

WORCESTER medicine

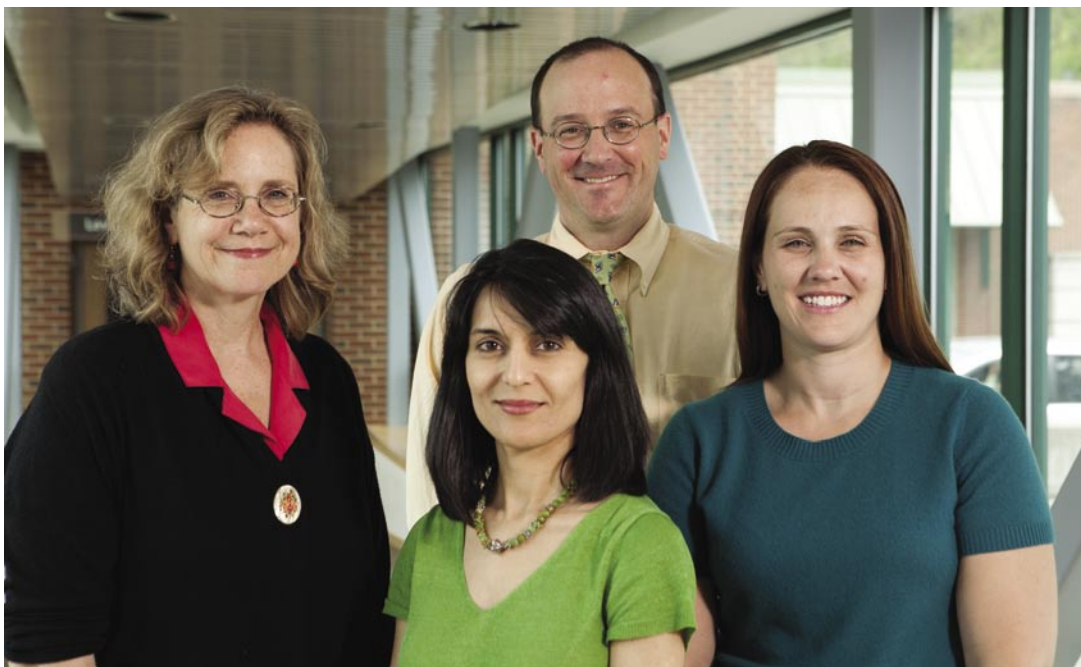
Volume 75 • Number 4 Published by the Worcester District Medical Society July/August 2011

Edmund Kornfeld

215th Annual Oration

www.wdms.org

Presorted Standard
US Postage
PAID
Worcester, MA
Permit No. 467



Meet our growing team (pictured from left): Katharine O'Dell, NP, PhD, Joy Saini, MD, Michael Flynn, MD, and Danielle Patterson, MD.

Expert Urogynecology Care

UMass Memorial Medical Center is delighted to introduce the new members of the Division of Urogynecology. Our fellowship trained urogynecologists will provide your patients with expert care, offering comprehensive evaluation and treatment for a full range of pelvic floor disorders in women. As a part of a major national academic medical center, our experts maintain state-of-the-art knowledge, resources and skills to optimize care for patients now and in the future.

Our team provides highly individualized care, offering a wide range of therapies for urinary and bowel dysfunction and uterovaginal prolapse. While many patients can be successfully managed through conservative and behavioral treatments, others benefit from our advanced and innovative technologies for incontinence and prolapse repair, including:

- Robotic surgery
- Minimally invasive repairs through the vagina
- Midurethral slings (TVTs)
- InterStim® neuromodulation
- Botox® for overactive bladder

Call to make a referral today. Two convenient locations:

Worcester: 508-334-9840 Westborough: 508-870-7281

www.umassmemorial.org



Botox® is a registered trademark of Allergan, Inc. InterStim® is a registered trademark of Medtronic, Inc.

Member Hospitals: UMass Memorial Medical Center (Physician Referrals: 800-431-5151)
Clinton Hospital • HealthAlliance Hospital • Marlborough Hospital • Wing Memorial Hospital and Medical Centers

The Diabetes Center at Fallon Clinic

Setting
new standards
in care



[Redacted text block]

[Redacted text block]

[Redacted text block]

[Redacted text block]



The American Diabetes Association has granted The Fallon Clinic its recognition for meeting the National Standards for Diabetes Self-Management Education.

The Fallon Clinic Diabetes Center at Plantation Street has been recognized by the American Diabetes Association for Quality Self-Management Education.*

The Certification of Recognition from the ADA assures patients that our educational programs in diabetes self-management meet the most stringent national standards.



Treating you well.™

www.fallonclinic.org/diabetes



Paul Steen, MD

The centerpiece of this issue is the 215th Annual Oration entitled “That Which Endures: The Quiet Heroes of Medical Discovery” delivered by Anthony L. Esposito, MD, FACP. This was a fascinating trip through recent medical pharmacologic discoveries concentrating on antimicrobials and some of the interesting people and circumstances surrounding the discoveries

There are three articles involving an event in Florida that began with a physician asking about firearm usage in the home of a patient and led to legislative action assaulting a freely taken and recorded medical history. There is a copy of a resolution introduced by the Worcester delegation at the Massachusetts Medical Society’s House of Delegates. In addition the President’s Message and Dr. Pies’ article on “Why Psychiatrists Should Support Reasonable Firearms Restrictions” address this issue.

Lastly, there is an interesting article on the delayed effects of radiation exposure related to the recent damage to the Fukushima nuclear reactor in Japan. There is a lot to learn in this article about medical issues still in the news.

Paul Steen, MD

WORCESTER
medicine

Worcester Medicine is published by
the Worcester District Medical Society
321 Main Street, Worcester, MA 01608
e-mail: wdms@massmed.org
web: www.wdms.org
phone: 508.753.1579

WDMS Officers

President: Michael Hirsh
Vice President: Peter Lindblad
Secretary: Dennis Dimitri
Treasurer: Robert Lebow

Joyce Cariglia, Executive Director
Melissa Boucher, Administrative Assistant
Francine Vakil, WDMS Alliance

WDMS Editorial Board

Paul Steen, MD, Co-Editor
Jane Lochrie, MD, Co-Editor
Lisa Beittel, MBA
Anthony Esposito, MD
Michael Hirsh, MD
Anne Kane, RN, PhD
Peter Lindblad, MD
Michael Malloy, PharmD
Thoru Pederson, PhD
Joel Popkin, MD
Robert Sorrenti, MD
Peter Zacharia, MD



Publishing, Design, Event Planning, & Web Development

Production and advertising sales by Pagio Inc.
88 Winter St., Worcester, MA 01604
508.756.5006

Paul Giorgio, President
Lara Dean, Sr. Editor
Justin Perry, Art Director
David Simone, Vice President of Sales
Chris Reddy, Account Executive

Worcester Medicine does not hold itself responsible for statements made by any contributor. Statements or opinions expressed in *Worcester Medicine* reflect the views of the author(s) and not the official policy of the Worcester District Medical Society unless so stated. Although all advertising material is expected to conform to ethical standards, acceptance does not imply endorsement by *Worcester Medicine* unless stated. Material printed in *Worcester Medicine* is covered by copyright. No copyright is claimed to any work of the U.S. government. No part of this publication may be reproduced or transmitted in any form without written permission. For information on subscriptions, permissions, reprints and other services contact the Worcester District Medical Society.

contents

Vol. 75, No. 4

JULY/AUGUST 2011

- | | | | |
|-----------|--|-----------|---|
| 4 | Editorial
Paul Steen, MD | 20 | Book Review
Giles F. Whalen, MD FACS |
| 6 | President's Message
Michael Hirsh, MD | 22 | Tribute/Book Review
Thoru Pederson, PhD |
| 9 | That Which Endures:
The Quiet Heroes of
Medical Discovery
Anthony L. Esposito, MD, FACP | 24 | Book Review
Sidney P. Kadish MD |
| 14 | Fukushima:
Current Events and
Delayed Effects of
Radiation Exposure
Thomas J. Fitzgerald, MD | 25 | Financial Advice For
Physicians
Katie Birmingham Weigel, CFP |
| 16 | As I See It
Ronald Pies, MD | 27 | Legal Consult
Peter Martin, Esq. |
| 18 | As I See It
Sambra Redick, PhD and Stephen Doxsey, PhD | 29 | University of
Massachusetts
Medical School Second
Year Oath Ceremony |
| | | 30 | In Memoriam
Charles Luyrink, MD |



On the Cover:
215th Annual Oration

The WDMS Editorial Board and Publications Committee gratefully
acknowledge the support of the following sponsors:

UMass Memorial Health Care
Physicians Insurance Agency of Massachusetts (PIAM)
Fallon Clinic
The Louis Albert Cottle, MD Trust Fund

President's Message

Michael Hirsh, MD



Michael Hirsh, MD

As the newly elected president of the WDMS, one of the privileges one receives is a bully pulpit, i.e. a column in *Worcester Medicine* called "Message from the President" where I can pick a topic of my choice to discuss with our readers/members.

So here it is, my inaugural column; the topic will be "Democracy in Action." One of the main goals for my presidency is to attract and inspire our youngest members

in the Central Mass Community ~ medical students, residents, fellows and young attendings alike ~ to come to the same realization that I have: organized medicine can be relevant, current and important in helping physicians to advocate for their patients and for public health issues and to develop strong bonds and steadfast colleagues in the area.

