Christopher Whaley, PhD, the report's lead author and adjunct assistant professor at the University of California, Berkeley School of Public Health. "Compensation inequity can directly affect where and what physicians choose to practice, which could ultimately affect patient access." ❖

To read the full report, visit:

https://www.doximity.com/careers/compensation_report



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CDC Emergency Department data show increases in opioid overdoses

Data from emergency departments (EDs) show that the U.S. opioid overdose epidemic continues to worsen, according to the latest *Vital Signs* report by the Centers for Disease Control and Prevention (CDC).

The report examines the timeliest data available to CDC on ED visits for opioid overdoses across multiple states. Overall, ED visits (reported by 52 jurisdictions in 45 states) for suspected opioid overdoses increased 30 percent in the U.S., from July 2016 through September 2017. Opioid overdoses increased for men and women, all age groups, and all regions, but varied by state, with rural/urban differences. The findings highlight the need for enhanced prevention and treatment efforts in EDs and for greater access to evidence-based opioid use disorder treatments, including medication-assisted treatment and harm reduction services.

“Long before we receive data from death certificates, emergency department data can point to alarming increases in opioid overdoses,” said CDC Acting Director **ANNE SCHUCHAT, MD**. “This fast-moving epidemic affects both men and women, and people of every age. It does not respect state or county lines and is still increasing in every region in the United States.”

ED data allow faster tracking of regional and state trends

Data from 16 states in CDC’s Enhanced State Opioid Overdose Surveillance (ESOOS) Program were analyzed, showing quarterly trends by state and rural/urban differences from July 2016 through September 2017. Overall, ED visits for suspected opioid overdoses increased 35 percent in these 16 states hit hard by the epidemic. The data show:

- Eight states from three U.S. regions reporting substantial increases – 25 percent or greater – in the rate of opioid overdose ED visits.
- Significant increases in all states reporting in the Midwest, including Wisconsin (109 percent), Illinois (66 percent), Indiana (35 percent), Ohio (28 percent), and Missouri (21 percent).
- Considerable variation among states in the Northeast and Southeast; some states reported substantial increases and others modest decreases:
 - In the Northeast, large increases were seen in Delaware (105 percent), Pennsylvania (81 percent), and Maine (34 percent), but other states, like Massachusetts, New Hampshire, and Rhode Island showed nonsignificant decreases (<10 percent).
 - In the Southeast, North Carolina reported an increase (31 percent), while Kentucky reported a statistically significant decrease (15 percent).
- Continued rises in cities and towns of all types. Highest rate increases (54 percent) were in large central metropolitan areas (a population of 1 million or more and covering a principal city).

The sharp increases and variation across states and counties indicate the need for better coordination to address overdose outbreaks spreading across county and state borders. Closer coordination between public health and public safety agencies can support identification of changes in supply and use of illicit opioids, further allowing communities to take appropriate action to reduce opioid overdoses.

CDC also examined data from the National Syndromic Surveillance Program (NSSP) BioSense platform, using ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics) software. Analysis of data from 52 jurisdictions in 45 states, which covers over 60 percent of ED visits in the U.S., found that from July 2016 through September 2017:

- All five U.S. regions experienced rate increases; the largest was in the Midwest (70 percent), followed by the West (40 percent), Northeast (21 percent), Southwest (20 percent), and Southeast (14 percent).
- Every demographic group experienced substantial rate increases, including men (30 percent) and women (24 percent) and people ages 25–34 (31 percent), 35–54 (36 percent), and 55 or older (32 percent).

The report noted the central role of state and local health departments in coordinating responses to opioid overdoses. Health departments can:

- Alert communities to rapid increases in overdoses seen in EDs and coordinate an informed and timely response.
- Increase naloxone distribution (an overdose-reversing drug) to first responders, family and friends, and other community members in affected areas, as policies permit.
- Increase availability of and access to treatment services, including mental health services and medication-assisted treatment for opioid use disorder.
- Support programs that reduce harms which can occur when injecting opioids, including those that offer screening for HIV and hepatitis B and C, in combination with referral to treatment.
- Support the use of the *CDC Guideline for Prescribing Opioids for Chronic Pain*, which encourages using prescription drug monitoring programs (PDMPs) to inform clinical practice.

