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Commentaries

Prison Ethics

I suspect that the offer last year by the governor of Mississippi, to prematurely free two sister prisoners if one donates a kidney to the other, seems like a reasonable offer to many readers. Judging by the newspaper accounts, legal authorities, the NAACP and prisoner support groups endorsed the initiative while only the rarely interviewed medical bioethicist offered thoughts of concern.

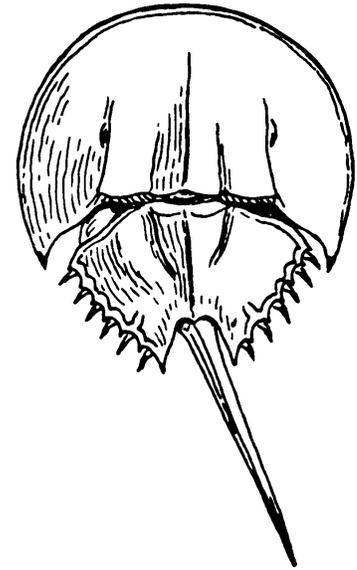
In addressing this issue it is impossible for me to put aside two items, which, I think, form something of an ethical background to this particular case, although the arguments I will make are quite independent of these observations. First of all, the two women, as teenagers, were convicted of luring a man into a trap in order to be robbed. He was beaten but not killed. The girls were then sentenced to life imprisonment, and while the news accounts trumpet the fact that the crime netted eleven dollars, ("Life in prison for \$11!") the crime was the beating, not the robbery, and had they netted a thousand dollars or ten thousand dollars, or nothing at all, the sentence should have been the same. Most, like the NAACP, have assumed that the life sentence had more to do with the color of their skin than the magnitude of the crime. The second item for background is the observation that the governor made only a week ago, that celebration of passage of the Civil Rights act was a vacuous action, as civil rights had never been a problem in Mississippi. He noted that during the early 1960s he and his friends spent their time riding in cars looking at pretty girls. There were no problems between the races where he grew up. Or at least, not that affected him.

What's wrong with a governor offering freedom in exchange for a kidney? In this case the healthy sister had offered, no strings attached, to donate the kidney, before the governor came up with the plan. The healthy sister merely wants to help her sib. The governor however, publicly noted that dialysis is costing

the state \$200,000 per year and that the kidney transplant will save money. If he had simply commuted the sentence, he would only be transferring the cost from one state agency to another, but the transplant represents, he hopes, a one time investment with a lasting economic solution, assuming, of course, which one should not, that Medicaid in Mississippi will pick up the cost of her drugs. There are few more slippery slopes than "offering" rewards for "voluntary" actions by prisoners.

A couple of years ago the state medical journal entertained some impassioned discussions about the ethics of offering clinical trials to AIDS patients in the ACI. One point of view was that prisoners can not, be definition, offer voluntary participation. There can never be a complete dissociation from the implications of choosing to do something that the authorities may view either with favor or with alarm. There can be no choice without repercussions. On the other hand it was argued that clinical care in any research trial, whether the subject was treated with placebo or with the active drug, was undoubtedly better than the best care the prisons could otherwise offer. Both sides, of course, fully understood the other's arguments and both saw the wisdom of generally not allowing prisoners to be in drug trials.

In the Mississippi case, we have a truly voluntary offer by the sister, and an apparently financially driven offer by the governor, with an outcome that everyone will agree is a good one, a win-win situation. But what if the sister had been reluctant to donate the kidney? Would it be ethical for the governor to offer early probation as a reward for offering the kidney? This is illegal in the United States and in most countries, that is, trading body parts for gain. What if the governor knew that a particular patient was a good match for an organ that his own daughter needed? Could he reward her for "volun-



teering" or threaten to punish her for not "volunteering?" In the United States there is an agreement that people who volunteer to be in research trials cannot be offered significant incentives to participate, that is, they cannot be "bought" to be in a study they'd really not like to participate in but feel that they have to in order to make ends meet. How much more of an incentive is there for a prisoner to try to find favor with authorities than by "volunteering" to do what those in power desire. How many years of freedom is a kidney worth? Bone marrow? But these are not clinical research trials. These are "voluntary" choices.

The issue in Mississippi is precedent. The governor is converting an altruistic offer into an illegal and patently unethical action with an eye towards courting popular opinion citing money-saving as the rationale. Prisoners and their care are never a high priority item, even in times of abundance.

Sacrificing ethics for money is never worth the exchange. The kidney transplant should be performed. It should never have been an issue. The pardons are a legal, not an ethical issue, although in Mississippi, one must wonder.

— JOSEPH H. FRIEDMAN, MD

Disclosure of Financial Interests

The editor's potential conflicts of interest are available by emailing him at joseph_friedman@brown.edu.

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From Mindless Medication to Reckless Recreation

It may not have been listed on the cargo manifest of the Mayflower; but opium, as a medication and as a trading commodity, was surely an accompaniment of the subsequent ships sailing west on the Atlantic.

Europeans marveled at the mood elevation achieved by crude opium. Educated to believe that a good thing can always be improved upon, Paracelsus (c.1493 – 1541), the eminent Swiss physician and alchemist, then mixed opium resin with wine producing a medication—he called it laudanum—which was swifter and more potent in action. Thomas Sydenham (1624 – 1689), England’s great physician, exploiting the solubility of opium in alcohol, and then standardized the mixture as follows: two ounces of opium, one ounce of saffron, a dram of cinnamon and cloves all dissolved in a pint of Canary wine.

Laudanum then became the standard medication used by physicians whether in sophisticated London or prairie villages in America’s West. Indeed, the frontier American physician, practicing in the early decades of the 19th Century, typically carried two saddle-bags: one with bandages, catheters and splints; and the other with his four basic oral medications: laudanum (for pain, emotional distress, diarrhea and “women’s ills”), quinine (for fevers), calomel (as an emetic and laxative) and whisky. And most practitioners were convinced that this pharmacologic quadrivium would overcome all clinical problems encountered by the itinerant practitioner.

Opium products were freely, excessively, used; and until the religiously based temperance movement, were easily accessible, carried little opprobrium and its use caused no shame.

Things changed, however. In 1804, the German chemist Friedrich Serturmer, realizing that the crude opium was a mixture of many biologically active alkaloids, proceeded to isolate each of them, one being a substance (later called morphine) which presented two great advantages over crude opium: as a pure chemical, its dosage was more easily regulated; and since morphine was soluble in water it could be readily injected thus producing a more rapid and sustained result. The development of the hypodermic syringe, perfected by 1860, combined with injectable morphine, now provided physicians with a ready means of controlling pain.

In 1874, the German drug company called Bayer announced that it had isolated yet another alkaloid from crude opium, a chemical called diacetyl-morphine. In its excitement, Bayer proclaimed that this compound was less addictive than morphine, and further, was more effective in providing breathing relief to children with bronchitis and asthma. And so, Bayer called its new discovery, heroin.

Heroin was then widely employed to bring relief to everything from the pains of infantile teething, the labored breathing of the asthmatic child to the insistent aches of the elderly soul with rheumatism.

By the early years of the 20th century, over-the-counter narcotics, most of them addictive, were widely available, abundantly advertised and extensively used. Narcotics even entered the contents of carbonated sodas. And it was not as though the medical profession was innocently ignorant of the phenomenon

of chemical dependency. The Standard American Dispensary, 1818 Edition, declared: that “habitual use of opium could lead to addiction, tremors, paralysis, stupidity and general emaciation.” Still, a Parke-Davis advertisement proudly announced that its narcotic products could “make the coward brave, the silent eloquent and render the sufferer insensitive to pain.”

This nation’s Constitution assigned such matters as health to the jurisdiction of the various states. By viewing the manufacture and sale of pharmacological agents as within the purview of interstate commerce, however, the first of the Pure Food & Drug Acts was passed in 1906. Its enactments were modest: all patent remedies were required to list its narcotic contents. By 1909, largely advanced by the United States, the first International Opium Commission was convened. The concluding document was an earnest condemnation of the evil of opium but placed no discernible restraints upon its distribution.

The Harrison Act of 1914 represented the first nationwide legislation to place restrictions upon any chemical with narcotic properties. The Act represented the first stringent control of the manufacture, distribution and sale of opium and coca leaf products. It declared that the distribution of these agents be confined to medically appropriate usage.

The Harrison Act coincided with a dramatic change in the nature and mission of the American medical profession. The Flexner Report, a 1910 study of the standards of medical education, declared that this nation’s medical schools were woefully inadequate. As a result almost half of America’s medical schools disappeared and medical school training then became a more disciplined form of graduate education.

Prior to World War I, chemical dependencies on narcotics were largely caused by legal sales of these drugs as well as widespread permissiveness by the medical profession in employing opium derivatives. And in recent decades an international industry of global proportions now underwrites an epidemic of recreational drug use.

– STANLEY M. ARONSON, MD

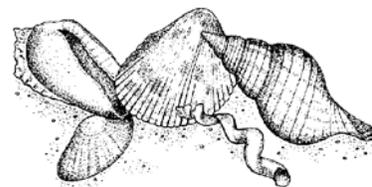
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Disclosure of Financial Interests

Stanley M. Aronson, MD, and spouse/significant other have no financial interests to disclose.

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The Warren Alpert Medical School of Brown University: Class of 2011

Philip A. Gruppuso, MD, Eileen Palenchar, and Janice Viticone

On May 29, 2011, 100 men and women received the Doctor of Medicine degree from the Warren Alpert Medical School (AMS) of Brown University. These new physicians represent the 37th class graduated from our institution since 1975. Of the over 2,700 physician graduates of AMS to date, approximately 12% are currently licensed to practice in Rhode

Island. This represents a substantial contribution of the medical school to health care in our state. By introducing the graduates of the MD Class of 2011 to the physician community in our state, this article is intended to apprise Rhode Island's physician community of the medical school's ongoing contribution to health care in Rhode Island.

A PORTRAIT OF THE CLASS OF 2010

Of the 100 graduates in this year's class, 54 are women and 46 are men. Four of our most recent graduates are residents of Rhode Island. The Rhode Island students in this year's graduating class came from four different communities in the state: East Greenwich, Lincoln, Bar-

Table 1. Specialty Choices for Warren Alpert Medical School Classes of 2004 – 2011

	2011		2010		2009		2008		2007		2006		2005		2004	
Specialty Choice	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Primary Care, Total	55	55%	47	48%	39	46%	35	50%	47	50%	34	38%	32	44%	44	59%
Internal Medicine, Total	24	24%	17	18%	18	21%	13	19%	19	20%	17	19%	16	21%	28%	23%
Categorical	21	21%	14	14%	11	13%	13	19%	16	17%	0	0%	16	21%	15	17%
Primary Care	3	3%	3	3%	7	8%	0	0%	3	3%	0	0%	5	7%	5	6%
Pediatrics	12	12%	13	13%	9	11%	9	13%	13	14%	9	10%	4	13%	17%	7%
Family Medicine	8	8%	5	5%	4	5%	6	9%	8	9%	5	6%	7	8%	11%	10%
Medicine/Pediatrics	4	4%	4	4%	2	2%	3	4%	4	4%	1	1%	2	2%	3%	5%
Obstetrics & Gynecology	7	7%	8	8%	6	7%	4	6%	3	3%	2	2%	3	1%	1%	2%
Surgery	8	7%	7	8%	7	8%	5	7%	6	6%	9	10%	3	4%	4	5%
Surgical Subspecialties, Total	12	12%	7	7%	10	12%	8	11%	8	9%	10	11%	6	8%	6	8%
Ophthalmology	3	3%	0	0%	3	4%	2	3%	0	0%	2	2%	3	2%	3%	6%
Orthopedics	4	4%	1	1%	3	4%	2	3%	3	3%	4	4%	2	1%	1%	3%
Neurosurgery	1	0%	2	2%	1	1%	1	1%	0	0%	1	1%	0	0%	0%	0%
Urology	1	1%	0	0%	2	2%	2	3%	2	2%	1	1%	1	2%	3%	1%
Plastic Surgery	2	2%	1	1%	0	0%	1	1%	1	1%	0	0	1	2%	1%	1%
Vascular Surg	1	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Otorhinolaryngology	0	0%	3	3%	1	1%	0	0%	2	2%	2	2%	0	0%	0%	26%
Dermatology	1	1%	3	3%	2	2%	1	1%	4	4%	5	6%	5	7%	1	1%
Emergency Medicine	9	9%	8	8%	6	7%	5	7%	3	3%	7	8%	3	4%	3	4%
Psychiatry	4	4%	6	6%	5	6%	3	4%	8	9%	5	6%	4	5%	5	7%
Neurology	2	2%	2	2%	3	4%	1	1%								
Transitional & Preliminary Medicine	1	1%	4	4%	1	1%	1	1%	7	8%	0	0%	1	1%	2	3%
Institutional Specialties, Total	4	4%	11	11%	7	8%	9	13%	7	8%	9	10%	9	12%	4	5%
Anesthesiology	1	1%	3	3%	1	1%	1	1%	3	3%	2	2%	1	1%	1%	3%
Pathology	0	0%	2	2%	0	0%	3	4%	0	0%	1	1%	0	0%	0%	0%
Rehabilitation Medicine	0	0%	0	0%	0	0%	0	0%	0	0%	0	0	0	0%	0%	1%
Radiology & Rad Oncology	3	3%	6	6%	6	7%	5	7%	4	4%	6	7%	9	3%	4%	7%
Delaying Residency	2	2%	1	1%	5	6%	1	1%	2	2%	9	10%	9	12%	4	5%
Not Entering Medicine	2	2%	1	1%	0	0%	1	1%	0	0%	0	0%	0	0%	0	0%
Totals	100	100	97	100	85	100%	70	100%	93	100%	89	100%	73	100%	75	100%