There is no better illustration of this than my recent adventure in advocacy through the House of Delegates (HOD) meeting of the Massachusetts Medical Society (MMS) this May 19-21. You may recall in our last issue of *WorMed* that I tried to alert our readers about a Florida state legislature law that since then has been passed and, as I pen this column, is sitting on Florida Governor Rick Scott's desk awaiting his signature. This law makes it a crime punishable by fine, dislicense and sanctions within the Florida Board of Registration of Medicine (FBORM) for a physician to ask a patient/parent /guardian of a patient about gun ownership status/storage/safety behaviors. The law got through both houses of Florida's state legislature because the Florida State Medical Association cut a deal with the NRA and the bill's sponsors so that those questions could be asked only if the answers were necessary for the care of the patient and not merely hypothetical. Additionally, jail time was eliminated and fines were left in the hands of the FBORM.

At a Public Health Committee meeting of the WDMS, Leonard Morse, former president of the WDMS and the MMS and the recently retired Worcester Public Health Commissioner, upon hearing about the pending Florida legislation, encouraged me to draft a resolution for the MMS HOD to express our dismay as a district at this incursion on the sanctity of the doctor-patient relationship, this interference with the public health, and this violation of the 1st Amendment rights of physicians

in favor of 2nd Amendment rights of gun owners and their politically powerful representatives, the National Rifle Association.

So write a resolution I did, with the help of Drs. Morse and Broadhurst. The Delegation of the WDMS to the MMS HOD met and discussed it ~ and as a District we approved it. Along the way, we picked up a groundswell of support from the student section of the MMS ~ thanks to the efforts of first year UMMS student Matt Janko ~ and from the psychiatric community in the form of a supportive blog entry on a major psychiatric medical blog site (Psych Central, www.hsph.harvard.edu/research/hicrc) written by new friend and ally Ron Pies.

The resolution inspired tremendous and vocal discussion within the WDMS, and much the same response was encountered in the reference committee hearings where I presented it on 5/19. There were critics who felt that MA should not take shots at Florida. Others were concerned that we should leave the gun out of the protest ~ making our outrage a generic complaint about government interference with the charts and interviews of our patients. I left that Thursday evening afraid that we would water down the resolution and potentially miss the fact that gun safety among our patients is a tremendously important part of maintaining their safety in the home. In March, a 6 year old Houston student had injured himself after two classmates brought a loaded gun to kindergarten. The day before Mother's Day, a three year old in Charleston, S.C. killed herself with a loaded gun that she found on a windowsill. The danger to our populace is real and will not be made better if physicians are hogtied.

To my delight, the reference committee did some very appropriate word-smithing with the resolution I proposed, and the resolution passed. The MMS is recommending the AMA take a leadership role in preventing this type of legislation from spreading as the NRA bankrolls this wave in state legislatures in South Carolina, Arkansas, and Alabama.

So I can tell you as I begin my term as WDMS President, I have already been impressed that our district is vibrant, cutting-edge and on top of current events affecting the care of our patients. I hope non-members reading this might be encouraged to give membership serious consideration. WDMS can offer the collegiality, advocacy, and results that you might not be able to achieve alone. I look forward to chatting again in our next issue. Thanks for listening.

“The Imperative for an Unrestricted Medical History”

Massachusetts Medical Society House of Delegates Resolution 405

MASSACHUSETTS MEDICAL SOCIETY HOUSE OF DELEGATES

Code: Resolution: 405, A-11 (D)

Title: The Imperative for an Unrestricted Medical History

Sponsors: Michael Hirsh, MD

James Broadhurst, MD

Leonard Morse, MD

Referred to: Reference Committee D

Vicki Noble, MD, Chair

Whereas, Promotion of a sound public health system is a Massachusetts Medical Society strategic priority; and

Whereas, The Florida State Legislature recently considered legislation (HB155, SB432) that would prohibit Florida physicians from asking their patients or the parents and guardians of their patients whether there is (or was a gun) in the home unless clearly related to a patient-related issue;¹ and

Whereas, In the United States, approximately 35,000 lives are lost annually from firearm injury;² and

Whereas, The National Centers for Disease Control and Prevention (CDC) reports that a gun in the home is 22 times more likely to injure a resident in that home than an intruder/criminal;³ and

Whereas, The American Academy of Pediatrics has determined that one of the key injury prevention measures that can help improve the safety of pediatric patients is to encourage pediatricians, family physicians, and emergency department physicians caring for children to ask their parents if there is a gun in the home and, if so, if it is stored, locked, unloaded, and inaccessible to children;⁴ and

Whereas, The latest CDC information recognizes an increase in firearm injuries in states with increased access to firearms as the result of easier carry, concealment, and gun purchase laws;⁵ and

Whereas, Violence continues to exist in our society; and Whereas, There are almost twice as many gun deaths from suicide as from homicide;^{6,7,8} and

Whereas, A complete medical history includes the potential risk(s) of one's environment; and

Whereas, In the opinion of some, the First Amendment rights of

both doctors and their patients are infringed upon by this proposed legislation; and

Whereas, The imperative of the doctor-patient relationship is governed by the tenets of the Hippocratic Oath, the Oath of Maimonides, and the laws of nature beyond the realm of legislators and government; therefore, be it Resolved

(Adopted as Amended)

1. That the Massachusetts Medical Society is strongly opposed to legislative interference in the right of physicians and patients (or their parents or guardians) to discuss gun ownership, storage, and safety in the home. (D)

2. That the MMS record its opposition to any legislative or regulatory limits on a physician's ability to take a complete history and document relevant portions of the history into the permanent medical record. (D)

3. That the MMS advocate that the AMA take a leadership role in opposing legislative interference in the physician-patient relationship and the physician's efforts to discuss and record the patient's history, including questions about gun safety. (D)

Fiscal Note: No Significant Impact
(Out-of-Pocket Expenses)

FTE: Existing Staff
(Staff Effort to Complete Project)

Footnotes

1 www.myfloridahouse.gov/default.aspx. March 29, 2010.

2 Ikeda RM, Gorwitz R, James SP, et al. Fatal firearm injuries in the United States, 1962–1994. *Violence Surveillance Summary Series*.

3 Kellermann AL, Somes G, Rivara FP, Lee RK, Banton JG. Injuries and deaths due to firearms in the home. *Journal of Trauma, Injury, Infection and Critical Care* 1998;45(2):263-267.

4 American Academy of Pediatrics. The role of the pediatrician in youth violence prevention in clinical practice and at the community level. *Pediatrics* 1999;103:173-181.

5 Centers for Disease Control and Prevention. Trends in rates of homicide — United States, 1985–1994. *MMWR* 1996;45:460-464.

6 <http://jama.ama-assn.org/content/283/9/1202.1.full.xref-ref-15-1>. March 29, 2011.

7 Kellermann AL, Rivara FP, Rushforth NB, et al. Gun ownership as a risk factor for homicide in the home. *N Engl J Med* 1993;329:1084-1091.

8 Kellermann AL, Rivara FP, Somes G, et al. Suicide in the home in relation to gun ownership. *N Engl J Med* 1992;327:467-472.

A promotional image for Enterprise cleaning corporation featuring three team members dressed as superheroes. A man in the center wears a dark suit with a glowing 'E' logo and sunglasses, holding a spray bottle. He is flanked by two women in red capes and sunglasses, one holding a duster and the other a broom. The background is a stylized, purple-tinted cityscape with motion blur.

ENTERPRISE
cleaning corporation

**Want your building 'super hero' clean?
Call the Enterprise Team.**

There's CLEAN and there's ENTERPRISE CLEAN!

We manage OUR cleaners so YOU don't have to. 508-890-1000 • www.enterprisecleaningcorp.com



Your ONE STOP SHOPPING Resource

*Through PIAM you have access to specialized insurance programs, financial services and practice services. Many products have **exclusive discounts** for MMS Members.*

- Business Coverage, Professional Liability, D&O, E&O
- Practice Services: Banking, Loans, Medical Supplies, Healthcare Apparel
- Personal Insurance, Homeowners, Auto
- Health, Life, Disability, Long-Term Care
- Financial Planning, Investment Management



MASSACHUSETTS
MEDICAL SOCIETY

800.522.7426
www.piam.com

PIAM
a subsidiary of the Massachusetts Medical Society

That Which Endures: The Quiet Heroes of Medical Discovery

Anthony L. Esposito, MD, FACP



**Anthony L. Esposito,
MD, FACP**

Imagine this: you are five hours into 13 hour flight from San Francisco to Sydney, Australia, but with soothing visions of the Great Barrier Reef, brilliant sunshine and immense blue seas, you are mellow indeed.

Your reveries dissolve, however, when the PA system crackles to life and a wavering voice asks, “Is there a doctor aboard?”

Confident of your abilities and perhaps inflated by that second glass of wine, you rise, scan the cabin, and, seeing a cluster of attendants at the back of the plane, stride quickly toward them. With your words “I’m a physician,” the crowd parts.

An ancient man huddles beneath several blankets, his head alone protruding above the black shroud. His skin is as white as the hair on his head, and his brow is stippled with sweat. His breathing is rapid and deep, his breath ominously fruity.

You nod a greeting and place your fingers on his neck. His skin is cold and clammy and his pulse is chaotic and feeble. Your warm touch rouses him, and he stares at you, his sunken eyes lit with confusion and fear.