“Research shows that people who have had an overdose are more likely to have another. Emergency department education and post-overdose protocols, including providing naloxone and linking people to treatment, are critical needs,” said **ALANA VIVOLO-KANTOR, PhD**, behavioral scientist in CDC’s National Center for Injury Prevention and Control. “Data on opioid overdoses treated in emergency departments can inform timely, strategic, and coordinated response efforts in the community as well.” ❖

Patient clinical outcomes shortchanged by prior authorization: AMA survey

CHICAGO – More than nine in 10 physicians (92 percent) say that prior authorization programs have a negative impact on patient clinical outcomes, according to a new physician survey released in March by the American Medical Association (AMA). The survey results further bolster a growing recognition across the entire health sector that prior authorization programs must be reformed.

“Under prior authorization programs, health insurance companies make it harder to prescribe an increasing number of medications or medical services until the treating doctor has submitted documentation justifying the recommended treatment,” said AMA Chair-elect **JACK RESNECK, Jr, MD**. “In practice, insurers eventually authorize most requests, but the process can be a lengthy administrative nightmare of recurring paperwork, multiple phone calls and bureaucratic battles that can delay or disrupt a patient’s access to vital care. In my own practice, insurers are now requiring prior authorization even for generic medications, which has exponentially increased the daily paperwork burden.”

According to the AMA survey, which examined the experiences of 1,000 patient care physicians, nearly two-thirds (64 percent) report waiting at least one business day for prior authorization decisions from insurers – and nearly a third (30 percent) said they wait three business days or longer.

The high wait times for preauthorized medical care have consequences for patients. More than nine in 10 physicians (92 percent) said that the prior authorization process delays patient access to necessary care; and nearly four in five physicians (78 percent) report that prior authorization can sometimes, often or always lead to patients abandoning a recommended course of treatment.

In addition, a significant majority of physicians (84 percent) said the burdens associated with prior authorization were high or extremely high, and a

vast majority of physicians (86 percent) believe burdens associated with prior authorization have increased during the past five years.

The survey findings show that every week a medical practice completes an average of 29.1 prior authorization requirements per physician, which takes an average of 14.6 hours to process – the equivalent of nearly two business days. To keep up with the administrative burden, about a third of physicians (34 percent) rely on staff members who work exclusively on the data entry and other manual tasks associated with prior authorization.

“The AMA survey illustrates a critical need to help patients have access to safe, timely, and affordable care, while reducing administrative burdens that take resources away from patient care,” said Dr. Resneck. “In response, the AMA has taken a leading role in convening organizations representing, pharmacists, medical groups, hospitals, and health insurers to take positive collaborative steps aimed at improving prior authorization processes for patients’ medical treatments.”

In January 2017, the AMA with 16 other associations urged an industry-wide reassessment of prior authorization programs to align with a newly created set of 21 principles intended to ensure that patients receive timely and medically necessary care and medications and reduce the administrative burdens. More than 100 other health care organizations have supported those principles.

In January 2018, the AMA joined the American Hospital Association, America’s Health Insurance Plans, American Pharmacists Association, Blue Cross Blue Shield Association and Medical Group Management Association in a Consensus Statement outlining a shared commitment to industry-wide improvements to prior authorization processes and patient-centered care.

Earlier this month, the AMA and Anthem announced a collaboration that would include, among other goals, identifying opportunities to streamline or eliminate low-value prior-authorization requirements and implementing policies to minimize delays or disruptions in the continuity of care. ❖

HIV Update 2018

Saturday, April 14, 2018
7:30 am–1pm

This program is designed to give an update on the diagnosis and management of HIV infection. We will address latest statistics on new infections and trends in the state of Rhode Island and services provided to HIV patients at the Immunology Center. Our speakers are Brown faculty with significant expertise in their topics. Our goals are to increase knowledge to effectively prevent, diagnose and treat HIV infection in primary care practice and to be knowledgeable about common questions arising in the care of the HIV-infected patient.