Table 2. Warren Alpert Medical School Class of 2011 Match List

Name	Institute	Affiliation	Specialty
Nitin Aggarwal	Vanderbilt University Medical Center	Vanderbilt University School of Medicine	Emergency Medicine
Wilbur Allen	Eisenhower Army Medical Center	Fort Gordon, GA	Medicine
Ginger Allister	Beth Israel Deaconess Medical Center	Harvard Medical School	Medicine
Elizabeth Anto	NYU School of Medicine	NYU School of Medicine	Psychiatry
Bella Avanesian	Rhode Island Hospital	Alpert Medical School	Surgery-Prelim
	Rhode Island Hospital	Alpert Medical School	Plastic Surgery
Andrew Baum	Hospital of the University of Pennsylvania	University of Pennsylvania School of Medicine	Emergency Medicine
Armando Bedoya	Duke University Medical Center	Duke University School of Medicine	Medicine
Bryan Beutel	Hospital for Joint Diseases	NYU School of Medicine	Orthopaedic Surgery
Erica Bromley	UCLA Medical Center	David Geffen School of Medicine at UCLA	Medicine
Darcy Broughton	Oregon Health & Science University	Oregon Health & Science University School of Medicine	Obstetrics/Gynecology
Ian Buchanan	McMaster University	McMaster University Faculty of Health Sciences	Emergency Medicine
Alicia Carranza	Mt. Sinai Hospital	Mt. Sinai School of Medicine	Obstetrics/Gynecology
Tina Charest	Memorial Hospital	Alpert Medical School	Family Medicine
Natalie Cheung	Wisconsin Affiliated Hospitals	Medical College of Wisconsin	Surgery-Prelim
	Case Affiliated Hospitals	Case Western Reserve University School of Medicine	Ophthalmology
Christina Cramer	University of Chicago Medical Center	University of Chicago Medical Center	Medicine-Prelim
	Duke University Medical Center	Duke University School of Medicine	Radiation/Oncology
Frank Crespo	Jackson Memorial Hospital	University of Miami Miller Medical School	Obstetrics/Gynecology
Laura Dawson	University of Massachusetts	University of Massachusetts Medical School	Pediatrics
Andrea Dean	Baylor College of Medicine	Baylor College of Medicine	Pediatrics/Global Health
Pojen Deng	NYU School of Medicine	NYU School of Medicine	Psychiatry
Matthew Deren	Rhode Island Hospital	Alpert Medical School	Orthopaedic Surgery
Almaz Dessie	Children's Hospital Oakland	Children's Hospital & Research Center Oakland	Pediatrics
Sarah Dreiling	Baystate Medical Center	Tufts University School of Medicine	Med/Peds
Brigid Dwyer	Boston University Medical Center	Boston University School of Medicine	Medicine-Prelim
	Boston University Medical Center	Boston University School of Medicine	Neurology
James Enos	New York Presbyterian Hospital	Weill Cornell Medical College	Pediatrics
Ross Feller	Rhode Island Hospital	Alpert Medical School	Orthopaedic Surgery
Sarah Fleisig	Lenox Hill Hospital	North Shore-Long Island Jewish	Medicine
Jennifer Gao	Massachusetts General Hospital	Harvard Medical School	Medicine

Table 2. Warren Alpert Medical School Class of 2011 Match List (cont.)

Name	Institute	Affiliation	Specialty
Luke Godwin	New York Presbyterian Hospital	Weill Cornell Medical College	Medicine
Zachary Gordon	Ohio State University Hospital	Ohio State University College of Medicine	Surgery-Prelim
	Ohio State University Hospital	Ohio State University College of Medicine	Urology
Laura Grimmer	Rush University Medical Center	Rush University Medical College	Surgery
Krista Hachey	Boston University Medical Center	Boston University School of Medicine	Surgery
Marla Hansel	Memorial Hospital	Alpert Medical School	Family Medicine
Haynes Heaton	Florida Hospital Medical Center	Florida Hospital Medical Center	Medicine
Xiaojue Hu	NYU School of Medicine	NYU School of Medicine	Psychiatry
Joel Huleatt	UCLA Medical Center	David Geffen School of Medicine at UCLA	Surgery-Prelim
Amanda Jacobson	University of Virginia	School of Medicine at the University of Virginia	Pediatrics
Micah Johnson	Allina Hospitals & Clinics	Allina Hospitals & Clinics	Family Medicine
Monica Kaitz	Kaiser Permanente-San Francisco	Kaiser Permanente-San Francisco	Medicine
Bharati Kalasapudi	Johns Hopkins Hospital	Johns Hopkins University School of Medicine	Medicine
Erin Kelly	Strong Memorial Hospital	University of Rochester School of Medicine & Dentistry	Med/Peds
Erich Kiehl	University of Virginia	School of Medicine at the University of Virginia	Medicine
Ajar Kochar	Johns Hopkins Hospital	Johns Hopkins University School of Medicine	Medicine
Ala (Alicja) Kreczko	Women & Infants Hospital	Alpert Medical School	Obstetrics/Gynecology
Bonnia Lau	Tufts Medical Center	Tufts University School of Medicine	Pediatrics
Danny Lee	Harbor-UCLA Medical Center	David Geffen School of Medicine at UCLA	Medicine
Ian Lee	Allegheny General Hospital	West Penn Allegheny Health System	Medicine-Prelim
	Long Island Jewish Medical Center	North Shore-LIJ Health System	Neurology
Marshala Lee	University of Maryland Medical Center	University of Maryland School of Medicine	Family Medicine
Steve Lee	Boston University Medical Center	Boston University School of Medicine	Medicine
Lucinda Leung	UCLA Medical Center	David Geffen School of Medicine at UCLA	Medicine-Primary
Evan Leventhal	Strong Memorial Hospital	University of Rochester School of Medicine & Dentistry	Emergency Medicine
Albert Lin	Rhode Island Hospital	Alpert Medical School	Medicine
James Lincoln	Christiana Care	Christiana Care Health Services	Emergency Medicine
Dominique Malacarne	NYU School of Medicine	NYU School of Medicine	Obstetrics/Gynecology
Bridget Malit	New York Presbyterian Hospital	Weill Cornell Medical College	Pediatrics
Eric Mao	Rhode Island Hospital	Alpert Medical School	Medicine

Table 2. Warren Alpert Medical School Class of 2011 Match List (cont.)

Name	Institute	Affiliation	Specialty
David Margolius	San Francisco General Hospital	University of California-San Francisco	Medicine-Primary
Jessica Marrero	Einstein/Montefiore Medical Center	Albert Einstein College of Medicine	Family Medicine
Amity Marriott	University of Minnesota Medical School	University of Minnesota Medical School	Obstetrics/Gynecology
Ross Martini	Oregon Health & Science University	Oregon Health & Science University School of Medicine	Anesthesiology
Zara Mathews	Mt. Sinai Hospital	Mount Sinai School of Medicine	Emergency Medicine
Diana Moke	UC San Diego Medical Center	University of California-San Diego Health System	Med/Peds
Eileen Myers	Indiana University School of Medicine	Indiana University School of Medicine	Transitional
	University Hospital	University of Cincinnati College of Medicine	Ophthalmology
David Norris	University of Washington Affiliated Hospitals	University of Washington School of Medicine	Family Medicine
Carleya Nunes	University of Arizona Affiliated Hospitals	University of Arizona College of Medicine	Obstetrics/Gynecology
Jennifer O'Brien	Rhode Island Hospital	Alpert Medical School	Medicine
Sagar Patel	Earl K Long Medical Center	Louisiana State University (Baton Rouge)	Medicine-Prelim
	University of Iowa Hospitals & Clinics	University of Iowa Hospitals and Clinics	Radiation/Oncology
Gregory Radin	Boston University Medical Center	Boston University School of Medicine	Medicine
Sareh Rajaei	Yale-New Haven Hospital	Yale Medical School	Vascular Surgery
Matthew Reilley	Hospital of the University of Pennsylvania	University of Pennsylvania School of Medicine	Medicine
Tanya Rinderknecht	Stanford University	Stanford University School of Medicine	Surgery
Virginia Sanders	University of Washington Affiliated Hospitals	University of Washington School of Medicine	Pediatrics
Benjamin Schnapp	Mt. Sinai Hospital	Mount Sinai School of Medicine	Emergency Medicine
Carly Seidman	North Shore-Long Island Jewish Health System	North Shore-Long Island Jewish Health System	Medicine-Prelim
	New York University School of Medicine	New York University School of Medicine	Ophthalmology
Raymond Serrano	Boston University Medical Center	Boston University School of Medicine	Psychiatry
Dhvani Shah	Yale-New Haven Hospital	Yale Medical School	Medicine
Ammar Shaikhouni	Ohio State University Medical Center	Ohio State University Medical Center	Neurosurgery
Candice Sheldon	University of Connecticut Health Center	University of Connecticut School of Medicine	Pediatrics
John Shuck	Georgetown University Hospital	Georgetown University School of Medicine	Plastic Surgery
Brenna Sullivan	Georgetown University Hospital	Georgetown University School of Medicine	Surgery

Table 2. Warren Alpert Medical School Class of 2011 Match List (cont.)

Name	Institute	Affiliation	Specialty
Ryan Tai	Roger Williams Medical Center	Tufts University School of Medicine	Medicine-Prelim
	Brigham & Women's Hospital	Harvard Medical School	Radiology
Queenie Tan	Duke University Medical Center	Duke University School of Medicine	Pediatrics
Nikki Tang	Einstein/Beth Israel Medical Center	Albert Einstein College of Medicine	Medicine-Prelim
	St. Lukes-Roosevelt Hospital Center	Columbia University College of Physicians and Surgeons	Dermatology
Peter Than	Stanford University Programs	Stanford University School of Medicine	Surgery-Prelim
Alicia Thompson	Advocate Christ Medical Center	Advocate Christ Medical Center	Pediatrics
Portia Thurmond	Dartmouth-Hitchcock Medical Center	Dartmouth Medical School	Surgery
Samir Trehan	Hospital for Special Surgery	Weill Cornell Medical College	Orthopaedic Surgery
Caroline Tschibelu	UMDNJ-RW Johnson-Piscataway	UMDNJ-RW Johnson-Piscataway Medical School	Emergency Medicine
Andrew Van Wieren	Brigham & Women's Hospital	Harvard Medical School	Medicine-Primary
Adam Vasconcellos	Brigham & Women's Hospital	Harvard Medical School	Medicine
Sienna Vorono	Rhode Island Hospital	Alpert Medical School	Pediatrics
Yvonne Wang	Rhode Island Hospital	Alpert Medical School	Emergency Medicine
David Washington	Rhode Island Hospital	Alpert Medical School	Med/Peds
Jill Wei	Santa Monica UCLA Medical Center	David Geffen School of Medicine at UCLA	Family Medicine
Heidi Wilder	Memorial Hospital	Alpert Medical School	Family Medicine
Patrick Worth	Oregon Health & Science University	Oregon Health & Science University School of Medicine	Surgery
JaeYoung You	Rhode Island Hospital	Alpert Medical School	Medicine-Prelim

rington, and Providence. The remaining students came from across the US.

This is one of the most experientially diverse classes in the history of the medical school. The breakdown of the graduating class by admissions route is 47% PLME (the 8-year Program in Liberal Medical Education), 34% standard pre-med and 5% students from post-baccalaureate programs (three from Bryn Mawr, one from Goucher, and one from Columbia). The remaining fourteen students came to AMS via the advanced transfer, Early Identification Program, Brown-Dartmouth and MD-PhD routes. This year represents the last cohort of Brown-Dartmouth students, a group who completed their first two years at Dartmouth and their clinical years at Brown.

The most common undergraduate major among the graduates was biology

(34%; inclusive of sub-disciplines such as biochemistry, neuroscience, and community health).

Taken together, science majors (including math, engineering, chemistry and psychology) accounted for 70% of all majors. Of the remaining students, 15% of majors were in the humanities and 15% in the social sciences.

The Class of 2011 is the second graduating class to complete the AMS Scholarly Concentrations Program. This elective program was established five years ago. It provides students with the opportunity to undertake mentored scholarly work in a variety of cross-disciplinary areas. Twenty-seven students participated in and completed the program. Their areas of focus were: Advocacy and Activism (four students); Aging (three); Contemplative Studies (one), Disaster

Medicine and Response (two), Global Health (seven); Informatics (one), Medical Education (two); Medical Humanities and Ethics (two); Medical Technology (two); Women's Reproductive Health (three). Students who completed the Scholarly Concentrations Program were distributed in similar proportions across the various admission routes.