You bend towards him, and as if on cue, galvanic chills lift the pitiable figure, seemingly intent on throwing him to the floor. You place a comforting hand on his quaking shoulder.

The man’s spasms seem to animate the stout woman seated to his right. After studying her companion, she frowns, shifts her gaze to you, and asks in a voice edged with challenge, “So, you’re a doctor?”

You compose your most professional expression and nod reassuringly.

“Good luck with this one,” the woman says with a snort. And before you can ask a question, she adds, “His doctor gave him an antibiotic for an infection in his prostate, but he didn’t take it...no, the genius didn’t even get the prescription filled...said the \$25 copay was too much...said it would cost less to get the drug in Australia.”

You nod with understanding.

“Did he take his insulin this morning?” she continues. “Who knows? And where are his needles and syringes?”

You shrug.

Shaking her head in disbelief, she says, “He put them in the checked bags...said he didn’t want security to think he was a drug addict.” Twisting in her seat with some effort and waving a finger at the shivering bundle, she adds, “Look at him: 83 and with hair growing out of his ears. Does he look like an addict to you?”

You shake your head in agreement. “No,” you say to yourself, “no addict here, just an elderly man with sepsis and diabetic ketoacidosis.”

In your mind’s eye you see with powerpoint clarity the figures that explain to a molecular level the diseases rampaging before you. And you envision the therapeutic algorithms for treating each: the evidence-based plans for repulsing the malevolent, microscopic invaders and for halting the metabolic flood of acid and osmols. Then your gaze descends from your desperate patient to your empty hands. And your heart sinks.

You look right and left, hoping to spot another physician or, better yet, a nurse; a nurse is always the best solution to a difficult situation.

Alas, you are alone but for a flight attendant who appears much too young to understand the gravity of the situation.

The attendant leans towards you and whispers, “The Captain says we won’t be able to land anywhere for at least three hours.” Moving closer she adds, “One of the passengers gave me a bottle of nitroglycerin.”

You glance down at the brown bottle she cradles in her palm, and then at the pallid man whose pleading eyes transfix.

“So, what now doctor?” asks your patient’s companion, a quiver in her voice revealing a dawning panic. “What’s the plan?”

“The plan?” you ask yourself. “The plan? The plan is for me to parachute out of this plane.”

Then, inhaling deeply to steel yourself for what is to follow, you turn to the flight attendant and whisper, “Hold onto those nitros. I’ll be needing one myself before this is over.”

The Lord hath created medicines out of the earth; and he that is wise will not abhor them. ~Ecclesiasticus 38:4

Our power as physicians to prevent, control or cure disease flows from the merging streams of knowledge, training and experience and from our great reservoir of tests and therapies.

Each of us can describe where we acquired basic medical knowledge, post graduate training, and clinical seasoning, in part because the experiences of medical school, residency and clinical practice have been so powerful and immediate. And each of us can recall with appreciation the mentors who helped us merge medical knowledge with clinical skills to yield competency and perhaps even mastery.

What remains a mystery to most of us are the names and stories of those who have given us the tools to treat and cure our patients, tools which are the real source of our power as healers.

I suspect that as I was presenting the story of the elderly diabetic with sepsis and ketoacidosis, some of you envisioned the diagnostics and therapeutics you would order if he were your patient. But the topic for your consideration centers not on the things we might do to treat an illness, but rather on those men and women whose minds conceived and whose hands forged the tools of our trade, the tests and therapies we routinely employ to prevent or relieve suffering.

Allow me to present one story of medical discovery, a story of several men whose humble service gave us only a single medication,

but a drug that over many decades has cured thousands of desperately ill human beings.

The 1940s had drawn to a close, and the country was turning its focus from the grim days of World War II to the future, which from American shores looked bright indeed. In the world of medicine, however, one threatening cloud darkened the horizon. That dark form, that fear, was that after only one decade, the antibiotic era might be coming to an end. Unthinkable, but penicillin, the miracle drug, appeared to be losing its power.

True, penicillin could still cure most patients with infections that only a few years earlier had been uniformly fatal: the young adult with viridans endocarditis, the post-partum female with streptococcal puerperal sepsis, and the child with pneumococcal or meningococcal meningitis. But in the late 1940s, strains of *Staphylococcus aureus* (at the time termed *Staphylococcus pyogenes*) resistant to penicillin had appeared in hospitals, and by the early 1950s, patients admitted with common infections such as pneumococcal pneumonia and cured with penicillin were becoming secondarily infected with *Staphylococcus aureus* and often dying of the superinfection. In 1950, Leslie Spink noted, “The incidence of strains of staphylococcus highly resistant to penicillin is increasing at an alarming rate.” He concluded, “...penicillin cannot be employed with a comfortable degree of confidence in the therapy of staphylococcus infections.”

To be sure, other antibiotics became available in the late 1940s and early 1950s. However, within months of the introduction of these agents, including streptomycin, aureomycin, terramycin and chloramphenicol, resistant strains of *Staphylococcus aureus* (and other bacteria) emerged in hospitals. Phyllis Roundtree and Edgar Thompson reported in 1952, “The new strains [resistant to penicillin and other antibiotics] have become well established in the hospital environment, both in the bedclothes and dust of the wards and in the noses of the nurses and doctors.”

Antimicrobial discovery in the 1940s and 1950s was not based on complicated biosynthetic processes nor, of course, on computer generated molecular models. No, the scientific approach to antibiotic development paralleled that which led to the introduction of penicillin.

In the 1870s, several observers reported that *Penicillium* mold found on oranges and jam produced a substance with antibacterial properties. In 1928, Alexander Fleming, a biologist, isolated the substance, which he labeled penicillin. Fourteen years later, in 1942, penicillin was first introduced into clinical use, and in 1944, the miracle drug became widely available.



Figure 1
Edmund Kornfeld

Actinomycetes and streptomycetes, ubiquitous microbes present in soil and decaying vegetation (and sometimes termed “soil molds”), were quickly recognized as potential sources of novel antibacterial compounds. Thus, in 1945, tetracycline was isolated from a golden actinomycete by Benjamin Duggar, a retired botany professor working in Lederle Laboratories in New York. In 1947, chloramphenicol was recovered

from an actinomycete by Gerald Langham, an agricultural geneticist working in Venezuela. And in 1952, erythromycin was isolated by Robert Bunch and James McQuire, biochemists working at Eli Lilly and Company in Indianapolis, from a streptomycete found in a soil sample from the Philippines.

In short, the Ecclesiasticus admonition that “He who is wise should not abhor medicines that come from the earth” was adopted with fervor by scientists of the era who coveted soil from exotic places, soil which might harbor microbes elaborating novel antibiotics.



Figure 2
Reverend William Conley

One such scientist was Edmund Kornfeld (Figure 1), who received his PhD in chemistry from Harvard in 1944 and subsequently joined Eli Lilly and Company in Indianapolis. In 1951, Kornfeld wrote to a friend, the Reverend William Conley (Figure 2), a former U.S. Army chaplain with the 82nd Airborne Division who was a missionary in Borneo. Kornfeld explained Lilly’s botanical screening program and sent along several sterile vials. Within a month, Conley returned the vials with the comment, “I certainly hope there is something promising in our dirt out here, but if our attempts at gardening are any measure, I cannot say the prospects are promising.”

Kornfeld did not isolate a new antibiotic-producing organism from the original samples, and he sent Conley a second request and additional vials, urging the missionary to “...collect samples off the beaten track, away from towns and villages.”

We Are Central MA Entertainment



Vitality
magazine

Taste
WORCESTER
Explore Central Massachusetts Cuisine

the **PULSE**
A lifestyle & entertainment magazine

thevitalitymag.com
tasteworcester.com
thepulsemag.com



sites updated and maintained by Pagio Inc.

Publishing House Event Planning
88 Winter St., 2D Worcester MA
508-756-5006



Figure 3
William Bouw

Conley was scheduled to leave Borneo on furlough and could not fill the new vials in a timely fashion. However, before departing, he asked a fellow missionary, William Bouw (Figure 3), to collect samples from a remote area of Borneo where he worked. Bouw consented and forwarded new samples to Indianapolis. In 1953, Kornfeld and his team isolated a previously unknown microbe, *Streptomyces orientalis*, which produced a unique compound designated 05856.

The in vitro properties of 05856 ~ the way the chemical behaved in the test tube ~ were remarkable: the antibiotic killed all staphylococci, including the penicillin-resistant strains causing havoc in hospitals. The drug's ability to inhibit staphylococci was very stable in pivotal serial passage assays, suggesting the agent might be clinically useful for a long period of time, a property lacking in penicillin, chloramphenicol, tetracycline and other available agents.

One of the early laboratory challenges confronting Kornfeld and his team was the difficulty in purifying compound 05865. The original purification method employed picric acid, a potentially explosive chemical, and as a result, an alternate process was developed. However, the new method yielded material with a purity of only 82% and when solubilized, produced a brown liquid aptly termed "Mississippi Mud." The impurities were to contribute to much of the toxicity forever associated with the agent. In any case, as the need was dire, the initial preparations were felt to be safe enough for use in humans.