Location

Warren Alpert Medical School
222 Richmond Street, Providence, RI 02912

For more information

Contact the Brown CME Office
233 Richmond St., G-R156
Providence RI 02912
401.863.2871
Fax 401.863.2202
CME@Brown.edu
<https://Brown.edu/cme>

Register online



BROWN
Alpert Medical School

Area Medical Director: Department of Mental Health Central Massachusetts Area

The University of Massachusetts Medical School (UMMS) seeks a board certified psychiatrist to serve as the Area Medical Director for Central Massachusetts Department of Mental Health (DMH). The Area Medical Director's primary responsibility is to provide administrative and clinical oversight for the DMH operated and contracted community and facility based service system. As a clinical leader within DMH, we are looking for inspired leadership in the recovery model of care for the people we serve. More specific responsibilities include utilization management, risk management, support for DMH initiatives, and oversight of clinical and psychopharmacology services. A full-time Area Medical Director may spend about 20% working on special projects as directed by the DMH State Medical Director. A UMMS academic faculty appointment will be based on prior experience. There are opportunities for research, including protected time depending on experience and goals. Successful candidates must be a licensed Massachusetts physician with board certification in psychiatry. Preferred qualifications would include facility in teaching professionals, lay public, consumers, as well as trainees such as medical students and residents.

As an equal opportunity and affirmative action employer, UMMS recognizes the power of a diverse community and encourages applications from individuals with varied experiences, perspectives and backgrounds. Excellent salary; superb benefits package. Interested applicants should apply at <https://academicjobsonline.org/ajo/jobs/10062>

UMass Medical School is committed to being an equal opportunity and affirmative action employer and recognizes the power of a diverse community. We encourage applications from protected veterans, individuals with disabilities and those with varied experiences, perspectives and backgrounds to consider UMass Medical School as their employer of choice.

Multidisciplinary Autoimmune Disease Summit

Saturday, April 28, 2018
7:30 am–4pm

The Multidisciplinary Autoimmune (AI) Disease Summit aims to provide up-to-date information on the diagnosis and management of complex autoimmune diseases with a focus on multidisciplinary care. This conference will present the most commonly encountered AI conditions including dermatomyositis, psoriatic arthritis, inflammatory bowel disease, uveitis, urticaria, scleroderma, interstitial lung disease and hepatitis in the setting of immune suppression. Participants will leave with a better understanding of each disease, its complicated multi-systemic manifestations and treatment options.

Register online

Advances in the Treatment of Epilepsy and Movement Disorders

Saturday, May 5, 2018
7:30 am–2:45pm

Medical therapies for intractable epilepsy and for movement disorders such as Parkinson's Disease are advancing rapidly. This CME conference will provide an overview of recent advances in the medical and surgical care of patients with complex, chronic neurologic conditions, focusing on epilepsy and movement disorders. The goal is to provide caregivers with the understanding necessary to convey existing and near-term potential options to patients, and to foster collaborations among attendees to develop optimal, team-based treatment strategies.

Register online



BROWN
Alpert Medical School

Location

Warren Alpert
Medical School
222 Richmond Street
Providence, RI 02912

For more information

Contact the Brown CME Office
233 Richmond Street, G-R156, Providence RI 02912
401.863.2871 Fax 401.863.2202 CME@Brown.edu
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Recognition

Brown/Women & Infants Department of Obstetrics and Gynecology named among top medical schools by *U.S. News & World Report*

The Department of Obstetrics and Gynecology at The Warren Alpert Medical School of Brown University and Women & Infants Hospital of Rhode Island has been ranked 11th in *U.S. News & World Report's* 2019 Best Medical Schools specialty rankings.

The specialty rankings are based on ratings by medical school deans and senior faculty from the list of 177 schools surveyed. Survey respondents were asked to identify up to 10 schools offering the best programs in each specialty area. This is the first year that obstetrics and gynecology was included in the rankings.

"This is a tremendous honor, and a true testament to the commitment of our faculty and the strength of the partnership between the Warren Alpert Medical School and Women & Infants Hospital. We created this remarkable program together, and the support from both the hospital and the medical school has been terrific," said **MAUREEN G. PHIPPS, MD, MPH**, 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, and chief of obstetrics and

gynecology at Women & Infants Hospital and Care New England Health System.