RESIDENCY AND CAREER CHOICES

An examination of the specialty choices made by this year's graduates (Table 1) showed an increase relative to recent years in the proportion choosing primary care disciplines. Internal medicine continued to be the primary career choice among all disciplines. The proportion of students entering family medicine increased to 8%. The rise in primary care career choice is a trend that has also been seen at AMS'

Table 3. Geographi Destination for all MD Class of 2011 graduates moving on to PGY-1 positions.

State	Number	Percentage
Arizona	1	1.0
California	11	11.5
Canada	1	1.0
Connecticut	3	3.1
District of Columbia	2	2.1
Delaware	1	1.0
Florida	2	2.1
Georgia	1	1.0
Iowa	1	1.0
Illinois	2	2.1
Massachusetts	13	13.5
Maryland	3	3.1
Minnesota	2	2.1
New Jersey	1	1.0
New York	19	19.8
New Hampshire	1	1.0
North Carolina	3	3.1
Ohio	4	4.2
Oregon	3	3.1
Pennsylvania	2	2.1
Rhode Island	14	14.6
Tennessee	1	1.0
Texas	1	1.0
Virginia	2	2.1
Washington	2	2.1
Total	96	100%

peer institutions and US medical schools in general. There were no significant differences in career choice when comparing students who came to AMS via the PLME and premed admission routes.

As has been the case in recent years, our students' residency placements (Table 2) again showed many students matching

at highly regarded programs within their chosen specialties. This was reflected in part by the number of students matching at programs affiliated with Harvard (five), the University of Pennsylvania (two), Stanford (two), Duke (three), Yale (two), and Johns Hopkins (two). Students' residency placements again showed considerable geographic diversity (Table 3). Fourteen of our graduates will be staying on in AMS-affiliated programs in Rhode Island. This number was exceeded only by the number of students who will enter programs in New York (19).

In closing, it should be noted that this year marks a unique milestone in the history of the medical school. This is the last class that will graduate prior to AMS occupying its new medical school building at 222 Richmond Street. We at AMS take pride in noting the professionalism and collegiality of our students in supporting the administration, faculty and each other through our long-standing challenges relating to our facilities. This class has also been instrumental in contributing to the design of the new facility and of our curriculum. Their contributions to AMS bode for their future success as physicians and as leaders.

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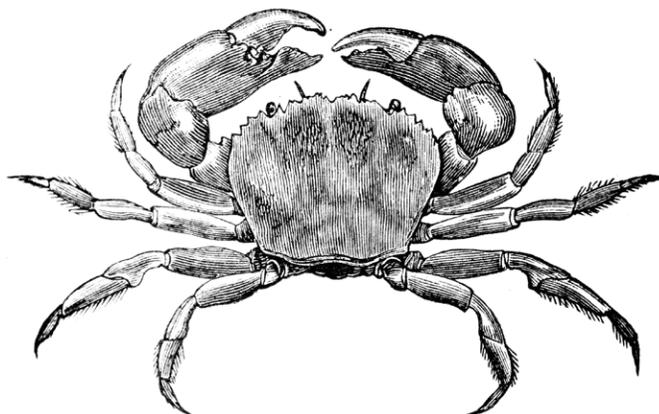
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A Focus on Primary Care: Effective Strategies for Recruiting Students

David Anthony, MD, MSc, Marina MacNamara, MPH, Paul George, MD, and Julie Scott Taylor, MD, MSc

INTRODUCTION

Rhode Island, much as the United States as a whole, is facing a shortage of primary care physicians. In the recent public debate about health care reform and in several aspects of the Affordable Care Act, there is a considerable and justified focus on the role of primary care in improving health and reducing healthcare costs. The availability of primary care physicians is associated with fewer preventable hospitalizations, fewer hospital readmissions, reduced health disparities, reduced mortality and lower costs.^{1,2,3} Even in areas of the country densely populated with physicians, there frequently exists a maldistribution of primary care providers. When it instituted its own version of healthcare reform in 2006 and large numbers of citizens newly enrolled in insurance plans, Massachusetts found itself dramatically short on primary care physicians. Within Rhode Island, there are ten Primary Care Health Provider Shortage Areas. These include all of Providence and Pawtucket, where the academic departments of the **Warren Alpert Medical School of Brown University (AMS)** are located.

Despite the clear evidence in favor of its importance, the number of US medical school graduates who enter primary care residencies dropped steadily between 1997 and 2008.⁴ Policy makers most commonly cite the smaller salaries of primary care physicians relative to procedural specialties, in particular. In light of the increasing level of educational debt accumulated by medical students, this is often cited as an explanation for this trend. However, it is likely that there are other factors as well. These may include a lack of quality exposure of some medical students to primary care physicians during their training, a perceived lack of prestige of the primary care disciplines, and the focus of medical schools on prominent external rankings (such as the prestigious *US News and World Report* research medical school rankings) that do not take primary care into account in their algorithms.

Among the several roles that medical schools have, none is more vital than training the next generation of physicians and guiding those future physicians in choosing their specialties. Given the recent national focus on reforming the healthcare system, there are calls for medical schools to consider the importance of their social mission in making curricular and other decisions.⁵ A recent and somewhat controversial publication developed a social mission score for medical schools based on the number of graduates working in primary care, working in **Health Professional Shortage Areas (HPSAs)**, and the number of underrepresented minority graduates.⁶ At the top of the resulting rank list were the historically black universities (which score highly on all three metrics) and state universities, which graduate a higher proportion of primary care physicians and those who work in underserved areas. Private medical schools, medical schools in the Northeast, and those with greater NIH funding scored lower. Such a ranking system prompts consideration of the factors that influence students' choices regarding primary care and care of the underserved, and whether medical schools such as AMS can influence these choices.

Factors that impact medical students' decisions to work in primary care and underserved communities

Research on students' choice of a primary care specialty has investigated a range of factors, including student demographics, financial concerns, personal beliefs, clinical training, and prior experience. This body of literature demonstrates that students who chose careers in primary care are more likely to be female, older, from non-physician families, interested in caring for the underserved, and possessing a stated interest in primary care specialties at matriculation.^{7,8,9,10} School factors that influence primary care specialty choice include having a required family medicine clerkship and a longitudinal experience in

primary care. As mentioned above, state schools, some of which have a stated mission to do so, graduate more primary care physicians. This phenomenon may in part be due to the decreased debt burden of graduates. National and state programs designed to decrease debt burden, such as the National Health Service Corps and state loan repayment programs, have been shown to be effective and can be promoted by medical schools. More recently, some medical schools have produced tracks and scholarships that provide support and mentored primary care experiences in exchange for a commitment to work in primary care in the state. In a novel partnership, the North Carolina Academy of Family Physicians has joined forces with all four medical schools in the state and with Blue Cross/Blue Shield of North Carolina to produce a three-year track and scholarship that medical students apply for at the end of the first year of medical school. Students in the track are assigned a family physician mentor, funded to attend three family medicine conferences per year, and are awarded a \$10,000 scholarship in exchange for a commitment to complete a family medicine residency in the state.¹¹

Research indicates that medical schools and policy makers can influence students' decisions to work in underserved communities as well. Training in a program with Title VII funding (funding from the **Health Research and Services Administration [HRSA]** devoted to primary care education) is associated with working in a **community health center (CHC)**.¹² Medical school tracks located in urban and rural settings tend to increase the number of graduates working in those communities.^{13,14} In response to the primary care physician shortage and published literature, the Josiah Macy, Jr. Foundation recently recommended medical schools take several steps, including the following: implementation of primary care tracks; creation of longitudinal experiences in community primary care settings; promotion of early primary care

exposure for students; changes in the the admission process.¹⁵

While AMS does not produce as many primary care physicians as many state schools, it has led the Ivy League medical schools. Also, AMS consistently has a high rate of graduates who go on to work in underserved communities, regardless of specialties. In the past several years, a series of coordinated activities at AMS have aimed to further increase interest in primary care and, consequently, in care for underserved populations.

RECENT DEVELOPMENTS AT ALPERT MEDICAL SCHOOL DESIGNED TO INCREASE INTEREST IN PRIMARY CARE

In its required curriculum, AMS supports primary care in several ways. The two-year Doctoring course provides many pre-clerkship students with longitudinal experiences in primary care settings. In the third year core clinical clerkships, all AMS students spend two weeks with a general pediatrician, four weeks with a general internist, and six weeks with a family physician. This experience provides for a comprehensive exposure to ambulatory primary care. In addition, there are numerous elective activities and programs designed to enhance the primary care experiences of AMS students. Of these, we will describe in detail three: the nationally award winning **Family Medicine Interest Group (FMIG)**, a recent Title VII HRSA Predoctoral Training in Primary Care grant, and a new Rhode Island Foundation Grant to support primary care education.

The Family Medicine Interest Group

One means of providing an early introduction of medical students to primary care is through student-led initiatives. The AMS FMIG is the leader amongst AMS medical student-run groups in increasing student awareness of primary care. In addition to exposing students to the diverse activities led by family physicians, the FMIG aims to “raise awareness among medical students about key issues related to primary health care at the local, national, and global levels.” To achieve these objectives, the student leaders and faculty sponsors of the AMS FMIG developed a three-pronged strategy:

- Organize events within the medical school community
- Promote student activity within the community
- Connect faculty and students interested in family medicine.

The Brown FMIG has organized an average of seven events per semester over the past three years, including lunchtime talks, panel discussions, and workshops. Talks have ranged in content from primary care in the global arena to lead poisoning in Rhode Island to debt relief for primary care physicians. Skills workshops have included phlebotomy, splinting and casting, and IUD insertion. Open to all medical students, some of these events are co-sponsored with other student groups; and attendance ranges from 15 to 50, depending on the event. Such activities not only broach important topics within primary care, but they also enable students to network with primary care physicians and advocates from around the state.

The first goal, which focuses on professional development, will take place on the university campus.

The Brown FMIG has also become active within the Rhode Island community. Since January 2009, its members have worked with two primary care faculty members to develop the skills of **community health supporters (CHS)** who come from and work within Providence refugee communities. This work, located at the Refugee Resettlement Program at the International Institute in Providence, recently led to a \$1,000 grant to carry out two communication training sessions with the CHS and to organize subsequent community educational sessions based on topics chosen by the CHS that are of special importance to their communities.

In the fall of 2009, the FMIG began a listserv that currently has more than 125 recipients, including students from all four years of medical school and medical school faculty. In this way, students and

faculty alike are able to share information about events and opportunities both within Rhode Island and elsewhere. The listserv is a powerful way of promoting a community of students and faculty with an interest in primary care. In 2010, the national American Academy of Family Physicians presented its annual Program of Excellence Awards to Family Medicine Interest Groups for their outstanding activities in generating interest in family medicine. The FMIG at AMS was one of ten programs selected for this national honor.

Title VII HRSA Predoctoral Training Grant in Primary Care

The overall purpose of this \$1.42 million dollar, five-year, federally-funded project is to train medical students at AMS to provide outstanding primary care for underserved populations. The project has two overarching goals: to increase the number of graduating medical students who intend to practice primary care in underserved communities, and to prepare 100% of AMS graduates to care for underserved patients regardless of their specialty choice.

The first goal, which focuses on professional development, will take place on the university campus. It spans eight years of training from the freshman year of college through the fourth year of medical school. The project team is in the process of engaging and longitudinally mentoring students interested in caring for the underserved by creating a new Scholarly Concentration at AMS called “Caring for Underserved Populations.” This new three-year concentration will include a one-year didactic curriculum, a summer experience in a CHC, a focused clinical experience in a CHC during the Family Medicine Clerkship, and an independent mentor-supervised scholarly project in a cross-disciplinary field. It is hoped that these students will complete their scholarly projects at the CHCs where they previously trained, thereby employing the energy and initiative of AMS students to help Rhode Island’s underserved communities.

In addition to developing this innovative Scholarly Concentration, the team will also recruit *pre-medical* students with an interest in practicing in underserved communities. This will be

accomplished by establishing an eight-year, coordinated primary care pipeline at Brown University in partnership with the undergraduate-graduate **Program in Liberal Medical Education (PLME)**, the medical school's Admissions Committee, and the on-campus Rhode Island Area Health Education Center.

The second goal, which focuses on curriculum development, will take place at the Department of Family Medicine at Memorial Hospital of Rhode Island. The clerkship team aims to improve the content knowledge and clinical skills of all AMS graduates in the care of underserved patients by enhancing the six-week required Family Medicine Clerkship. The clerkship faculty recently developed and implemented a six-week virtual family curriculum that focuses on knowledge and skills required for caring for vulnerable and underserved patients. Topics include health literacy, cross-cultural communication, inter-partner violence, addressing adherence to therapy, and teen pregnancy. In addition to the new didactic experiences, the team has commenced the systematic recruitment of family medicine clinical training sites at community health centers. It is hoped that by developing a network of CHC clinical training sites, AMS will increase the number of graduating students who have had high-quality experiences working in CHCs, an exposure associated with later work in underserved communities.¹⁴ Medical students' understanding of the social and community context of health will also be enhanced by linking an existing Family Medicine Clerkship project to AMS's six-week Community Health Clerkship in the fourth year of medical school. The project team plans to then systematically evaluate the impact of these diverse programs on students' knowledge, skills and attitudes in the care of the underserved, the number of students choosing primary care careers, and the number of students who go on to work in underserved settings, regardless of their specialty choice.