Figure 4
Richard S. Griffith

The first human trials of compound 05865 occurred in the early 1950s and were quaint by contemporary standards. Richard S. Griffith (Figure 4), a physician and Eli Lilly clinical investigator, wrote, "The high specificity of the new antibiotic 05865 against staphylococci and relatively low toxicity in animals warranted clinical trial as soon as possible. We needed a patient..." As a result, house officers at several Indianapolis hospitals were asked to identify potential candidates. Dr. Griffith noted, "Many possible cases were seen. All were passed over because they were mild and would have healed themselves, because adequate therapy with other antibiotics had not been administered, or because the patient refused trial when told this was a new medication. Then one morning a surgical resident called and said, 'We have a patient for your new antibiotic.'

This man had developed a severe infection of his foot following surgery. He had received large doses of all the available antibiotics, alone and in combination, systemically and topically, without improvement, and sensitivity studies showed that the staphylococci in his wound were resistant to all of these antibiotics. The foot and the lower leg were tremendously swollen and indurated, and there were several sinuses draining pus. The surgical staff recommended amputation. We told him about this new antibiotic and he said, just as any of us would have said, 'Anything that might save my foot.'

Because of the urgency of the case, we had to raise the dosage much more rapidly than we would have liked in order to get the therapeutic results as quickly as possible to save the man's foot. In five days he was getting 100 mg every eight hours and he felt better. Heat was disappearing out of his foot; his white cell count was dropping; and the exudate from his wound was less. During the next seven days the staphylococci disappeared from the wound, and his foot was free from signs of infection.... Then we ran out of 05865. While we held our breath he continued to improve and two months later he left the hospital with an intact foot."

Because of such dramatic clinical results and the expectation that 05865 would vanquish staphylococcal disease, the drug was named vancomycin.

The medical community became aware of vancomycin when case vignettes like the one above were presented at national meetings. Dr. Griffith wrote, "After the 1955 Antibiotic Symposium, word soon got around that Lilly had an experimental antibiotic that looked promising against resistant staphylococci. We began to get appeals for help in desperate cases of staph infection that had not responded to other antibiotics ~ meningitis, pneumonia, septicemia and endocarditis. The telephone rang not only during the day but at night and during weekends."

The need for the drug was so great that by 1956, vancomycin was being sent from Indianapolis to physicians throughout the country. "A lawyer's 11 month-old baby was dying of staphylococcal meningitis in California," reported Griffith. "The organism was resistant in the laboratory to all antibiotics, and three had been tried in combination with no response. Again came that call for help. The doctor was sent Vancocin. 500 mg were given into the jugular vein of this 11 month-old baby and were followed by a total of 1 gram over the next 36 hours. This brought about a dramatic cure."

In 1958 vancomycin was approved for use by the FDA.

In the 1960s, other drugs with activity against penicillin-resistant *S. aureus* ~ methicillin in 1960 and cephalothin 1964 ~ became

available, and the use of vancomycin fell, since the newer drugs had fewer side effects. However, with the emergence of methicillin-resistant *S. aureus* in the 1970s and with the recognition that the drug was effective in treating patients with *Clostridium difficile* colitis, the use of vancomycin surged. Now, more than fifty years after its introduction, vancomycin remains a potent weapon in our antimicrobial armamentarium.

With sound reason, their contemporaries and history have been kind to Alexander Fleming, who discovered penicillin, and to Ernest Chain and Howard Florey, who moved Fleming's work from the realm of biological curiosity to that of clinical practice: all three were awarded the 1945 Nobel Prize for Physiology or Medicine "...for the discovery of penicillin and its curative effect in various infectious diseases," and all three were knighted.

What of the compulsive chemist, Edmund Kornfeld, the generous missionaries, William Conley and William Bouw, and the physician-investigator, Richard Griffith? The public record offers only the smallest of glimpses into their lives.

Edmund Kornfeld worked for many years at Eli Lilly, where his scientific efforts led to a number of discoveries in the area of medicinal heterocyclic compounds. Like Conley and Bouw, Kornfeld held deep religious convictions and wrote on how he reconciled his religious beliefs with his scientific grounding. "Faith," he suggested, "is neither irrational nor subrational, but in a wider sense it is perhaps superrational ~ above and beyond the confines of man-made logic." He is alive and 91 years of age.

William Conley earned degrees in theology and anthropology and taught at several seminaries; he died in 2010 at age 93.

William Bouw and his wife, who was also a missionary, served in posts around the world; he died in 2006 at 88 years of age.

Richard Griffith also worked at Lilly for many years and participated in clinical studies that preceded the introduction of other novel antibiotics, including the first 1st generation cephalosporin ~ cephalothin ~ in the early 1960s, and the first 2nd generation agent ~ cefamandole ~ in the mid-1970s. He retired as a Professor of Medicine at the University of Indiana, and died in 1994 at 74 years of age.

One wonders if Kornfeld, Conley, Bouw, Griffith or their coworkers ever fully appreciated the everyday medical miracles they helped create. Similarly, one wonders if they considered their roles in bringing vancomycin into existence an important accomplishment in their professional careers or merely a footnote.

William Conley, William Bouw and Richard Griffith have passed, and Edmund Kornfeld is quite elderly. Eli Lilly and Company no longer engages in antibiotic discovery or development. And vancomycin is being gradually supplanted by antibiotics developed specifically to treat patients infected with MRSA, *C. difficile* and vancomycin-resistant enterococci (VRE). Thus, under the hands of science and time, the greater and lesser stories of medical discovery are inexorably overlaid by newer and equally compelling narratives. So, what does endure?

What endures is the desire of men and women to play some role in the search for answers to vexing questions of human suffering. And because of what has been and what will be accomplished by so many nameless people propelled by simple good will, or scientific ardor, or even more self-serving impulses, most physicians rarely feel hopeless when confronting virulent disease or have the urge to bail out when faced by patients in dire need.

Dr Anthony Esposito is the Chief of the Department of Medicine and Director of the Division of Infectious Diseases and Geographic Medicine at St. Vincent Hospital.

Acknowledgements

Lisa E. Bayne, Archivist, Eli Lilly and Company, Indianapolis, IN

Arthur DesChamps, Library Technician, Saint Vincent Hospital, Worcester, MA

Jenn Whiteman, Managing Archivist, Christian and Missionary Alliance of New York City, NY

Sources (selected)

Anderson RC, Griffith RS, Higgins HM, Jr and Pettinga CD. Symposium: how a drug is born. Cincinnati J Med 1961;42:49-60.

Griffith RS. Introduction to vancomycin. Rev Infect Dis 1981;3:S200-4.

Roundtree PM and Thompson EF. Incidence of antibiotic-resistant staphylococci in a hospital. Lancet 1952;2:262-5

Spink LW. Clinical and biologic significance of penicillin resistant staphylococci, including observations with streptomycin, aureomycin, chloramphenicol and terramycin. J Lab Clin Med 1951;37:278-93.

Shnayerson M and Plotkin MJ. The killers within: The deadly rise of drug resistant bacteria. Boston, MA, Little Brown and Company, 2002, pp. 40-43.

Cooper GL and Given DB. Vancomycin: A comprehensive review of 30 years of clinical experience. New York, NY, Park Row Publishers, Inc., 1986.

Fukushima: Current Events and Delayed Effects of Radiation Exposure

Thomas J. Fitzgerald, MD

The events surrounding the recent catastrophe in Japan remind us of the need to re-visit radiation safety and assess our readiness to respond to a radiation emergency like that seen at Fukushima. The nuclear plants at Fukushima are older, with early generation safety design. Current nuclear facilities both in development and operation have the benefit of 50 years of design evolution and operational practice. At most boiling water nuclear power plants such as Fukushima, neutron absorbing control rods are pushed upward from below the core to limit the fission chain reaction in the event of an emergency. However, at Fukushima, the tsunami eliminated the nearby secondary power source, and therefore the control rods could not be elevated into the standard safety position. Modern power plant design keeps the safety rods above the core, held in place by electromagnets; if there is an interruption of power, they are released and fall into position by gravity. This crucial safety precaution could not be accomplished at Fukushima due to lack of secondary power.

Heat dissipation is a crucial element in reactor safety as heat can impose further structural decay and an explosion of radioactive gas. If pumps and power are required for cooling elements, lack of secondary power for an extended period of time ~ as was the case with Fukushima ~ can have devastating impact. Modern power plants feature depressurization valves and upper pools of water replenished by natural systems that cool nuclear systems by gravity and convection. Lower pools are used to condense steam from the core, and hence can remain functional in spite of primary and even secondary power loss. This permits workers on site to address issues in a timely manner and with less risk. The challenge of the future will be to establish a clear and safe strategy to manage spent fuel. Modern reactors mobilize fuel to an earthquake-proof building. At plants similar to Fukushima, spent fuel is moved to an elevated pool above the reactor, rendering the plant susceptible to leakage when

faced with an unanticipated event such as an earthquake. This event will, as did the accidents at Three Mile Island and Chernobyl, accelerate the need for a strategy to address storage of spent fuel.

The immediate and long term effects of accidents and nuclear events are significant. Immediate death from an accident is often thermal in origin; however, exposure to 10 Gy will result in swelling of the central nervous system and death within 24 hours of

It remains unknown whether risks are equivalent whether the exposure is from a single event or from an insidious constant exposure over an extended period of time.

exposure. An exposure of 2 Gy without benefit of blood and fluid support will result in gastrointestinal and bone marrow toxicity causing death for 50% of people within 30 days, as acute exposure affects cells with rapid self-renewal potential. Delayed or late effects of exposure can affect cell systems of both rapid and limited self-renewal potential and can lead to the development of malignancies.