"Being ranked among the best programs in the nation is a true testament to the stature and reputation of our faculty in the Department of Obstetrics and Gynecology – those who teach our students and residents, hold leadership positions locally, nationally, and internationally, and conduct groundbreaking research to improve the lives of women across the globe," said **JACK A. ELIAS, MD**, senior vice president for health affairs, Dean of Medicine and Biological Sciences. ❖



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Recognition

Lifespan hospitals recognized as top performers in LGBTQ Health Care Equity

PROVIDENCE – For the second time, Lifespan’s four hospitals achieved Top Performer status on the Healthcare Equality Index (HEI), a national benchmark of hospitals’ policies and practices related to equitable and inclusive treatment of their LGBTQ patients, visitors and employees.

The Human Rights Campaign Foundation announced March 27 that Rhode Island, The Miriam, Bradley and Newport Hospitals had again earned the designation. The Human Rights Campaign, the largest national lesbian, gay, bisexual, transgender and queer civil rights organization, has more than 3 million members and supporters.

The HEI was established 11 years ago. It assesses hospitals’ policies and practices regarding non-discrimination and staff training, patient services and support, employee benefits and policies, and patient and community engagement.

“Lifespan is honored to be recognized as an HEI top performer. This distinction reflects Lifespan’s shared values of C.A.R.E. and our commitment to provide a culture of inclusiveness for patients, employees and our community,” said **LISA AB-BOTT**, Lifespan’s senior vice president for human resources and community affairs. ❖

Women & Infants’ Prenatal Diagnosis Centers achieve ultrasound accreditation

Women & Infants Hospital’s Prenatal Diagnosis Centers in Providence, RI and North Dartmouth, MA have achieved re-accreditation from the Ultrasound Practice Accreditation Council of the American Institute of Ultrasound in Medicine. This accreditation is in the specialties of adjunct detailed fetal anatomic ultrasound level 2 ultrasound studies), and first, second, and third trimester obstetric ultrasound.

The Prenatal Diagnosis Centers achieved this recognition by meeting rigorous voluntary guidelines set by the diagnostic ultrasound profession. All facets of the practice were assessed, including the training and qualifications of physicians and sonographers; ultrasound equipment maintenance; documentation; storage and record-keeping practices; policies and procedures to protect patients and staff; quality assurance methods; and the thoroughness, technical quality, and interpretation of the sonograms the practice performs.

The Prenatal Diagnosis Centers (PDC) offers specialized services, comprehensive screening, and counseling to help pregnant women and their health care providers better understand a potentially high-risk pregnancy. The PDC is staffed by nurses, genetic counselors with master’s degree training in clinical genetics, and obstetrician-gynecologists with further training in maternal-fetal medicine, a sub-specialty of obstetrics that focuses on pregnancies with maternal or fetal problems. ❖



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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

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Brookdale Sakonnet Bay
 Brookdale East Bay
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 Brookdale South Bay

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Appointments



Dr. Jesus Sosa joins the Comprehensive Wound Care Center at Fatima

Jesus Sosa, MD, CWS-P, has joined the Comprehensive Wound Care Center at Fatima Hospital. For the last five years, Dr. Sosa served as a Wound Care Specialist at the St. Anne's Center for Wound Healing. He previously held positions with Vohra Wound Physicians and the Steward Physician Network.

Dr. Sosa is board-certified by the American Board of Wound Management. He completed his surgical residency at the University of Medicine and Dentistry of New Jersey after receiving his medical degree from Rush Medical College of Rush University Medical Center. ❖

Dr. Aleksandra Phillips named Medical Director for Psychiatry Services at Roger Williams



Dr. Aleksandra Phillips has been named Medical Director for Psychiatry Services at Roger Williams Medical Center. Dr. Phillips most recently served as an attending psychiatrist at Bradley Hospital. She has served in a variety of medical director and attending psychiatrist roles at several hospitals over the past 15 years.

Dr. Phillips completed a Fellowship in Child and Adolescent Psychiatry and a residency in Psychiatry at Tulane School of Medicine.