A Grant from the Rhode Island Foundation

Among the multiple challenges to providing students with quality, high-impact experiences in primary care settings is the many competing demands faced by primary care clinicians. They are frequently under pressure to see more

patients, and have not historically been directly supported for their teaching efforts. Such an environment understandably makes it difficult for primary care physicians to add clinical teaching to their list of responsibilities. Aiming to address the challenge head-on and, ultimately, to increase the number of primary care physicians in the state, the Rhode Island Foundation has partnered with AMS and Lifespan to support primary care physicians for teaching third- and fourth-year AMS students. The almost \$100,000, year-long grant (with the potential of funding during subsequent years) provides a stipend to all community-based primary care physicians who host students during their pediatric, internal medicine, and family medicine clerkships. After an initial pilot year at a lower funding level in 2011, it is anticipated that the stipends will increase in the summer of 2012 to their expected long-term level. To satisfy a requirement for the funding, AMS has committed to continuing the stipends after the Foundation funding ends. The medical school administration sees this as a sustainable and long-term investment in Rhode Island's primary care infrastructure. In addition to the stipends, the project will support professional development and continuing medical education sessions for primary care physicians at the new medical school building. While the stipends do not, and are not intended to, fully reimburse physicians for their teaching time, they do represent a substantive commitment from the school to support primary care education and enhance the primary care experiences of all AMS students.

CONCLUSION

The changing demographics of the United States and Rhode Island have exacerbated the existing shortage of primary care physicians, particularly in communities serving economically disadvantaged and ethnically diverse populations. As the various features of the Affordable Care Act roll out and the number of citizens with health coverage increase, the shortage is only expected to worsen. The addition of primary care physicians to any health system is strongly associated with improved measures of health and reduction of health disparities. AMS is taking deliberate steps to provide students

with positive experiences in primary care, particularly in underserved settings, and to provide early and frequent exposure to primary care mentors. One possible avenue to boost the number of AMS graduates entering primary care careers, particularly in Rhode Island, the school may consider starting a primary care track and scholarship. This could be done with support from the state and/or a partnership of local insurance companies. Such tracks have been effective in other settings and could enhance the already rich array of programs available.

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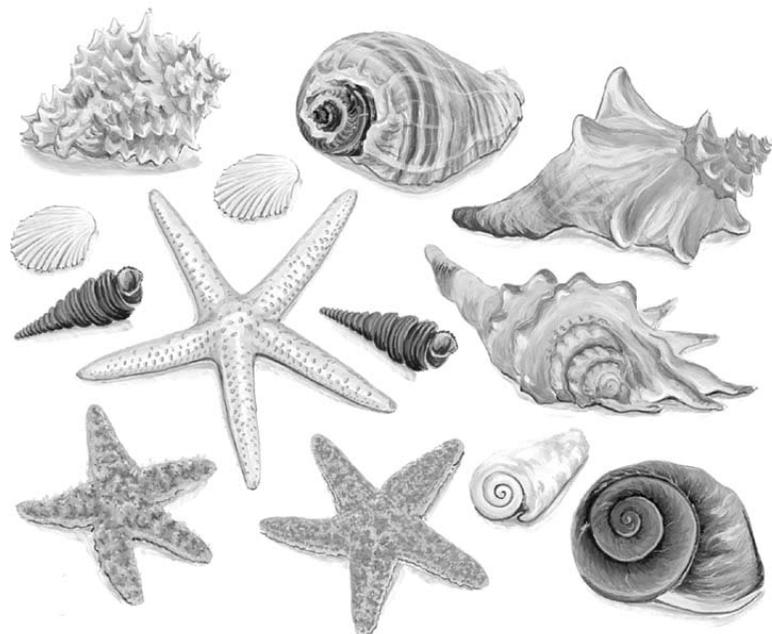
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The New Clinical Skills Suite at the Warren Alpert Medical School: Integrating Technology, Medical Education and Patient Care

Paul George, MD, Julie Scott Taylor, MD, MSc, Peter L. Holden, and Richard Dollase, EdD

As the Warren Alpert Medical School (AMS) moves into its new home at 222 Richmond Street in the summer of 2011, AMS students and faculty will now be able to access instructional technology for medical education not previously available at Brown. Recent consensus guidelines¹ recommend that in preparing for the changing role of instructional technology in medical education, technology be used to:

- Provide experiences for learners that are not otherwise possible;
- Focus on fundamental principles of teaching and learning rather than learning specific-technologies in isolation;
- Allocate a variety of resources to support the appropriate use of instructional technologies;
- Support faculty members as they adopt new technologies, and provide funding and leadership to enhance electronic infrastructure.

STATE OF THE ART CLINICAL SKILLS SUITE

At AMS, our goal of integrating instructional technology into medical education will be greatly enhanced with the availability of a clinical skills suite. The new facility, which will be located on the third floor of the new medical school building (http://med.brown.edu/newbuilding/building_layout/thirdfloor), will be a key contributor to the integration of medicine, education, and technology. The suite, composed of a 16-exam room, state-of-the-art simulated physician's office, will be home to the medical students' virtual clinical practice. Each room is equipped with an examination table, required examination equipment such as blood pressure cuffs and otoscopes, and a physician's desk (Figure 1). The examination

rooms will also be equipped with a computer for the use of faculty or standardized patients (actors, trained to portray a patient with a specific disease presentation) for the rating students' clinical performance, and with video recording capability (two closed circuit television cameras per room). The latter will allow students to view their own encounters, and faculty to critique students' clinical performances. Outside each clinical suite will be another computer station that students will use to document their notes or complete a written exercise related to the patient they had just seen. The suite will be fully automated with sophisticated software capable of scheduling students for examinations, recording assessment data, and analyzing results, allowing faculty to provide immediate feedback to both students and faculty.

Each examination room within the suite is designed to look and function like a primary care physician's office. In fact, the design is based on Alpert's family medicine residency outpatient practice site. Each room in the suite is large enough to hold six people (standardized patients, the student learner, student colleagues, and faculty). Two of the rooms are larger than the others. These rooms are "simulation ready"

should AMS decides to integrate simulation manikins on site in the future. There are two doors in every exam room so that standardized patients can come in to the rooms from "backstage"—that is, from a central area—adding an even more realistic element to patient encounters. There is a central control room for video and audio monitoring. Finally, during various simulation exercises in the clinical suite, students will use iPads or other electronic devices to take notes or look up treatment protocols. Students will also learn to use **electronic medical records (EMR)** applications on the iPads, preparing them for their clinical work in their clinical rotations.

THE DOCTORING COURSE

The technologic capabilities of the clinical skills suite will enhance a number of components of the curriculum at AMS, including the Doctoring course. Doctoring, currently a two-year clinical skills course in Years 1 and 2, is designed to teach the knowledge, skills, attitudes, and behaviors of the competent, ethical, and compassionate 21st-century physician. Beginning in 2012, Doctoring will be a required course for all students from the first year through the fourth year of medical school.



Figure 1. An architectural rendering of one of the examination rooms in the clinical skills suite (Courtesy Ellenzweig Associates).

Doctoring combines instruction and assessment in medical interviewing, physical examination, medical ethics, cultural competence and professional development. It does so using an educational paradigm that emphasizes interdisciplinary teaching, collaboration, patient-centered care, student reflection, teamwork, and teacher-learner partnerships. Across the entirety of the first two years, students spend one half day each week in the classroom setting and one half day in a clinical setting working with an individual attending physician mentor. In the classroom, students work longitudinally throughout the academic year in groups of eight students with a physician and a social/behavioral scientist co-teaching pair. Small groups often work with standardized patients to develop or refine their clinical skills. At the conclusion of each of the first four semesters of Doctoring, students are evaluated by both faculty and standardized patients on their clinical skills, including medical interviewing, physical examination, oral presentations, written documentation, and professionalism. Thus, the clinical skills suite will not only be used for instruction but also for assessment.

In the past, students practiced their medical interviewing and physical examination skills in make-shift seminar/study/examination rooms in the lower level of the Biomedical Center on Brown University's campus. The clinical skills suite will allow students the opportunity to acquire and hone their skills in a clinical environment very similar to where they eventually will practice medicine. Case scenarios that students will encounter will be more realistically rendered because of the new physical facilities. Students and standardized patients will be video recorded from two angles, allowing faculty to view both students' and the standardized patients' facial expressions and other nonverbal behaviors. Students will receive feedback from faculty members who review patient encounters, typically from either within the exam room or from a remote seminar room in the medical education building. In addition, faculty will be able to view student encounters from their own clinical practices or homes via an internet connection. Students will be better able to reflect on and improve their clinical skills after reviewing their own patient interac-

The clinical skills suite will allow students the opportunity to acquire and hone their skills in a clinical environment very similar to where they eventually will practice medicine.

tions. In summary, the clinical skills suite will provide well designed simulation and feedback exercises for preclinical medical students not possible at our current facilities.

THE NEW CLINICAL SKILLS CLERKSHIP

In 2009, AMS embarked on a curriculum redesign of Years 3-4. A central objective of this curriculum redesign, as articulated by the medical admissions committee, is that "a professional, patient-centered approach to patient care should be instituted. Informed perspectives related to potential conflicts of interest and cultural diversity should be instilled and internalized in a manner that influences future behavior throughout student careers." In order to achieve this objective, beginning in the spring of 2012, students will be required to complete a Clinical Skills Clerkship, a three-week introduction and orientation to the clinical years of medical school. It will take place after the USLME Step 1 board exam and before core clinical clerkships begin. Research studies suggest a course such as the Clinical Skills Clerkship, a version of which is offered at many medical schools nationally, increases students' self-reported preparedness for the clinical years of medical school.²

As a central component of the Clinical Skills Clerkship, students will follow a panel of virtual patients in an outpatient setting during week one, in an inpatient setting in week two, and in a longitudinal care setting during week three. The clinical skills suite will serve

as a home for this clerkship and will be transformed from outpatient office to inpatient hospital room to long-term care facility. One recent study found, "The intent of transition courses is to prepare students for workplace learning, but the most common approaches provide limited exposure to real clinical settings. Transition courses could better prepare students for workplace learning by increasing exposure to the routines, norms, and professionals that students encounter in clinical settings."³ Our new clinical skills suite will do just that, allowing students to focus on learning how to be a clinician before actually being given responsibility for patient care on the inpatient wards or in the office.

CORE CLERKSHIPS

The clinical skills suite will also be used within specialty-specific core clerkships at AMS. At present, core clerkships in Internal Medicine, Obstetrics and Gynecology, and Pediatrics run an individual Objective Structured Clinical Examination (OSCE) at the conclusion of their rotations. Space and other resources necessary to conduct these OSCEs have often been difficult to arrange in the hospitals. In the new clinical skills suite, clerkship faculty (with the assistance of medical education administrators at Brown) will have the use of consistent state of the art facilities and resources to assess students' clinical performance in their own familiar clinical setting at the end of a clerkship. It is also planned that procedural training will become an integrated part of all core clerkships, facilitated in part by the availability of the new clinical skills suites.

FOURTH-YEAR OSCE

At AMS, the fourth-year OSCE is a required, summative examination held every fall to assess student competency using standardized patients. Clinical cases are drawn from multiple specialties and capture the essence of a typical day in an outpatient office, in the emergency room, or on the hospital wards. Students can be evaluated on their medical knowledge as well as their communication and physical diagnosis skills. Most recently the role of the OSCE has been expanded both nationally⁴ and at AMS to assess professionalism, quality improvement, and written documentation.

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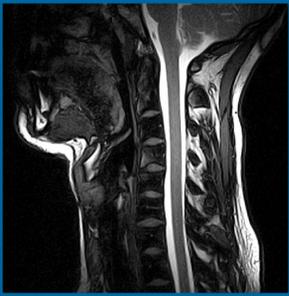
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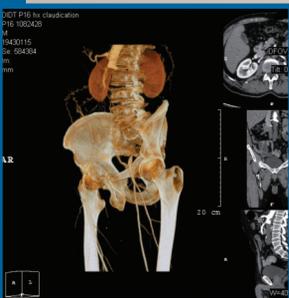
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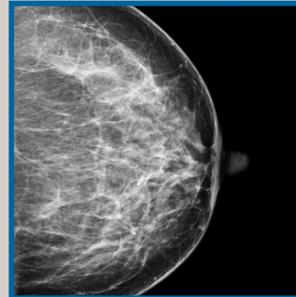


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The clinical skills suite will improve the way this important clinical exam is administered and graded. In the past, students and standardized patients were scheduled using a time consuming and complex algorithm. AMS has now invested in software to efficiently schedule students and standardized patients for the OSCE. The software also allows standardized patients to score students electronically. It is capable of performing statistical analysis of the exam, allowing medical educators to provide more immediate feedback and comparative data to both students and clerkship directors on student performance. Because of the video recording capability, students who do not pass the initial OSCE can review their own performance, and reflect on their strengths and deficiencies before remediating the examination. This feature is quite important. One recent study showed that “OSCE remediation combining review, reflection, and self-assessment has a salutary effect on (subsequent) performance and self-assessment of performance.”⁵

INTERPROFESSIONAL EDUCATION

The clinical skills suite will enhance interprofessional medical education within Rhode Island. An expert panel recently recommended that health professional students be trained to **work in cooperation with those who receive care, those who provide care, and others who contribute to or support the delivery of prevention and health services.**⁶ Each year, second-year medical students, fourth-year nursing students, and fifth-year pharmacy students are brought together for a half-day workshop where

team building and problem solving skills are formally taught. Students function as a 3-person team of one medical student, one nursing student, and one pharmacy student to take a history, perform a physical examination, interpret laboratory data, and counsel a standardized patient. The clinical skills suite will allow this and other interprofessional workshops, as well as other collaborative educational opportunities, to occur. This will provide medical students with important structured opportunities to collaborate with other health professional students early on and throughout their undergraduate medical education. In addition, in the future students from other health professions will be able to use the clinical skills suite for their independent clinical training purposes.