Most information on this topic has been generated from nuclear events of the past including those at Hiroshima and Nagasaki; two hundred thousand (200,000) people died from those detonations. 94,000 survivors with known radiation exposure were followed and compared with a cohort of 26,000 unexposed controls. There was a 45% increase in leukemia deaths and an 11% increase in solid tumors. The risk of developing a solid tumor appears to extend over the lifetime of the individual exposed. From 1948 until 1972, 21,000 workers at a nuclear weapons facility at the Mayak-Teche River in Russia and 30,000 nearby villagers were exposed to various doses of radiation (including some from plutonium-239) and the data on malignancies is proving similar to that gathered from people exposed to atomic bomb radiation. At Chernobyl in the Ukraine, there have been 6,000 new cases of thyroid cancer reported since the explosion, largely due to radioactive iodine contamination of food and milk. It remains unknown whether risks are equivalent whether the exposure is from a single event or from an insidious constant exposure over an extended period of time.

Countermeasures in response to radiation exposure remain limited. There are multiple reasons for this as there is no clear commercial market and government emphasis has been placed on defenses for biological weaponry attacks. Potassium iodide is used to saturate the thyroid, thus limiting uptake of radioactive iodine, but this intervention has no utility for other areas of exposure. Growth factor delivery as well as support with fluid and blood products have been the traditional medical response to exposure, with organ or skin transplants reserved for those with significant exposure. There are medications in development that promote factors that inhibit apoptosis (cell death) after exposure as well as ones that prevent over-production of certain lipids identified after exposure which appear to de-stabilize vascular membranes. The field of radio-protectants is still nascent, with no demonstrated efficacy to date in traditional clinical trials. Clinical studies of compounds in development will need to convince the FDA that a candidate drug has the identical mechanism of action in animal models as well as in healthy human subjects.

The events at Fukushima remain a grim reminder of the risks and consequence associated with reactor technology and radiation health. 30 of the 54 reactors in Japan have similar technologies to those used at Fukushima. Nuclear technology remains an important component of world energy: there are 104 reactors in the United States, seventy percent of the electricity generated in France is from one of the 58 reactors in that country, Russia has 11 reactors under construction, and China has 27 in development. As we move forward with expanding nuclear power, safety and damage prevention must remain the first priority.

Thomas J. Fitzgerald, MD is Professor of Radiation Oncology, Radiation, BO/GYN and Pediatrics at UMass Medical Center.





acclaim

Home Health Care Inc.

- Highly trained professionals.
- No delays in SN, PT, OT, ST, SW, or HHA.
- Multilingual Clinical Staff.
- Close working relationship with Physicians.

237 Chandler Street
Worcester, MA 01609
Ph#: 508-459-6937
Fax: 508-459-4154
www.acclaimworcester.com

Insurances include Medicare, Blue Cross Blue Shield, MassHealth, Fallon Summit, ElderPlan, Senior Whole Health, Evercare, Neighborhood Health Plan, and Network Health.

Towns include Worcester, Shrewsbury, Millbury, Paxton, Holden, Grafton, West Boylston, Leicester, and Auburn.

"Working to keep you in your home."



Prescription for Success!

Advertise in the next Worcester Medicine

Contact David Simone at 508-756-5006 ext. 03
or dsimone@pagoinc.com



SAINT JOHN'S

A Xaverian Brothers Sponsored School

What do you want for your son's high school experience?

Challenging Academics:

- Named by the Siemens Foundation and the CollegeBoard as leading Massachusetts in AP Math, Science, and Technology

Formation of Values:

- 110 year tradition of intellectual, moral, and spiritual education

Transformational Experience:

- 18 varsity sports and 50 clubs for a well-prepared and well-rounded young man

For Information Regarding Admission and Financial Aid Contact:

ST. JOHN'S HIGH SCHOOL

Admissions Office: 508-842-8934, ext. 266/230
Visit our website: www.stjohnshigh.org

Why Psychiatrists Should Support Reasonable Firearms Restrictions

Ronald Pies, MD

In the wake of the horrific shootings in Tucson, what have we as a nation learned? Despite a deluge of blogs and commentaries, I'm not sure we have learned very much. Consider this: two weeks after the shootings, according to the Jan 31 New York Times, undercover investigators were legally able to buy semi-automatic pistols at an Arizona gun show ~ even after telling the sellers, "I probably couldn't pass [a background check]...." No such checks were performed. Imagine that instead of an undercover agent, the buyer was someone with untreated psychosis and substance abuse, intent on killing another public official. Much has been written on the need to improve access to mental health care in the U.S., particularly for the very small fraction of persons with severe mental illness who are prone to violence ~ the risk of which is largely a result of co-morbid substance abuse. Indeed, we must improve our mental health care system, especially in cases requiring court-mandated treatment. But psychiatrists cannot be credible advocates for their patients' health and safety without also being proponents of reasonable firearms restrictions. And, no ~ that does not mean confiscating guns, banning hunting, or repealing the second amendment. It does mean taking sensible steps toward reducing the lethality and availability of certain kinds of guns and ammunition.

Firearm violence is an enormous problem in this country. According to research from the UCLA and Harvard Schools of Public Health, homicide rates in the U.S. are nearly 7 times higher than rates in other high-income countries, driven by firearm homicide rates nearly 20 times higher. In the 15-24 year old population, firearm homicide rates are almost 43 times higher in the U.S. than in other high-income countries. Moreover, contrary to some much-publicized claims, both homicide and firearm homicide rates in the U.S. are generally higher in areas with increased gun presence. Furthermore, permissive policies regarding carrying guns have not reduced crime rates, according to Dr. Garen Wintermute in the April 3, 2008 New England Journal of Medicine. Suicide rates, according to the UCLA-Harvard study, were actually 30% lower in the U.S. than in comparison countries ~ but the U.S. firearm suicide rate

was almost 6 times higher. Unintentional firearms deaths were also about 5 times higher in the U.S. versus comparison countries.

But these numbers don't tell us why lethal violence is so widespread in the U.S. Are we inherently a more violent people than, say, people in Japan, the U.K., or Slovakia? The UCLA-Harvard researchers, Erin Richardson and David Hemenway, impugn that hypothesis, for when we examine non-lethal crime and violence rates, the U.S. is comparable to the other countries studied. The authors hypothesize that we are an "average" country in terms of violence per se, but that our firearms crime rate may be driving up our non-firearms homicide rate. For example, a drive-by shooting by one gang may provoke retaliatory gang killings by individuals using other deadly means. Importantly, firearms make killing extraordinarily efficient ~ especially when semi-automatic weapons with high-capacity clips or magazines are involved, as was the case in the Tucson shootings. An attacker wielding a knife simply cannot take down twenty people in thirty seconds.

Suicide rates in the U.S. are slightly lower than average, but the profusion of guns here increases the lethality of many suicide attempts. The UCLA-Harvard researchers opine that U.S. suicide rates would likely be even lower, relative to other countries, if firearms were not so readily available. Some insist that limiting the availability of firearms will merely result in suicide by other means. But appropriate firearms restrictions may buy valuable time, particularly when the suicidal individual impulsively seeks to buy a gun. Thus, Andrew Slaby, MD, writing in the August, 2001 Psychiatric Services, recounted the story of a suicidal man in New York State who tried to buy a gun in a sporting goods store, only to be told that it takes six months to obtain a gun license. Temporarily put off, the man found his way into psychiatric treatment and subsequently improved. Finally, numerous case-control studies in the U.S. find that a firearm in the home increases the likelihood of both firearm suicide and overall suicide, for everyone in the household.

Placing sensible restrictions on firearms is not a "liberal" or a "conservative" position. Such restrictions have been advocated by groups as diverse as the American Psychiatric Association and the International Association of Chiefs of Police (IACP). Psychiatrists are sometimes called "ambassadors of reality." It is now time for us to become ambassadors of responsibility. We must become advocates for reasonable limitations on firearms sales and lethality.

Acknowledgment: reprinted with permission from Psychiatric News.

Ronald Pies, MD is Professor of Psychiatry, SUNY Upstate Medical University Syracuse NY, Clinical Professor of Psychiatry, Tufts University School of Medicine, Boston, and a member of MMS.



Vitality
Magazine 50+
FOR TODAY'S ACTIVE ADULTS

Want to attract customers
who appreciate the
arts & culture in Central MA?
REACH THEM THROUGH VITALITY!

Special Caregiver Section Inside:
ParentCare

Find out about Vitality Today!
Contact Sales Manager David Simone
at 508.756.5006 or e-mail dsimone@pagioinc.com
THEVITALITYMAG.COM

ENTERTAINMENTCENTRALMA.COM

An on-line experience of what
Central Massachusetts has to offer.

Vitality
magazine

the **PULSE**
A lifestyle & entertainment magazine

**CENTRAL MA
DINING GUIDE**

the **PULSE** Guide to the
DCU center

Taste
WORCESTER
Explore Central Massachusetts' Cuisine.

wormtown nightlife



sites updated and maintained by Pagio Inc.