She completed an Internship in Surgery at the School of Medicine at the University of Belgrade, where she also received her medical degree. Dr. Phillips was also a Research Assistant Professor at Krasnow Institute at George Mason University. ❖

Obituaries

FRANCES BLOOM, MD, 90, died Tuesday, March 13, 2018 at home. She was the beloved wife of the late Max Bloom, MD. Born in Berlin, Germany, she had lived in Needham for three years, previously living in Cranston for over 60 years.

Dr. Bloom was a graduate of Brooklyn College and Yale Medical School.

She was the devoted mother of Ira Bloom and his wife, Deborah Ebner, of Glenview, IL; the late Paul Bloom, and Steven Bloom and his wife, Marti, of Needham, MA. She is also survived by her grandchildren and great-grandchildren.

Contributions in her memory may be made to the Lewy Body Dementia Association, 912 Killian Hill Road, S.W., Lilburn, Georgia 30047. ❖



DR. ELIE J. COHEN of Newport passed away unexpectedly March 1, 2018 with his beloved wife of 56 years, Marcia, by his side in the Caribbean.

He was born in Cairo, Egypt in 1931 and graduated from the Ein Sham University in Cairo in 1955. He pursued his medical career in the United States and completed internships at The Miriam Hospital, surgical residencies at Rhode Island

Hospital and Washington Hospital Center in Washington, DC and orthopedic residencies at both the University of Maryland Hospital and Kernan Hospital for Children in Baltimore, MD.

Dr. Cohen was the first orthopedic surgeon to set up a practice in Newport. He joined the Aquidneck Medical Center and in 1972 set up his private practice. He performed the first arthroscopic surgery, introduced total joint replacement and was known to stay at the hospital round the clock when a patient was in serious condition.

He was certified by the American Academy of Orthopedic Surgeons, a Fellow of the American College of Surgeons, a Fellow of the American Academy of Cerebral Palsy and Developmental Medicine, Diplomate of the American Board of Forensic Examiners, Diplomate of the American Board of Forensic Medicine and a member of the American Academy of Pain Management. He was also licensed to serve as a physician in Israel in the event of combat.

In addition, he was past president of the Newport County Medical Society, the medical staff at Newport Hospital, and the Medical Legal Committee of RI. He was a member of the Rhode Island Medical Society, the American Medical Association, the RI Orthopedic Society, the Boston Orthopedic Club, the University of Maryland Surgical Society and the Eastern Orthopedic Society. Dr. Cohen also served as Governor of the Newport HealthCare Corporation, and a consultant on the staff of the University of RI Health Services. In 1986 he received the physician recognition award from the American Medical Association. He was appointed to the Workmen's Compensation Committee in 1978 and to the Medical Examiner's Committee in 1987. Dr. Cohen also received a merit award from the AMA in honor of 50 years of dedicated service to the medical profession.

In 2013, Dr. Cohen retired from his private practice. Although he remained on as an active senior staff member at Newport Hospital, he used to say, "Once a doctor, always a doctor."

Dr. Cohen had many charitable, civic and sporting interests. He was fluent in English, French and Arabic languages. He loved spending time with his wife, children and grandchildren. He enjoyed worldwide travel and recently returned from an expedition to the Galapagos. He was a member of the Newport Lions Club for more than 40 years and received the Melvin Jones Award. He was a member, trustee and Past Squadron Commander of the Newport Sail and Power Squadron, and held a senior navigator certificate for educational achievement and was a past commander and member of the Navy League.

Dr. Cohen was a lifetime member of the Newport Yacht Club. He was a past President of B'nai Brith of Newport, a member of Congregation Jeshuat Israel of Touro Synagogue and a founding member of the Touro National Heritage Trust. He enjoyed participating in Alliance Francais events and the Retired Dr. Dinners. He touched many lives during his 53-year career.

He was an avid swimmer, champion rower on the Nile, sailor and equestrian. He loved playing backgammon with his children, spending time on his computer and had many philanthropic interests.

Dr. Cohen will be deeply missed and fondly remembered by his wife, Marcia Cohen and three children: Renee Cohen of North Kingstown, RI; Audrey Pavia (Joseph) of East Meadow, NY; and Lawrence Cohen (Charlene) of Warwick, RI. He is survived by two grandchildren, Gillian and Jolie Pavia. He is also survived by his brother, Jacob Cohen (Odette) of Baltimore, MD

Donations in his memory may be made to Touro Synagogue, Newport Hospital or any charity of your choice. ❖

 **ARTHUR BURTON KERN, MD**, 96, of Pawtucket, passed away peacefully on March 6, 2018 with his beloved cat Zoe at his side. For almost sixty years, he was the husband of the late Sybil (Blistein) Kern.