CONCLUSION

As Alpert Medical School moves into its new building, the new clinical skills suite will help transform the curriculum for students, clinical faculty and medical education researchers. The physical space will provide key educational opportunities for our medical students that have not been available previously. Faculty will be able to teach holistic patient care in an enriching environment, allowing them to better focus on the fundamental principles of teaching. Medical education researchers will be able to analyze the impact of the medical school building and its clinical skills suite on student performance. And most importantly, we believe patient care will improve as students are exposed to high fidelity patient care settings earlier and more frequently in their medical training.

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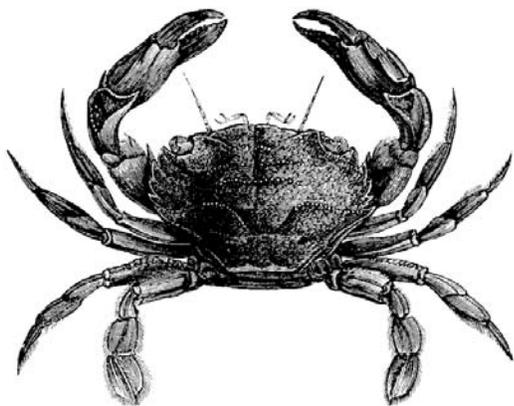
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The Impact of Social Support Services on Health: Lessons from The POINT on Increasing Access to Community Services and Social Support

Hannah Shamji

Access to social support services is a major determinant of health, particularly as people age. A recent study examining the relationship between physical health and stress on adolescents, middle-age adults, and older adults concluded that although a decline in physical health is suffered by all age groups under social stress, bodily function deteriorates more quickly in older adults with no social support, compared to individuals of equal age who have social support.¹ The unique interplay of health and social factors, particularly among the elderly, highlights the immediate need for improved access to social support services.

While best addressed by multiple disciplines, managing social stress is a responsibility that frequently falls to the primary care physician. In fact, up to one third of patients visit their primary care physician with nonmedical issues.² The relationship of trust and confidence between patients and their doctors uniquely positions clinicians to provide nonmedical care in a setting that supports patient receptivity. Limited by time and resources, however, clinicians may not be able to address patient needs outside of the medical arena and must rely on referring patients to other resources. Without a single, networked organization for physicians and patients across the state, identifying appropriate and reliable financial and medical services requires an unrealistic amount of detective work from the physician.

National data also indicate that many senior patients delay seeking care for various reasons, including not wanting to bother the physician, or not feeling comfortable disclosing personal and perhaps seemingly unrelated information.³ Patients are also unlikely to inquire about

support, often assuming their doctor will direct them accordingly. However, without guidance from the patient, physicians are unable to deliver appropriate nonmedical assistance. Physician practices can facilitate awareness by educating staff about available social support services or by posting fliers. Such efforts emphasize the importance of social support to the patient and help identify suitable resources.

In particular, patients—by way of their primary care physicians—may turn to The POINT to help locate the support they need. The POINT is a state-wide resource that guides seniors and adults with disabilities through actionable solutions to increase access to social support services. In directing patients to The POINT, physicians can be assured that patients will receive appropriate support to address their financial and social concerns through a variety of services such as:

- options counseling for long-term support options (including in-home, community-based, and institutional services and programs),
- transportation services (for doctors' appointments, therapy, medical tests, senior day care, kidney dialysis, cancer treatments) through the RIDE Program,
- nutritionally balanced meals through meal site lunches five days a week at over 75 meal sites, or the Meals on Wheels of Rhode Island Program services,
- assistance to identify and contact appropriate financial services (public assistance programs and private pay services), and

- resources for patient transition from institutional settings (hospitals and skilled nursing facilities) back to the community.

Endorsing and facilitating awareness of The POINT can provide necessary support for patients who are willing to self-manage, and position them for improved health outcomes. The POINT can serve as a primary resource for physicians, complementing the comprehensive care they deliver to the patient. The support The POINT provides can increase the efficiency and effectiveness with which physicians administer medical care.

Services through THE POINT are free and confidential. Patients can seek immediate support or assistance at *any* time by calling 462-4444 (TTY: 462-4445). Please visit www.thepointri.org for more information and [call] to collect fliers and other material from The POINT to distribute throughout your office.

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Established in 2005, **The POINT** is designed to provide information about and referral to a statewide network of programs and services targeted to seniors (60 years of age and older), adults with disabilities (18 years of age and older) and their caregivers. This resource center operates with an annual grant of \$350,000 from the **Rhode Island Department of Elderly Affairs (RIDEA)** through a grant from the federal **Administration on Aging (AoA)**. A three-year grant extension was obtained by the RIDEA in 2009 to help The POINT build partnerships with state departments and services. The POINT currently has eight regional partners and has also worked with **Rhode Island's Department of Human Services (DHS/Medicaid)**, the **Department of Health**, and several community organizations.

Opioid Overdose Prevention and Naloxone Distribution in Rhode Island

Michael A. Yokell, ScB, Traci C. Green, MSc, PhD, Sarah Bowman, MPH, Michelle McKenzie, MPH, and Josiah D. Rich, MD, MPH

INTRODUCTION

Opioid overdose is a major public health concern that affects a diverse group of individuals across all categories of race, class, and geography.¹ Overdose is the leading cause of adult accidental death in Rhode Island, making our state one of only 16 where overdose mortality exceeds that of motor vehicle accidents.² Drug-related deaths, of which overdose is the largest component, claimed the lives of 193 Rhode Islanders in 2008.³

Opioid overdose (OD) occurs when opioids bind receptors in the brain stem, diminishing sensitivity to carbon dioxide and ultimately resulting in respiratory failure. Naloxone Hydrochloride (brand name Narcan[®]) is an opioid antagonist capable of reversing overdose due to opioids, such as heroin or prescription opioids.⁴ Naloxone has no potential for abuse; its only major contraindication, allergic reaction to prior administration, is rare.⁵ For more than three decades, emergency medical personnel have administered naloxone as a standard pre-hospital treatment for opioid overdose.⁴ Naloxone has been available, by prescription, to at-risk drug users and their family/friends since 1999 through select programs across the country.

A common argument against the provision of naloxone to at-risk injection drug users (IDUs) is that the availability of naloxone will increase their risk behavior. To the contrary, Seal *et al.* observed a decline in heroin use in participants enrolled in their naloxone (and resuscitation) intervention in San Francisco, with a simultaneous increase in overdose prevention knowledge.⁶

In two different studies of drug users in Rhode Island, the majority expressed a willingness to administer naloxone to a peer in the event of an overdose.⁷⁻⁸ Evaluations of naloxone interventions in major US cities, including San Francisco, Baltimore, Chicago, and New York, have found a notable increase in overdose knowledge among drug users trained in opioid OD recognition and response,

dissemination of this knowledge through peer networks, and successful usage of naloxone by study participants.⁹

Massachusetts instituted a statewide pilot OD prevention program in late 2007, which is operated by the Department of Public Health (DPH). The DPH purchases naloxone and distributes it to training centers, monitors the program, and tracks participant enrollment and naloxone use. The medical director has issued a standing order that allows non-medical personnel to distribute naloxone to trained lay responders in the community without a prescription. In Wilkes County, North Carolina, Project Lazarus began distributing naloxone through physicians in 2010, in collaboration with the state Medical Board. Naloxone is prescribed and distributed by physicians when patients with documented risk factors for overdose are prescribed opioid medications.

This paper presents an overview and pilot evaluation of PONI (Preventing Overdose and Naloxone Intervention), the opioid overdose prevention program in Rhode Island.

PROCEDURE AND METHODS

Preventing Overdose and Naloxone Intervention (PONI) is the pilot OD prevention program in Rhode Island. PONI has been conducted as a research study, approved by The Miriam Hospital's Institutional Review Board (IRB). Recruitment occurred through a variety of venues, including a fixed-site needle exchange at Community Access (Broad St, Providence), outreach efforts conducted by AIDS Care Ocean State, drug abuse treatment centers, and homeless shelters.

The training process and curriculum are modeled after similar community overdose prevention programs. Participants are first guided through a detailed informed consent process by research assistants (RAs), and then complete a short medical history. The medical history,

which gathers information regarding past drug use and overdose(s), was the survey instrument through which data were gathered for this article. The RA then executes an interactive training process, including a discussion of common causes of OD, techniques for prevention, proper and improper responses, and administration of intramuscular naloxone. After completing a short quiz, the RA contacts Dr. Rich by phone and then distributes the prescribed naloxone. Participants are encouraged to return three months after the training or after the first use of naloxone, whichever comes first. Upon return, participants complete a report of naloxone use and are remunerated with a \$15 gift card.

Data were analyzed for descriptive statistics using STATA 11.0 (STATA Corp, College Station, TX).

RESULTS

Since its inception in late 2006, 120 participants have been trained in overdose prevention and response through PONI and were included in this evaluation. All of these participants received a 10ml flip-top multiuse vial of naloxone, along with supplies to reverse at least three opioid overdoses, including printed materials with the overdose response steps. Table 1 displays demographic information gathered from study participants.

Currently, we have limited information on OD reversals by study participants, as a result of the passive reporting system and limited funding to collect follow-up data. Ten individuals returned for follow-up with PONI staff. Of these participants, five used their overdose response training and did not find it necessary to administer naloxone. In five cases, participants successfully administered intramuscular naloxone to reverse an opioid overdose. Reports from community agencies that hosted training events indicated that individuals have used naloxone to reverse opioid overdoses in the community, although they likely did not return for follow-up with PONI. Even with these

Table 1. Participant Demographics, Opioid Use and Overdose History

DEMOGRAPHICS (N=120)			
Age	Mean = 38 Median = 38	Standard Deviation=12.5 1st Quartile: 29 3rd Quartile: 47	
Characteristic		number	percent
Gender	Male	63	53
	Female	56	46
	Declined	1	1
Race/Ethnicity	Caucasian/White	65	54
	Black/African American	14	12
	Hispanic/Latino(a)	22	18
	Other	16	13
	did not identify	3	2
OPIOID USE			
	Lifetime use	78	65
	No Lifetime use	42	35
OD HISTORY			
Have ever OD'd (including non-opioid)		41	34
Witnessed an OD	Yes	81	68
	No	38	31
	No response	1	1

limited data, PONI demonstrated that an OD prevention program with a naloxone distribution component is feasible in Rhode Island. Thus, there is a potential to greatly reduce overdose-associated morbidity and mortality in Rhode Island if this program is expanded.

In addition to the 120 individuals trained by PONI, over 1,000 inmates at the Adult Correctional Institutes have been trained in OD prevention, recognition, and response by PONI staff in collaboration with health educators at the Rhode Island Department of Corrections.

LIMITATIONS

The passive nature of PONI's reporting system limited the collection of participant follow-up data. Several factors may have contributed to the low follow-up rate. First, participants were issued sufficient supplies to reverse at least three overdoses before replenishing stocks with PONI staff. Second, it may be difficult for individuals trained in the greater Providence area to locate and travel to Community Access. Third, some members of the target population are transient, and may no longer be located in the area.

Fourth, a significant percent of participants reported no lifetime opioid use and only 68% of participants had witnessed an OD. Therefore, it is possible that PONI did not exclusively train individuals with the greatest level of need or risk of overdose. Additionally, study participants may not report all overdose reversals. While gift card remuneration was offered for the three-month follow-up, cash remuneration could have improved follow-up rates. An effective mechanism to remind participants about the three-month follow-up is still needed.

DISCUSSION

PONI is the first opioid overdose prevention program in Rhode Island. The program has met great success with the training of the first 120 participants, which has helped educate the citizens of Rhode Island and saved many lives. Similar opioid overdose programs currently exist throughout the nation that have been linked to measureable reductions in opioid-associated morbidity and mortality. Wide-scale, statewide efforts allow coordinated distribution of naloxone to large numbers of people and also provide

the opportunity for more comprehensive monitoring of overdose events and responses by program participants.

The major challenge faced by PONI has been its limited size. When considering the scope of opioid use and misuse in Rhode Island, PONI has had limited reach. Expanding PONI would provide critical, lifesaving knowledge to opioid users and their friends and families, which could ultimately avert countless opioid overdoses and subsequent deaths.