Publishing House - Event Planning
88 Winter St., Worcester MA
508-756-5006

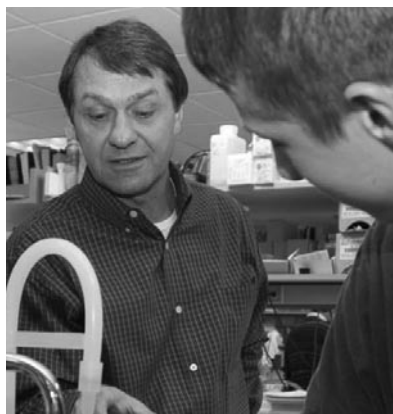


UMass Labs for Local Area High Schools

Sambra Redick, PhD and Stephen Doxsey, PhD



Sambra Redick, PhD



Stephen Doxsey, PhD

Earlier this year, the College Board announced a revamped Advanced Placement biology curriculum. The new AP exam has shifted focus from memorizing facts to critical thinking and understanding concepts. There is less rote memorization and more focus on discovery-based learning in the laboratory.

Worcester, it seems, has been ahead of the times. For more than a decade, UMass Labs for Worcester High Schools has given Worcester area high school students access to state of the art research labs where they gain hands-on lab experience. This program ~ the brainchild of the laboratory of Stephen Doxsey, UMass Professor of Molecular Medicine and Jane Raabis, North High School biology teacher and Science Department Chair ~ began with the North High School AP Biology class and has grown to include the AP Bio classes from Burncoat, Doherty, and South High Schools. With recent grants from United Bank Foundation and the UMass Public Service Endowment, and a microscope donation from Carl Zeiss, the program will expand next year to include Shrewsbury High School.

The lab exercises in the UMass program are certainly not the canned, predictable experiments that many of us remember from high school because they reflect the ongoing research in the participating UMass labs. This means that experiments don't always go as planned and students are required to think critically and use problem-solving skills to explain what they observe. These skills will serve them beyond the AP exam into all facets of life. In addition

to fostering a greater science literacy, analytical skills help students grow into informed adults capable of critical thinking.

Beyond preparing students for the revamped AP Bio exam, the UMass program gives them a sneak peek into the worlds of basic research and post-graduate education. The AP students interact with UMass faculty in small groups that allow them to see that, unlike television stereotypes, researchers are ordinary people who are more likely to be clad in blue jeans than in a crisp white coat, surrounded by bubbling "potions." In addition, graduate students and post-doctoral fellows act as teaching assistants and discuss the educational path to a career in research.

Scoring a 3/5 or better on the AP exam can earn high school students college credit. However, this is only one goal of the UMass program. The hands-on science experience is the major focus. Each lab exercise is unique, depending on the research interests of the participating UMass faculty. For example, Doxsey's lab focuses on several aspects of cell division, so they teach an AP Bio lab on mitosis. One focus of the exercise is the connection between abnormal cell division and disease, such as cancer, and the teaching assistants highlight the ways that basic science can serve as a bridge to the clinic.

Although the program is in its second decade, it is still growing, especially with the help of this year's grants and donation. Given the shifting focus of the revamped AP Biology curriculum and exam mandated by the College Board, this growth couldn't have come at a better time.

Stephen Doxsey, PhD is a Professor at UMass Medical School in the Program in Molecular Medicine studying cell division and how defects in the process lead to cancer, cilia disorders and primordial dwarfism

Sambra Redick, PhD is a Research Associate in the Program in Molecular Medicine, UMass Medical School

Photo of Dr. Doxsey courtesy of John Gillooly, Professional Event Images

The
WOUND CARE CENTER
at Harrington

Somehow,
The Wound Care
Center at
Harrington found
a way to heal my
wound when
nobody else
could. The doctors
and nurses knew
just what to do.
And they had
wonderful
technology that
I can't even
pronounce, much
less explain.

But the best part
is they did it.
My wound
is healed.
Finally.

That's all that
matters to me.

Our medical experts provide you with the individualized treatment plans and the most advanced wound care therapies available. Our specialized approach offers treatments that radically speed the healing process. It's time to get your life back.

10 North Main Street,
Charlton, MA 01507
508-248-8126

The
WOUND CARE CENTER
at Harrington

The Wound Care Center at Harrington is a part of Harrington HealthCare Systems



THE NOTRE DAME
TRADITION OF QUALITY

*A Place
of Welcome!*



At Notre Dame Long Term Care Center, we pledge to provide the supportive, nurturing and challenging environment needed at every stage of life. Our commitment to the community reaches beyond the sisters of Notre Dame, to all in need of Long Term Care.

*Notre Dame
Long Term
Care Center*

- 24 Hour Skilled Nursing Care
- Center garden courtyard providing a safe haven to the outdoors
- Serene Setting
- Daily Mass / Pastoral Care
- End of Life Care
- Rehabilitation Services

559 Plantation Street, Worcester, MA 01605
(508) 852-3011 Fax: (508) 852-0397

Genius on the Edge. The Bizarre Double Life of Dr. William Stewart Halsted

by Gerald Imber, MD 2010, Kaplan Publishing, New York.

Giles F. Whalen, MD FACS

This book tells the story of William Stewart Halsted (1852 -1922) and how he midwifed the modern field of surgery on the North American continent at the turn of the last century. He is usually known to contemporary professional audiences as the first Chief of Surgery at the then brand new Johns Hopkins Hospital and Medical School ~ an institution which opened in 1889 on the principles that medicine needed to change and be based on science and evidence. The best “new men” that Medicine had to offer were recruited to Johns Hopkins and were eager to come. The founding Chairs of the other departments at this brand new institution, William Osler (Medicine), Howard Kelly (OB-Gynecology), and William Welch (Pathology) were already legends in their own time and have remained giants even through the lens of history.

Halsted's personal surgical accomplishments during this time were extraordinary by the standards of any era. He developed the radical mastectomy for breast cancer and new operations for the repair of groin hernias, both of which dramatically changed the ancient natural history of these problems and which persisted as the surgical standard of care for seventy five years. He made fundamental contributions to the study of wound healing, formation of intestinal anastomoses, and arterial occlusions and aneurysms. He introduced the use of rubber gloves in surgery, ushering in the age of aseptic surgery. His own infection rates were orders of magnitude better than his contemporaries' ~ probably because of his attention to precise anatomic and relatively atraumatic dissection and the use of fine artery forceps and fine silk to tie vessels only and not devitalize wads of tissues in the ligatures. This was a relatively new surgical virtue since, in the absence of good anesthesia, speed and strength had been more prized in surgeons up to this point in time. Still, what really set Halsted apart was his ability to teach his techniques and thoughtful scientific approaches to the patho-physiology of disease to his trainees. As importantly, he had an uncanny ability to identify

who those trainees should be. His residents became the founding fathers of neurosurgery, urology, ENT, and so forth. His method of training surgeons (“residents” who lived in the hospital and used the wards as their laboratories, caring for patients 24/7) established the patterns, culture and expectations of surgical training which are changing only now, more than 100 years later.

What kind of paragon of medical/surgical energy could pull all this off? What experiences developed his emotional intelligence to the degree that allowed him to make such astute human selections and inspire his mentees to carry on? How did he manage the tensions between scientific research and clinical instruction which were nascent even at the beginning of this prototypical academic medical center? As often seems to be the case in stories of medical greatness and achievement, the truth is not what you might expect. Halsted was born to the upper echelons of merchant society in New York City. There is a Worcester ~ or at least Central Massachusetts ~ connection in this story since he was sent off to boarding school at age 11 to Monson Academy, which is still open for educational business in Wilbraham, Massachusetts. He did not like it there and literally escaped, but was apprehended in Springfield and sent back to school. He apparently did not demonstrate any specific traits that marked him for greatness. In fact, he seemed a fairly indifferent student who went to Yale and towards the end of his senior year found *Gray's Anatomy*. He shortly informed his father that he was going into medicine and not the family business. Interestingly, memorizing and understanding *Gray's Anatomy* text appears to have been a touchstone for him throughout his career, as there are anecdotes of him disputing what fine points were printed in which edition. He went on to be a good medical student and then teacher in New York medical circles and developed a tight cadre of like-minded medical friends. This group lived or convened at the house Halsted kept in New York City and was dedicated to the

new scientific approaches to medicine and disease. By the time he turned up at Johns Hopkins there was more to write about, but at this point in the book he sounds like a fairly odd human being with significant obsessive compulsive tendencies whom you would never predict would be capable of accomplishing what he did. The Halsted in these pages is a fairly shy or remote individual who apparently rarely talked with his residents; he was caustic when they did not measure up, but otherwise left them to their own devices. He was regularly derelict in his teaching duties; for example, he never turned up to teach his assigned medical school lectures and never actually delegated the task. He worked hard in his laboratory during the day and performed operations several days a week, but often turned up late or didn't bother to turn up at all and instead worked from home. He also would regularly leave Baltimore; some summers he could be found staying for four or five months in rural North Carolina or traveling anonymously through Europe. These habits understandably drove the trustees of Johns Hopkins to distraction and it seems a wonder that he was not fired. Of course, this behavior makes more sense once one learns something else about the man. Remarkably, even given his extraordinary success as both a surgeon and a new light in medical training, plus his apparent unimpaired, energetic faculties, Halsted had a problem. He was a junkie.