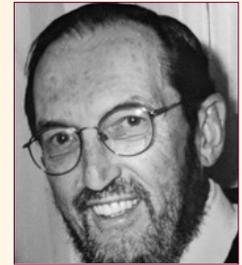
A graduate of Harvard College and Boston University School of Medicine, Dr. Kern practiced dermatology in Providence and was Emeritus Clinical Professor of Dermatology at Brown. He honorably served in the U.S. Navy during both World War II and the Korean War.

In the field of public affairs, Dr. Kern was actively interested in local and national politics, supporting a national single payer plan for health care, election reform, and conservation. He loved skiing, tennis and bird watching; and dragged his entire family to Block Island every fall for memorable viewings of the fall bird migration.

Dr. Kern is survived by his children: Ronni Kern (Alan Swyer) of Santa Monica, CA; David Grant Kern (Robin Kowal Kern) of Camden, ME; and Jonathan Kern (Laurie Cassidy Kern) of Carmichael, CA. He is also survived by many grandchildren and great-grandchildren.

Donations in his memory may be made to either Doctors Without Borders, www.doctorswithoutborders.org, or the National Audubon Society, www.audubon.org. ❖

 **JAMES B. LEACH, JR. MD**, age 87, passed away peacefully at his home in East Greenwich, surrounded by his family on March 4, 2018. He was the beloved husband of Evelyn (Veresko) Leach. They were married for 62 years.



Dr. Leach graduated from Providence College in 1952 and earned his medical degree in 1956 from New York Medical College, with honors, when it was located in New York City, at Flowers and Fifth Avenue. After his internship at St. Joseph's Hospital in Providence, Dr. Leach served as a physician in the U.S. Air Force in Oscoda, MI from 1957-59. Returning home to RI, Dr. Leach opened his own practice as a general practitioner in Cranston, before heading out to the Bronx VA Hospital in Yonkers, NY where he was a radiology resident. He became a board-certified radiologist in 1964 and was an Associate radiologist at St. Joseph's Hospital from 1963-1969. In the summer of '69, Dr. Leach became the Director of Radiology at The Woonsocket Hospital. He was the Chief of Radiology until he retired in 1988. It was during this time that Dr. Leach served on many medical organizations, including President of The Radiological Society of RI. In 2005, Dr. Leach was conferred the degree of Retired Fellow in The American College of Radiology. Dr. Leach continued to practice radiology for a number of years in an ultrasound practice, JBL imaging, and other part-time work until his tee times at Quidnessett Country Club took precedence over his hours assisting local doctors who needed expert coverage.

Dr. Leach was also an accomplished amateur photographer who built his own dark room and developed and printed thousands of outstanding images when film and paper was used. His African safari photographs and those of his children were his proudest works of art. Travelling the world with his wife Evelyn was a joy to him, and finding the birthplace of his Irish ancestor, Joseph Leech, of County Louth was special to him. Dr. Leach was also an avid gardener and often said he wished he was born a farmer. He was a loyal Red Sox and Patriots fan. An accomplished piano player and vocalist, he sang in glee clubs and church throughout his life. Dr. Leach was a "do-it-yourselfer" who could fix anything and amassed a tool collection worthy of gallery display.

Besides his wife, Evelyn (Veresko), he is survived by his sister, Joan Forbes of Franklin, MA, and his loving children, Karen and Roberto Rodriguez of Tampa, Florida, Stephanie Corrente of East Greenwich, RI, Kevin and Catherine Leach of Fairfax, VA, James and Elizabeth Leach of Smithfield, RI, and Kathryn and Andrew Viveiros of Smithfield, RI. He is also survived by many grandchildren and great-grandchildren.

The family asks that donations in his memory be made to The RI Philharmonic Orchestra, The RI Civic Chorale, or The Audubon Society of RI. For on line condolences, visit www.hill-funeralhome.com. ❖