A comprehensive approach to overdose prevention, including more efficient engagement of target populations, is required to address the burden of opioid overdose in Rhode Island. Regulatory changes, physician involvement and education, pharmacist involvement, potential funding strategies, legislative approaches, and collaborations with the Department of Health must all be considered to develop a state-wide strategy to address Rhode Island's opioid overdose epidemic. A system emulating that of Massachusetts may be plausible, where a standing order would be issued by the Department of Health to allow the distribution of naloxone without prescription by the project physician.

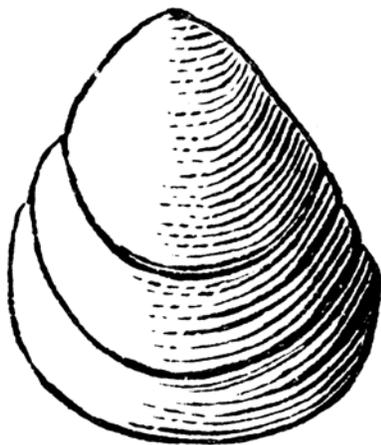
Physician and pharmacist involvement in overdose prevention will be a fundamental component of a comprehensive effort to address the overdose epidemic in Rhode Island. Continuing education could be offered to educate providers and pharmacists about the severity of the overdose epidemic in our state, risk factors for overdose, and potential ways to intervene, including the safe and appropriate prescription of opioids. Pharmacists can check dosing levels and interactions of prescribed opioids. The new statewide **prescription monitoring program (PMP)** database will soon permit real-time queries of patient's controlled substances prescription fill records. Registered physicians and pharmacists could then utilize the PMP to detect "doctor shopping" and unusual doses of narcotics, and better inform patient-provider discussions about long-term treatment with opioid medications.

A naloxone kit distributed by PONI costs about \$15 and has the potential to reverse a total of five overdose events. In 2008, a conservative estimate for the cost of treating OD events in Rhode Island's

emergency departments (327 visits) is \$88,288, with an additional minimum of \$827,637 spent on hospital admissions related to OD events. This produces a total of \$915,925 in OD-related hospital costs for 2008, which could have purchased over 61,000 kits of naloxone.^{10,11,12}

CONCLUSIONS

A statewide OD prevention strategy in Rhode Island must take a unique approach to meet the needs of the state with limited resources. Integrating multiple elements from other large-scale programs, in addition to innovative ideas for overdose prevention and response, would likely be the most successful and realistic option for Rhode Island. An ideal program would encourage physicians to prescribe naloxone in a proactive manner to appropriate at-risk patients, encourage the involvement of pharmacists and state policy makers, and allow community agencies to maintain OD prevention training and naloxone distribution programs with minimal programmatic support from the Department of Health. Collectively, these components could allow for widespread distribution of naloxone and OD prevention knowledge and skills to residents, ultimately reducing opioid overdose-associated mortality and morbidity in Rhode Island.



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The Challenges of Treating Pain in the Emergency Department

Elizabeth Nestor, MD, FACEP

"Hi Mrs. S____, my name is Elizabeth Nestor and I'm the Emergency doctor. Tell me what's going on."

"I was sent down from the Clinic. My doctor isn't there and I needed some more pain medicine for my leg; I have lots of screws and rods in there."

or

"My doctor is away and the covering doctor said to go to the ER because he couldn't re-write the prescription for percocet. I have Fibromyalgia. I need to have the 10mg pills"

or

"The pain from my tooth is killing me and I can't get in to see a dentist: they want the money up front."

or

"My son-in-law stole my pain pills."

or

"Here's my MRI. I have really bad disc problems, and my doctor can't do another operation until I get insurance."

or – or – or –

Every day in every Emergency Department (ED) of this state, and I imagine, in most states, these stories are repeated. Just because they are familiar doesn't mean that they aren't true. There is (no question) a lack of availability of clinic appointments, and it is true that covering physicians don't want to prescribe narcotic pain medication for patients they don't know. Dental coverage is only common among well-insured people and tobacco use along with little dental care means there are many patients waiting for the dental clinic appointments which are available; three months is typical. Prescription narcotics are among the most abused/misused medications, and not just sons-in-law, but sons and daughters and neighbors have been known to take mom's meds. And disc disease is an endemic finding, which probably would be present on your MRI as well as mine.

But just because these are plausible histories doesn't mean that we in the ED feel entirely comfortable in simply complying with patient requests. Currently it takes about five minutes, I would say, to search our RI Hospital ED records and see if the patient has been here before with similar requests, and to see what prescriptions have been given. It might take another 5 to search the hospital's medical records for clinic notes which could signal a potential problem with narcotics. It might take 15-30 minutes to reach a **Primary Care Provider (PCP)** if they are available (since covering physicians likely wouldn't know) to enquire if the patient has a problematic history with narcotic use. At RI Hospital (as is the case in all the EDs of the state), we are seeing increasing numbers of patients: we are up 20% over the last six years and continue to be among the ten highest

volume EDs in the country. With over 100,000 patient visits per year in our adult ED, we annually see by gross numbers about 10% of the states' population. Some individuals are very high utilizers of our ED. In 2009, 319 patients visited the Anderson Emergency Center 12 or more times, accounting for more than 7000 separate visits. Many of our mid-level providers, residents and Attending physicians feel that an extra 30 minutes spent on a patient who might otherwise be dispositioned in five minutes with a prescription, is an untoward amount of time and threatens patient safety for more critically ill patients. There is a point there. But as a group, the physician and mid-levels of the RI Hospital Anderson Emergency Center have undertaken to make that investigation.

The Joint Commission says that there is "an **epidemic of critical proportion for persons suffering with pain**" and I agree, **but referral to Pain Management centers, from which many patients would benefit is largely for insured patients with PCPs.** Many patients, however, have no doctors or dentists of their own; the clinic systems are overburdened so that referrals to local dental clinics or to our own hospital-based medical clinics may take three months (if one is persistent) to produce a follow-up appointment. Many groups of primary care physicians in the state are either no longer taking new patients or can't provide the space to see their own patients urgently. Patients are left to visit 'emergency rooms' for amelioration of conditions which others might not judge to be emergent. These, among others, are by default our patients.

We have general guidelines (non-binding) at the Anderson Emergency Center of Rhode Island Hospital to limit the number of visits in which we give parenteral narcotics for chronic intermittent non-hemotologic or non-oncologic pain to once monthly, and to limit the number of narcotic prescriptions we dispense these patients to once quarterly. We have a group (the **Patient Centered Approach to Pain, or P-CAP**, including representatives from the provider group and from nursing as well as from the Department of Social Work; two members are also on the hospital Ethics committee) which meets bi-monthly to discuss the situation, and representatives from that group meet regularly with the committee from the RI Hospital clinics which discusses patients with aberrant narcotic use patterns. Other hospital EDs (Miriam and Newport for example) are also involved in similar formal efforts, and these are tied to our continuing efforts to communicate with PCPs about their patients' use of the state EDs, which ranks fourteen among the fifty states plus the District of Columbia, in frequency of ED visits by population (431 per thousand people per year, in 2003).

Emergency physicians have advocated for establishing that a patient's emergency is self-defined. We stand by that position so it is up to us to take responsibility for the appropriate treat-

ment of patients, for coordination of care with the PCPs for the patient, and for trying to arrange adequate (and, one hopes) timely follow-up. It is a mountain of work if done right, and sometimes we slip up, I will be the first to admit.

So—what is the right response to Mrs. S. and to her colleagues-in-pain, quoted at the start of this reflection?

“I’m sorry. We have the position that only one person should write narcotics on a patient with chronic pain problems. Go and see your PCP next week/month.”

or

“Here is a prescription for vicodin.” or percocet.

or

“Here is a prescription for Ibuprofen. We don’t think treating chronic pain with narcotics is a good idea, and we’ve spoken to your PCP who will see you tomorrow.”

or

“I’ve put you in the clinic system as a referral so you can be seen in follow-up. Here is a prescription, but I need to let you know that you may not be seen in the clinic for some months, that they may not re-write this prescription, and that we won’t write you another for 3 months. By that time you may actually have an appointment to be seen by a doctor.”

or – what?

My guess is that the possible appropriate (and inappropriate) answers are as diverse as are our shared patients. We very much want to be of help in caring for them, and we welcome your deeper insight into their treatment.

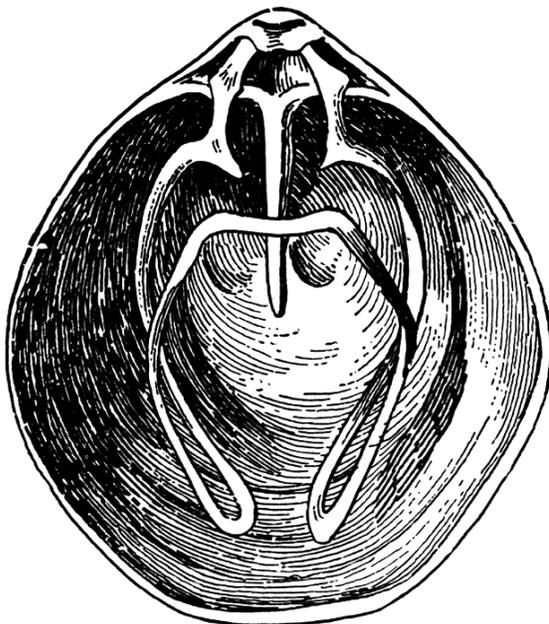
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Disclosure of Financial Interest

The author and/or their spouse/significant other has no financial interests to disclose.

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Screening for a Common Cause of Illness and Death: Alcohol

Julie Jacobs, MD

A 48-year-old male presents for a physical exam. He was last seen in the office two years ago. He reports no significant illness since then. He continues to smoke one half a pack per day and reports "social drinking." He works as an accountant. His blood pressure is 143/89 and his exam is grossly normal. During the visit he casually mentions that he is in danger of losing his job and his wife recently separated from him.

For such a tiny molecular structure, alcohol represents an extremely complex subject for health care providers. The consequences of a glass of red wine can range from modest cardiovascular benefits to chaos and destruction. Alcohol misuse is strongly associated with health problems, disability, accident, injury, social disruption, violence, and death.¹ In the United States, alcohol abuse generates nearly \$185 billion in annual economic costs.¹ It may be surprising to note that Medicare beneficiaries are as likely to be hospitalized for alcohol-related problems as for myocardial infarction; however, as with the 10% to 20% of patients presenting to physicians with some type of alcohol misuse, early recognition and treatment has the potential to derail this deadly disease in all age groups.

As with any behavior related illness, alcohol misuse can be extremely challenging to diagnose. The spectrum of drinking ranges from low risk drinking, to misuse or abuse, which is used synonymously, to alcohol dependence. The DSM IV guidelines for alcohol abuse define it as a maladaptive pattern of alcohol

use leading to clinically significant impairment or distress occurring within a 12-month period. Abuse requires alcohol related disruptions with the law, health, occupation, or social interactions.² The amount of alcohol is irrelevant when any of these problems develops for the patient. Furthermore, misuse often leads to dependence through tolerance and development of withdrawal symptoms, which in most situations should be treated by specialists in a closely monitored setting.

Unfortunately, primary care physicians do not routinely approach the subject of alcohol use with patients.³ The knowledge that most alcohol misuse will not progress to end organ disease is often enough to deter doctors from probing into personal habits. Also, doctors commonly take a patient's initial negative response to screening as a perpetual truth. However, primary care physicians are in a position to make an impact on high risk drinking. A systematic review of 38 studies of screening for alcohol misuse by adults in primary care settings supports the effectiveness of available screening instruments.⁴ For this reason, alcohol misuse screening in adults is recommended by the **US Preventive Services Task Force (USPSTF)**, as well as other organizations.⁵

Screening in the primary care setting does rely on a truthful history from the patient. Screening can range from one simple question such as "How many times this year have you had more than 5 alcoholic beverages in a day?" to more complex surveys. The **CAGE (feeling the need to Cut down, Annoyed by criticism, Guilty about drinking, and need for an Eye-opener in the morning)** is the most widely used screen for detecting alcohol

Table 1. General Outline for Brief Intervention by the Primary Care Provider

<ul style="list-style-type: none"> • Ask: "Do you think your drinking is a problem? Safe? Healthy? Does it bother your loved ones? Your work?" <ul style="list-style-type: none"> ◦ Your goal: To get the patient to verbalize his problem. To ensure the patient is not alcohol dependent. • Advise: "I think you should cut down or quit drinking." <ul style="list-style-type: none"> ◦ Your goal: To clearly state what is medically indicated for the patient. • Assess: Use the patients previous statements and reactions to determine his willingness to change <ul style="list-style-type: none"> ◦ Your goal: To have a realistic idea of the patient's readiness to change in order to encourage him appropriately and continue to engage him • Assist: "What do you think is a reasonable drinking goal for you?" "What do you think will be the hardest part and how will you deal with that?" <ul style="list-style-type: none"> ◦ Your goal: Set a specific and reasonable goal for the patient. This may range from drink reduction and safety to abstinence. • Follow up: "I want to see you in 2 weeks so we can discuss how this is going for you." <ul style="list-style-type: none"> ◦ Your goal: Remain in close contact to keep the patient motivated, answer questions, or refer to a specialist if necessary
--

abuse; it is also sensitive for alcohol dependence. A longer but more closely studied test is the **Alcohol Use Disorders Identification Test (AUDIT)**. Its ten questions are sensitive for detecting alcohol abuse or dependence, and can be used alone or given with questions about other health related activities. Screening tools are available at the National Institute on Alcohol Abuse and Alcoholism Web site.⁶

A positive screening test should then prompt a primary care physician to perform a brief intervention. Brief interventions have been studied extensively over the last twenty years.⁷ Although the data on these interventions have mixed results on morbidity and mortality of alcoholism, it has been proven to reduce alcohol consumption.^{7,8} In addition, it has not been proven harmful to the patient. In fact, several interventions over time are shown to reduce average alcohol consumption by three to nine drinks per week, with effects lasting up to six to 12 months after the intervention and as far out as four years.⁸

A brief intervention involves a five to 15 minute counseling session consisting of objective feedback, advice, and goal-setting conducted in a non-confrontational environment. Brief interventions work by proposing the idea of abstinence, or if disinterested, to simply educate the patient, with a goal of reducing the harm produced by risky drinking. Ideally, a motivational interviewing technique should be used for these interventions.⁹ This strategy attempts to engage the patient in order to increase awareness of problems and consequences experienced by alcohol use. This awareness may allow the patient to move through the stages of change toward action. These interventions often require a tactful, empathic approach. A suggested format for these interventions is outlined in Table 1.