Indeed, Halsted's ongoing addiction, which only came to light in the 1960s, is now a well known part of the tale. He became addicted to cocaine while experimenting with it as a local anesthetic during the early part of his career at New York's Roosevelt Hospital. He had been successfully injecting it into particular peripheral nerves to block them and produce safe regional anesthesia. He was writing about this and, as was the scientific custom of the time, testing it on himself and friends as well as on patients. These experiments spilled over into more social uses of the drug and ultimately nearly destroyed Halsted as man and as a physician. He was treated in one of the leading asylums of the day ~ nearby in Rhode Island ~ where the cure at the time involved replacing the cocaine addiction with another one ~ morphine. There is some evidence and suggestion in the book that all this really produced was an addiction to morphine in addition to an ongoing one to cocaine. Halsted was ultimately rescued from his fate by his own willpower and by the influence and intercession of his very close friend William Welch, who had been one of his chums in those heady early days in New York City. Welch got him off to the asylum, then secured his appointment to the job at Johns Hopkins and finally protected him during his life there. The story of how he managed and concealed his addictions and still carried on with his life's work is certainly worthy and even heroic. However, after reading this book, one wonders whether he

was more lucky than he was a genius. He certainly had talent and tastes. He was drawn to the field of surgery as it was entering a phase of explosive advances (following the discovery of anesthesia and the appreciation of the role of bacteria in infections) and the advent of Listerian antiseptic surgery. Indeed, an interesting question is whether Halsted would choose to become a surgeon if he appeared in medical school today. There is reason to think that he might not. The frontispiece of the book is a quote from him: "Surgery would be a wonderful field if you did not have to operate." Nevertheless, he did become a surgeon and landed in a supportive institution with a cast of colleagues who would be in any Medical Hall of Fame at a time when the major opportunities for medical advance were in surgery ~ and the rest, as they say, is history.

This book overall is an instructive and enjoyable read. However, the personality traits which Halsted must have demonstrated to inspire such loyalty and devotion from his friends and trainees remain veiled in these pages. It is equally unsatisfying in its presentation of his character development and formative experiences. There simply is not enough here to help the reader understand the man or find inspiration. Nevertheless, this may be a function of Halsted's private and secretive nature ~ a nature which is blamed on his addiction but which one suspects may have been innate. The book's strength lies in its depictions of the circumstances of the hospitals where he worked, his patients and their diseases and the customs and flavor of the times. It also refreshes the memory of some of the other men and women who helped construct the greenhouse in which Halsted flourished. For example, it leads the reader to appreciate more clearly the character and talents of his good friend William Welch, without whom things may well have turned out differently for him and for Johns Hopkins Hospital. Halsted's personal and domestic idiosyncrasies are both many and fascinating even if they don't necessarily help us understand his genius or his achievements. The prologue to the book is simply a spectacular piece of storytelling that really sets the stage for all that is contained between the covers and demands that you read on.

Dr. Giles Whalen is Professor of Surgery, University of Massachusetts Medical School.

Tribute: Three Heroes from a Medical Milestone

Thoru Pederson, PhD

December 27, 2010 brought to a close the 79 year life of a devoted teacher from Rutland, Massachusetts ~ Ronald J. Herrick. All dedicated teachers are heroes, but Ron was one in another dimension. 56 years earlier, almost to the day, he had donated a kidney to his identical twin Richard in the world's first human kidney transplantation, performed at the [then-named] Peter Bent Brigham Hospital in Boston.

Three heroes rallied on that day, each possessed with uncommon courage. The patient had no other options and yet the outcome of the operation was a complete unknown, no matter how many successes had been attained with dogs. His brother knew that a normal life could well be achieved with the contralateral organ and yet a nephrectomy was not without some risk. Indeed, in the hours before the operation, Richard beseeched his brother not to make the donation.

Standing beside the waiting transplant recipient stood the third hero of this medical milestone, Joseph E. Murray. Warmly and admiringly known to many of us here in our local medical community, he celebrated his 92nd birthday on April 1. It thus seems fitting to honor him in our pages at this time.

I first met Joe Murray when he agreed to join the Board of Trustees of the Worcester Foundation. He was enormously supportive of my efforts as President and Scientific Director and was especially enthusiastic about our planned merger with UMass Medical School. A few years later, at the 1999 AMA Delegates conference in San Diego where we were both on the program, I got to meet Joe's "secret weapon," his wife Virginia, known to all her friends as Bobby.

As a 92nd birthday tribute to a man who continues to inspire us all, reproduced below (with the publisher's permission) is a review of his autobiography. The book conveys both to a medical and general audience what is so special about this surgeon and scientist and why we all have even more than the usual reasons to celebrate his longevity. He is the last of three heroes who pioneered and advanced organ transplantation. I know all readers of *Worcester Medicine* join me and the editorial board in sending Joe and Bobby our very best wishes.

Reproduced from The Pharos, Autumn 2002 issue, pp. 48-49, with permission of Alpha Omega Alpha Honor Medical Society.

Surgery of the Soul: Reflections on a Curious Career

By Joseph E. Murray, MD *Science History Publications, Canton, Massachusetts, 2001*

Reviewed by Thoru Pederson, PhD

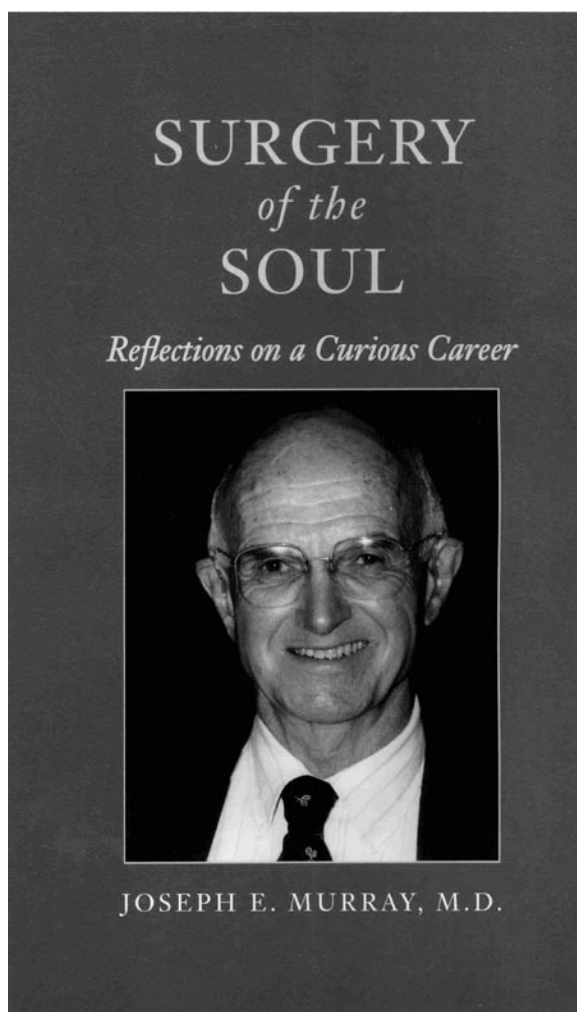
Autobiographies by physicians are highly variable, like those by individuals in any other profession. Some have a homespun Arrow-smith quality, others are breezy bravuras. And, of course, many are very well done. Once in a while, one comes along that is just plain wonderful: *Surgery of the Soul* by Joseph Murray is of this kind.

Murray has designed his book as a series of 14 case histories. His family upbringing, schooling, and medical training are conveyed in attractive quanta parceled throughout the initial chapters, rather than in the typical autobiographical opening salvo. In the first chapter, we find the 25-year-old Murray stationed at a U.S. Army hospital in southeast Pennsylvania. It is the winter of 1944. He de-

scribes the case of a 22-year-old Army Air Corps pilot, Charles Woods, whose aviation fuel-loaded cargo plane had crashed in the mountains of Burma. With severe burns over 70 percent of his body, Woods had been airlifted 10,000 miles and was barely alive upon arrival. Woods had too little usable skin for autografts, although they were done successfully later, after the initial allografts had sloughed off. Murray describes the painstaking grafting and the subsequent two years of 24 reconstructive procedures. No reader will stop for an instant anywhere in this chapter.

The book then moves through Murray's early surgical career, describing several fascinating head and neck cases; his accounts always balance clinical and human dimensions. But the story comes to a rush with the chapter on the world's first kidney transplant patient, Richard Herrick, and his healthy identical twin, Ronald. Murray's account of the 1954 Herrick case is cast in clinically objective prose, yet one can sense the surgeon's quest for knowledge. There is human drama in every sentence.

Within another three years, Murray and colleagues were moving ahead with dog renal allotransplants, recognizing that few patients have identical twin donors as did the fortunate Richard Herrick. By this time, Murray had become very knowledgeable about the science of immunology. Astutely, he had come to recognize the great importance of Peter Medawar's work on immunological tolerance, the graft versus host reaction, and related mysteries of transplantation biology. He recalls his good fortune in being in close contact with Gertrude Elion and George Hitchings at the Burroughs-Wellcome laboratories in Tuckahoe, New York. A variant of their antileukemia drug, 6-mercaptopurine, had been found to suppress skin graft rejection in rabbits. Murray's team tested this drug, known first as BW57-322 (then azathioprine or Imuran), in their dog renal transplant studies. In 1962, Murray and colleagues carried out the first successful human renal allograft.



In 1990, Murray received the Nobel Prize in Physiology or Medicine. He describes the occasion with circumspection and genuine humility. He closes with a distinctly philosophical chapter. A deeply religious man, he sees his career as one of service, both as a canon of medicine and also as the definition of a spiritual life. As one finishes the book and turns it over, there on the back of the jacket is, once again, Charles Woods, photographed in his army uniform, robust in his early 70s. Woods is clearly the enabling and defining metaphor for Murray's "surgical soul."