If screened for alcohol misuse using any validated screening test, a meta-analysis concluded that 3% to 18% of patients would screen positive for alcohol misuse, but less than a third of those patients who screen positive would receive any intervention.¹⁰ A fear many clinicians may have is that screening for such a common malady could bring alcohol abuse to the forefront of many practices, replacing other common illnesses. Currently physicians lack training in addiction medicine and counseling, not to mention the feeling of helplessness that chronic alcoholism can produce for health care providers. However, by creating a safe place for dialogue and using the initial tools for change, primary care physicians can transform high risk behavior and prevent a myriad of negative consequences for their patients.

The patient above answers yes to having more than five drinks several times over the past year. He goes on to say that he often does this once a week, which disturbs his wife. The physician respectfully points out that his drinking is risky and could be causing some of his current problems. Although embarrassed, the patient agrees to the doctor's opinion, but does not want to quit drinking. They negotiate a drinking goal of cutting back to no more than three drinks in one day, and he will return to the office in three weeks.

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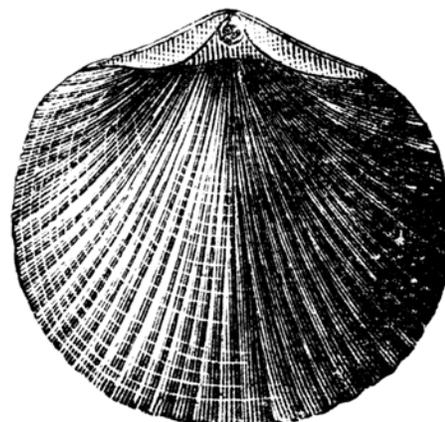
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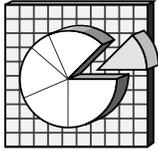
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Assessing the Impact of RI's Managed Oral Health Program (RIte Smiles) on Access and Utilization of Dental Care among Medicaid Children Ages Ten Years and Younger

William McQuade, DSc, MHP, Martha Dellapenna, RDH, MEd, Junbie Oh, BDS, MPH, Deborah Fuller, DMD, MS, Laurie Leonard, MS and Deborah J. Florio

Medicaid programs are particularly interested in dental care because oral health problems, such as dental caries, are more prevalent and severe among children from low-income families.^{1,2} **RIte Smiles**, Rhode Island's managed oral health program, was designed to increase access to dental services, promote the development of good oral health behaviors, decrease the need for restorative and emergency dental care, and decrease Medicaid expenditures for oral health care. To achieve these goals, Rhode Island developed a new oral health delivery system, transitioning from a payer of services model to becoming a purchaser of a **dental benefit management (DBM)** program provided by private insurers. The program was implemented in September 2006 for non-institutionalized RI residents born on or after May 1, 2000, who have no other dental insurance.

In the first year of operations (2006), the program enrolled 34,000 Medicaid eligible children ages six years and younger. Since then, children have been aging into the program each year as the cohort becomes another year older. RIte Smiles now enrolls approximately 52,000 children ages birth to 11 years. Medicaid eligible children who do not qualify for RIte Smiles continue to receive Medicaid dental benefits under the traditional fee-for-service program. The State plans to continue transferring Medicaid eligible children into RIte Smiles until all children under 21 are covered by managed care.

Managed dental programs have been shown to improve utilization of services as well as provider participation in many states.^{3,4} One of the strategies adopted by RIte Smiles is promoting early and regular preventive dental care along with more active engagement by primary care physicians. Preventive dental care, such as teeth cleanings, dental sealants and fluoride treatments, is beneficial to maintain good oral health status and avert acute and restorative care.^{5,6}

The purpose of this paper is to assess the impact of the RIte Smiles Program on: 1) the percentage of Medicaid enrolled children ages ten years and under receiving dental care before and

after the inception of the RIte Smiles program, and 2) changes in the distribution of preventive versus treatments services within the eligible population during the study period.

METHODS

Data for this paper were obtained from two primary sources. All dental claims that were paid by fee-for-service Medicaid were accessed through the Department of Human Services' **Medicaid Medical Information System (MMIS)**. Claims paid through the managed care entity were accessed directly from the DBM and linked by patient identification number with the fee-for-service claims. Claims were aggregated by incurred date from January 1, 2002 to December 31, 2010 and age was determined on the date of service.

Preventive services were defined as any claim billed with a **Healthcare Common Procedure Coding System (HCPCS)** Level II procedure code between D0120 and D1555. Treatment services were defined as any claim billed with a HCPCS code greater than D2000. Normally, a claim is synonymous with a 'visit' or episode of care. The term 'visit' will be used in this paper to denote a claim or episode of care.

Table 1. Children with Any Medicaid Eligibility by Age and Year: Calendar Year 2006 through 2010
(Highlights indicate RIte Smiles eligibility age-in process)

Age	2006	2007	2008	2009	2010
0	6,758	7,005	6,705	6,650	6,461
1	7,079	7,192	7,333	7,122	7,170
2	7,127	7,046	7,173	7,439	7,390
3	6,941	6,967	6,885	7,158	7,627
4	6,547	6,172	6,034	6,145	6,600
5	5,937	5,696	5,562	5,656	5,930
6	5,694	5,548	5,442	5,453	5,776
7	5,588	5,468	5,350	5,359	5,609
8	5,537	5,358	5,297	5,255	5,453
9	5,411	5,301	5,179	5,151	5,400
10	5,368	5,202	5,130	5,046	5,331
Total	67,987	66,955	66,090	66,434	68,747

*Not all Medicaid eligible children are enrolled in RIte Smiles.

RESULTS

Table 1 illustrates the distribution of Medicaid eligible children ages birth to ten years. The highlighted area indicates the age groups that are eligible for RItE Smiles and shows how the aging-in process works. For example, in 2006, only children six years old and younger were eligible for RItE Smiles. The seven year olds were added in 2007 followed by the eight year olds in 2008. The nine and ten year olds were added in 2009 and 2010, respectively. Not all children eligible for Medicaid were actually enrolled in RItE Smiles (Those with private dental coverage or residing out of state are excluded from RItE Smiles but still covered under fee-for-service Medicaid).

Figure 1 illustrates the percent of children in each of the age groups that received any (at least one) dental service (preventive or treatment) during the period CY 2002-2010 by age group. Children ages two years and under had the lowest participation rate but the highest increase going from 1.9% in 2002 to 13.3% in 2010, an increase of 600%. Children three to five years, increased from 35.3% in 2002 to 46.2% in 2010, an increase of 30.9%. Children six to eight years and nine to ten years had comparable increases of 27.4% and 24.2% respectively. In fact, about 70% of children nine to ten years of age with Medicaid coverage received at least one dental service in 2009 and 2010.

Note that the majority of these increases occurred between 2005 and 2010, coinciding with implementation of the RItE Smiles program. Overall rates increased from 33.2% in 2002 to 34.5% in 2005, an increase of 3.9% (data not shown). However, the overall rate increased from 34.5% in 2005 to 44.2% in 2010, an increase of 28.1%.

Figure 2 illustrates the utilization of dental services by category of care (preventive vs. treatment) for the population of children ten years and younger from CY 2002 to 2010. Here we see a very distinct increase in services between 2005 and 2006 marking the beginning of the RItE Smiles program that continues through 2009. Preventive services increased from just over 600 per 1,000 in 2005 to 800 per 1,000 in 2007, a 33% increase in just two years. Similarly, treatments had remained at about 200 per 1,000 between 2002 and 2005 before increasing to 300 per 1,000 in 2007, an increase of 50%.

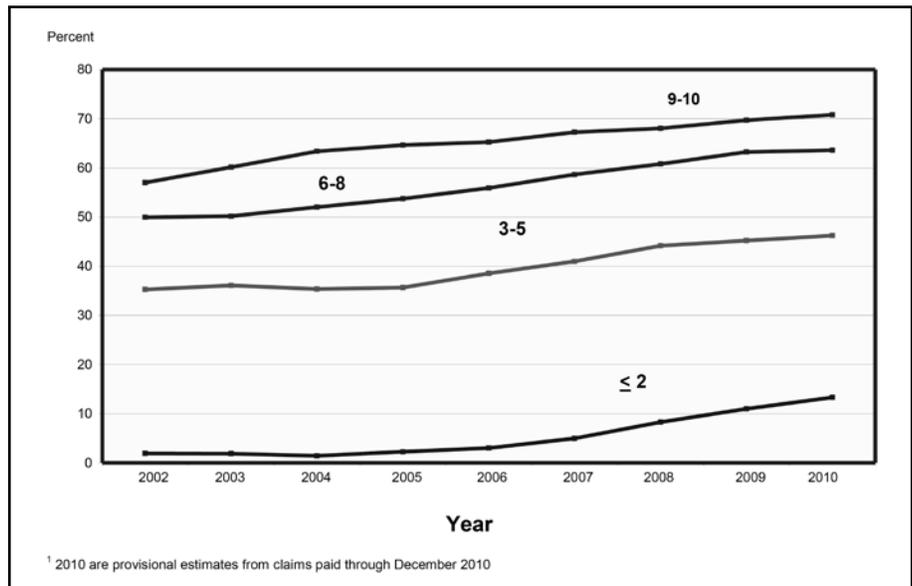


Figure 1. Dental Care Participation Rate among Medicaid Children Ages 0-10 Years by Calendar Year and Age Group¹

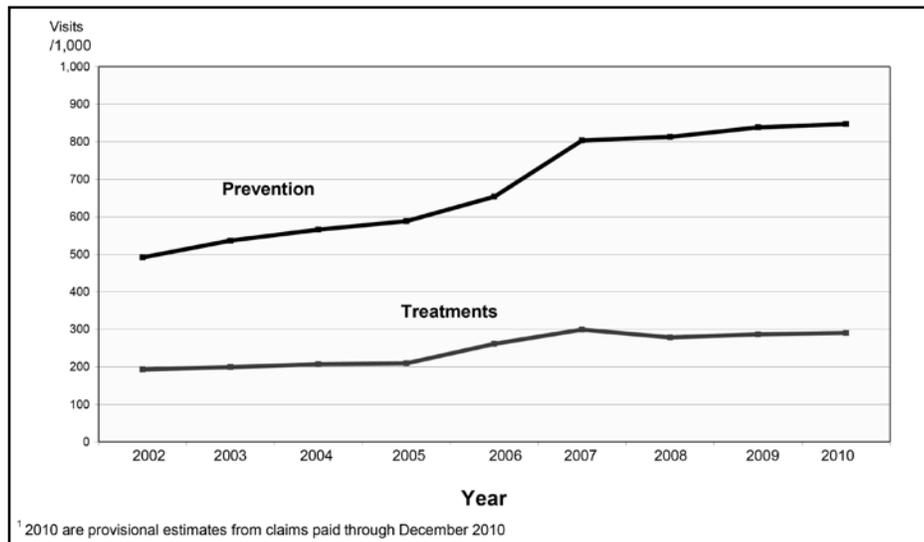


Figure 2: Utilization of Dental Services by Medicaid Children Ages 0-10 Years by Category of Care (Prevention vs. Treatment) and Year: Calendar Year 2010¹

DISCUSSION

The purpose of this paper was to assess the impact of the RItE Smiles program on access and utilization of dental care among Medicaid children ages ten years and younger between 2002 and 2010. Note that while the RItE Smiles program began enrolling children in September 2006, several initiatives were underway beginning in 2004 that could have impacted utilization of dental care. As such, there appears to have been a slight trend upward on dental care between 2002 and 2004; however the major inflection points in both participation and utilization appear between 2005 and 2007—coinciding with implementation of the RItE Smiles program. In fact, there was a 28% increase in overall participation in dental care between 2005 and 2010, a 33% increase in preventive visits and a 50% increase in treatment visits.

An important objective of the RItE Smiles program was to improve early initiation of preventive dental services among

pre-school children to comply with recommendations from the American Academy of Pediatric Dentistry and the American Academy of Pediatrics.^{7,8} The percentage of children ages two years and younger who received any dental care increased by almost 600% from 2002 to 2010, marking the first time that over 10% of this cohort received dental care. Significant progress was also made among pre-school children three to five years with participation rates approaching 50% for the first time. Similarly, participation among the school aged children nine to ten years increased to over 70% which is another milestone for this population.

While the 50% increase in the treatment visit rate is certainly impressive, we need to follow this trend more closely in the coming years. Given the prevalence of dental disease among children, we would expect the treatment visit rate to be about 50-60% of the preventive visit rate.² With early and regular preventive dental care, children can experience improved oral health status and reduced incidence of oral disease, thereby avoiding complex and expensive restorative dental treatments and lead to significant savings in Medicaid dental expenditures.

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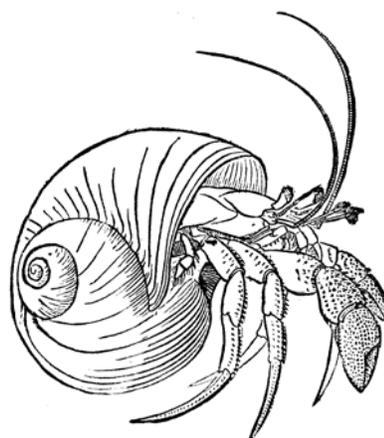
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Information for Contributors

Medicine & Health/Rhode Island is peer-reviewed, and listed in the *Index Medicus*. We welcome submissions in the following categories:

CONTRIBUTIONS

Contributions report on an issue of interest to clinicians in Rhode Island: new research, treatment options, collaborative interventions, review of controversies. Maximum length: 2500 words. Maximum number of references: 15. Tables, charts and figures should be submitted as separate electronic files (jpeg, tif, or pdf).

CREATIVE CLINICIAN

Clinicians are invited to describe cases that defy textbook analysis. Maximum length: 1200 words. Maximum number of references: 6. Photographs, charts and figures may accompany the case.

POINT OF VIEW

Readers share their perspective on any issue facing clinicians (e.g., ethics, health care policy, relationships with patients). Maximum length: 1200 words.

ADVANCES IN PHARMACOLOGY

Authors discuss new treatments. Maximum length: 1200 words.

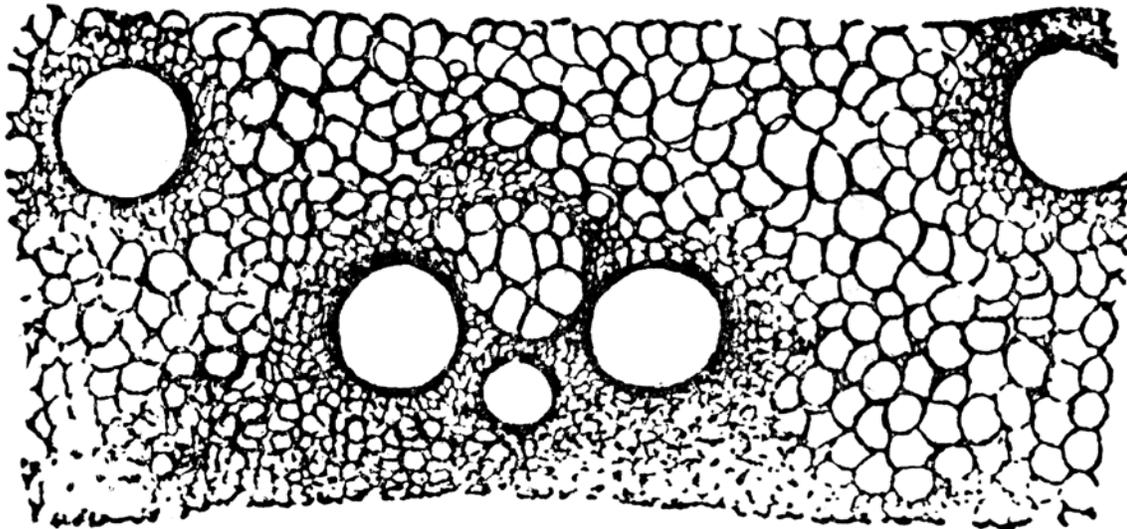
ADVANCES IN LABORATORY MEDICINE

Authors discuss a new laboratory technique. Maximum length: 1200 words.

IMAGES IN MEDICINE

Authors submit an interesting Image, with a 300-400 word explanation.

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Physician's Lexicon

Vernacular Medical Terminology of the 17th Century

Physicians pride themselves that their diagnostic terminology, derived largely from ancient Greek and Latin, is contaminated only marginally by vulgar words of ambiguous meaning. We now live by the constraints placed by our edited dictionaries. In the past, however, it had been otherwise and diagnostic terms were selected from sundry sources and were rarely regularized.

In 17th Century London during the recurring epidemics of bubonic plague, a decision was reached to find answers to two compelling questions: How high was the general mortality rate? And second, what was killing so many Londoners in the year, 1665?

The clerks of each of London's 97 parishes were ordered to submit weekly reports (called *The Bills of Mortality*), recording the weekly numbers of christenings, burials, and the likely causes of each death. And in that tragic year of 1665, for example, 97,306 Londoners perished, 68,596 dying of the plague.

The names given to the many mortal diseases by the parish clerks, were quaint, often

vernacular and, at times, singularly inventive; nonetheless they provide some insights into the way English was employed in the 17th Century. Some of the more common diagnoses, mentioned in *The Bills of Mortality*, are listed below; and while many sound as though they originated in London's back streets, they yet have a linkage to the ancient Mediterranean tongues.

Chrisom: The baptismal robe of the infant; and by extension, referring to any infant dying within a month of baptism. (from the Greek, meaning to anoint.)

Canker: a gangrenous sore, perhaps cancer or chancre. (from the Latin, *cancreum*, meaning crab-like.)

Tissick: a corruption of the word, phthisis, a synonym for tuberculosis; from a Greek word meaning wasting. Consumption, another synonym for tuberculosis, is from the Latin, *consumere*, meaning to devour, destroy.

Calenture: A burning, often tropical, fever; from the Latin, *calens*, meaning warmth.

There were many 17th Century diagnostic terms, permissively spelled, that can still be recognized in the 21st Century. For example: ague, fever, bloody fluxes, scowrings (diarrhea), collick, dropsie, king's evil (scrofula), livergrowne (hepatomegaly), meagrom (hemigranium, migraine), impostume (abscess and if used theologically, meaning an apostasy), quinsie.

And finally there are the more perplexing names reflecting the sense of wonderment experienced by the parish clerks. Words such as bedrid (describing a chronic, lingering disease); childbed (maternal mortality), mouldfallen (describing an ill-defined neonatal death), purples (probably spotted fever), teeth and worms, and plannet (born to misfortune), a useful term sadly missing from our contemporary diagnostic listings. Rising of the lights, a common 17th Century diagnosis, probably refers to croup in youngsters.

— STANLEY M. ARONSON, MD



RHODE ISLAND DEPARTMENT OF HEALTH
MICHAEL FINE, MD
DIRECTOR OF HEALTH

VITAL STATISTICS

EDITED BY COLLEEN FONTANA, STATE REGISTRAR

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

Underlying Cause of Death	Reporting Period			
	August 2010	12 Months Ending with August 2010		
	Number (a)	Number (a)	Rates (b)	YPLL (c)
Diseases of the Heart	167	2,057	195.3	2,689.5
Malignant Neoplasms	199	2,062	195.8	5,700.0
Cerebrovascular Diseases	34	428	40.6	562.5
Injuries (Accidents/Suicide/Homicide)	50	564	53.6	9,218.0
COPD	43	454	43.1	545.0

Vital Events	Reporting Period		
	February 2011	12 Months Ending with February 2011	
	Number	Number	Rates
Live Births	850	11,802	11.2*
Deaths	833	9,904	9.4*
Infant Deaths	(8)	(66)	5.6#
Neonatal Deaths	(7)	(63)	5.3#
Marriages	243	6,076	5.8*
Divorces	271	3,262	3.1*
Induced Terminations	438	4,221	357.7#
Spontaneous Fetal Deaths	56	706	59.8#
Under 20 weeks gestation	(50)	(639)	64.5#
20+ weeks gestation	(4)	(65)	5.5#

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

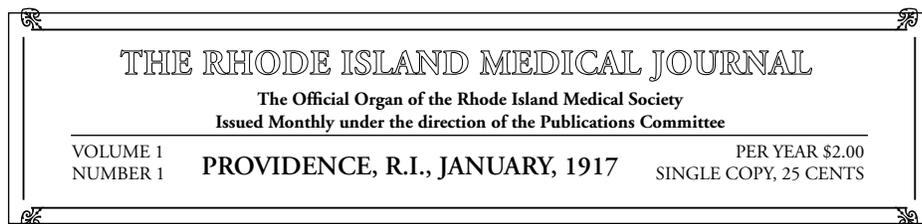
(b) Rates per 100,000 estimated population of 1,053,209. (www.census.gov)

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

Note: Totals represent vital events that 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.

* Rates per 1,000 estimated population

Rates per 1,000 live births



NINETY YEARS AGO, AUGUST, 1921

Paul Appleton, MD, offers a piece entitled “Obstetrics—A Two-Man Job” in which he draws a comparison between surgeons requiring the help of anesthesiologists and an assistant, and obstetricians who, given the range of stress and risks their patients experience, could likewise benefit from more than one set of trained hands. Appleton asks how much respect one would have for a surgeon who relied upon the sole help of an experienced nurse of well-wishing neighbor. He goes on to draw similar comparisons with plumbers and electricians. He takes his argument a step further by challenging the reader to name a more difficult surgical problem requiring deftness, judgment, and rapid action than a case of surgical obstetrics. Appleton urges that for responsible safety, two obstetricians should be present for a patient. He points out that the duties of the obstetric assistant would be just as well-defined as those of a well-trained surgical assistant. Adopting the practice of two obstetricians, Appleton says, will bring good results and a lower mortality rate.

A nationwide “save your sight” campaign was conducted by the recently-organized Eye Sight Conservation Council to acquaint the public with the importance of eye care and to urge the universal eye examinations of school children, workers in industry, and clerks in stores and offices. Special literature was sent to teachers and employers. Schools and factories received charts and posters visualizing eye care, depicting the advantages of correcting ocular defects, and warning against eye strain and its “attending evils.”

An editorial criticizes over-reliance on specialization, citing a case in which an elderly man of ill health, after having his history taken down, is sent to a succession of physicians for various tests over the course of several days, during which his health deteriorated further. The writer goes on to wax poetic on days of the “good old family doctor,” who, in his big-hearted, even if superficial and inefficient manner, would have calmed all fears, and put the patient at rest in mind and body, having carried out the treatment perhaps as effectively, if less accurately.

FIFTY YEARS AGO, AUGUST 1961

Walter E. Barton, MD, presents the Tenth Arthur Hiler Ruggles Oration: Action for Mental Health in which they honor and praise the work of Arthur Ruggles and his achievements with Butler Hospital. Various programs instituted meant that patients who had previously been considered hopeless could now find rehabilitation. Chronically ill mental patients could be motivated toward a more active social role. Improving self-esteem among patients, and creating positive atmospheres which result in stronger patients with greater chances of improvement.

A.A. Savastano, MD, looks at being a medical witness in court, noting that there is little preparation for this role in medical training. He points out that if a physician accepts cases based on personal injury or compensation, they are legally obligated to appear in court. By that same token, it is important for the attorney to make sure that the physician is given plenty of fair notice prior to a court appearance in which to get notes in order and to arrange his schedule. Savastano underscores the importance of medical records, and with disclosing all injuries sustained—not just the major injuries. No detail should be considered too trivial. While on the stand, a witness should be presentable, well and clear-spoken, unpretentious, courteous, direct, accessible, and, most of all, fully aware that they are testifying under oath.

An editorial makes mention of a special commission of the Rhode Island legislature discussing underground installation of utility lines. Due to the frequency of downed power and telephone lines during storms, the author is wholly supportive of the plan to put important lines of communication out of harm's way and wishes the special commission the best of luck.

The American Medical Association stresses the need for teachers and other school personnel to receive regular medical checkups. This would not only aid in preventing the spread of disease, but also help maintain the supply in the manpower-short teaching profession.

TWENTY-FIVE YEARS AGO, AUGUST 1986

Joseph Friedman, MD, continues his look at recent research advances in Parkinson's disease. He notes that the discovery of 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) has led to an increase in Parkinson's disease research with a hope for improved treatments and understanding of the disease. He also takes a look at the promising research being done with brain implants.

This issue presents a special report on missing and exploited children and offers some eye-opening figures as far as the number of missing children is concerned, and the varying forms of exploitation. In addition to legislative initiatives and national programs to help curb the problem of missing and exploited children, the piece reports on health—physical and mental—problems and injuries often found among runaway and homeless youth, abducted children, and sexually exploited children, and the role of the physician. The report goes on to talk about prevention, research issues, educational opportunities, and other activities and organizations. Physicians and other health care professionals can play a role in helping alleviate the problem.

Air bags are becoming available as an option in new cars and it is recommended that they be used in addition to lap-and-shoulder safety belts.

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