Murray's book will strongly engage most surgeons, pleasantly inform other physicians, and richly educate the interested lay reader. Though much of the book is clinically objective, Murray's scientific, research-oriented approach to surgery is evident throughout. In addition, the author's extraordinary grace and warmth come through sotto voce. To those fortunate enough to know him, Murray's dynamic energy and perpetually upbeat demeanor make us all

want to aim higher. His smile and twinkling eyes convince us not only that we should, but that we can.

Dr. Pederson is the Vitold Arnett Professor at the University of Massachusetts Medical School. He can be reached at Thoru.Pederson@umassmed.edu.

Commonwealth of Massachusetts
Justice of the Peace
"For everyone's wedding needs"

Paul Giorgio
508-414-4454
pgiorgio@pagioinc.com

The Emperor of All Maladies: A Biography of Cancer

By Siddhartha Mukherjee

Sidney P. Kadish MD

The author of *The Emperor of all Maladies: A Biography of Cancer*, a medical oncologist who trained at the Dana Farber Cancer Institute in Boston, has set out to review and record the entire history of cancer. He has succeeded admirably, with a magisterial history of the thinking behind cancer since ancient times right up to the present, when most of the new developments in this field have been developed. The author's scope is very broad. He tells us interesting stories like Sir Percival Pott's observation in the 18th century that young London chimney sweeps tended to develop scrotal skin cancer, an observation which led to epidemiologic studies linking cancer to toxic exposures. He tells of the German bombing of Allied ships in Barre, Italy which contaminated the area with mustard gas, and how pathologists observed that the lymph nodes in the exposed dead servicemen were devoid of lymphocytes, and how Goodman and Gilman reasoned that mustard gas, therefore, may be a useful tool to treat lymphoproliferative diseases like leukemia. This deduction, incidentally, was the beginning of chemotherapy.

We should not read this grand volume because we are physicians and wish to learn more medical science, but rather because we wish to be citizens informed about one of the principal scourges of modern life. In this book, we will get a heavy dose of science, but we will also learn of the politicization of cancer and cancer research. We learn of the machinations of Mary Lasker, Sidney Farber, the American Cancer Society, and the National Cancer Institute, all of which culminated in President Nixon's War on Cancer. Mukherjee also gives us an assessment of what millions of dollars in resources have bought, given our 1.5 million new cancer cases and 570,000 deaths estimated for 2010.

There are some negatives in this magnum opus. The author intersperses some of his clinical vignettes, but they contribute little to the narrative. He is also very focused on drug treatment, to the detriment of the important contributions of modern surgery and radiation therapy.

But overall, *The Emperor of all Maladies: A Biography of Cancer* is a lively and charged account of what could have been a very ponderous story. The author teaches us that this is a very human story, a story of startling discovery and heart breaking disappointment. In its latest

chapters which cover our own time, we read of the institutionalization of cancer research, punctuated by chance and random discovery. Finally, this story is incomplete: we are left with the hope that the true complex biology of cancer will be learned and that strategies of early detection and cure will follow. It is a promise and a hope, and the author leaves us wishing for this wonderful and ultimately attainable human triumph.

As of this writing, the book is available in hard cover and as an audio disc set.

Sidney P. Kadish, MD is Professor and Clinical Director, Department of Radiation Oncology, University of Massachusetts Medical Center.

Note: Thursday, September 15 is the University of Massachusetts Medical School's 2011 Convocation, a special celebration to mark the beginning of the new academic year. The third annual campus summer reading assignment is The Emperor of All Maladies: A Biography of Cancer by Siddhartha Mukherjee, MD, which speaks to the historic development of our understanding of cancer, the challenges of scientific research, how cancer research has transformed cancer treatment and care, and how the disease and patient experiences have informed research. Faculty and students from all three UMass schools, the School of Medicine, the Graduate School of Nursing, and the Graduate School of Biomedical Sciences, will read The Emperor of All Maladies in anticipation of both the Convocation keynote presentation, which will directly reflect cancer research and cancer care, and a related dinner event for students on Wednesday, September 14 featuring Dr. Craig Ceol from the department of Molecular Medicine, whose study of zebrafish has led to the discovery of the melanoma-causing gene, and Dr. Michael Green, director of the Program in Gene Function and Expression, whose research on genome-wide scans revealed the mechanism by which a network of 17 genes prevent a melanocyte with a BRAF mutation from progressing to a melanoma, a discovery which could lead to novel therapies for this disease.

Lisa Beittel, MBA

Lisa Beittel, MBA is Assistant Dean for Administration and Chief of Staff for the Dean, Provost and Executive Deputy Chancellor of the University of Massachusetts Medical School.

Life Supported or Supporting Life – What Is Financial Planning?

Special Women Physicians' Article As Re-printed from the PIAM Women in Medicine Bulletin

Katie Birmingham Weigel, CFP

If you are a woman physician, chances are your life is a dizzying array of family, friends, career, home, taking care of aging parents, and saving for college, retirement and that special vacation or adventure. Your life is the day-in and day-out living that you do to manage yourself, your household and your career. As a woman, your life has special needs that must be considered and recognized in order to best plan each aspect of all that you do.

protect your life in every manner. And the best way to begin is to work with a financial planner who focuses first on you as a unique individual, who pays attention to all you are trying to achieve, and then guides you with a customized approach to manage and coordinate your current life, your future and your money. The key is financial life planning where the emphasis is your life, supported by your finances.

As a woman, odds are:

- You will be one of the 8 in 10 women to be the sole financial decision-maker at some point in your life, most often due to divorce or widowhood.
- You will live 5 years longer in retirement than a man.
- You will earn less over your lifetime than a man and thus accumulate smaller retirement savings plans.
- You are the primary caregiver for both your children, as well as aging parents.
- You will see your household resources drained by an ailing husband, leaving you with less on which to live.
- You will be counted amongst the women twice more likely as a man to be impoverished in your retirement years. (If you are divorced you are more likely to live in poverty than a divorced man or a woman who has never married.)

Your vision of your life is of utmost importance before any well-crafted financial plan can be created - a plan that you will believe in and will therefore take ownership of.

So what exactly is financial life planning? It isn't a special designation of alphabet letters after someone's name, or a new and improved magical formula for achieving superior investment results that will eliminate all your worries. In a nutshell, financial life planning is financial planning done right. It begins with listening to you and all that makes up your life – the good and the “needs improving”.

It is paying as much attention to your life needs, passions and desires, as well as your obstacles, as to the means you have to achieve them. As Yogi Berra once said, “If you don't know where you're going, you'll end up somewhere else.”

Your vision of your life is of utmost importance before any well-crafted financial plan can be created - a plan that you will believe in and will therefore take ownership of. Goals and needs must be examined and clarified and fully thought through in terms of how they interconnect with other areas of your life. Only after this clearer life picture has emerged can a financial planner really help you fashion a complete game plan to manage all the interconnected parts.

However, these depressing statistics do not need to have you included as a member! There are many ways beyond a well-diversified portfolio to better ensure your finances properly support and

Financial planning encompasses, balances and juggles everything that influences your life – your job, your family's needs, your own personal dreams, the investment markets, taxes and insurance – to

best ensure your future is not just one of beating the odds stacked against you as a woman, but is instead the life you dreamed of, created and made happen because of sound, informed choices you made along the way working with a trusted planner.

Katie Birmingham Weigel, CFP
LongPoint Financial Planning, LLC

PIAM, a subsidiary of the Massachusetts Medical Society, has selected Katie Weigel CFP to be their designated provider of financial planning services to MMS. For more information, you can contact Katie at katie@longpointfinancial.com.

Katie is a CFPTM and founder of LongPoint Financial Planning, a fee-only firm dedicated to independence, objectivity and a holistic approach of integrating each client's life needs and goals with all their financial resources. With advanced degrees in economics and statistics, and work experience that includes managing the Russell Indexes™, Katie brings a wealth of institutional investment knowledge to the needs of each individual.



Unforgettable.

MECHANICS HALL
Worcester's Premier Concert Hall and Meeting Place

Call to inquire about hosting your Gala, Concert, Meeting, Recording Session, Wedding, or other Special Event.



MECHANICS HALL
AN ACOUSTICAL MASTERPIECE

321 Main Street, Worcester, MA 01608
Bookings: 508-752-5608 · Tickets: 508-752-0888 · Fax: 508-754-8442
info@mechanicshall.org · www.mechanicshall.org
Built in 1857 ~ National Register of Historic Places

Summer breeze.

Warmer weather brings sun-filled afternoons and a relaxing evening breeze to dining on the Bistro Patio.

Enjoy our fresh seasonal menu or a crafted cocktail while unwinding with a breath of fresh air. Ceres Bistro, an unparalleled food and wine affair that delivers the farm to your table in an elegant yet casual atmosphere.

Featuring Live Entertainment on
Thursday, Friday & Saturday Nights

\$5 Appetizers (4-7PM & 10PM-Close)
\$5 Mojitos (All Day)

Ceres Bistro at the Beechwood Hotel
363 Plantation Street ~ Worcester, MA
508.754.2000 ~ ceresbistro.com



CERES
BISTRO
Revel in the harvest.

Accelerating Collaborative Opportunities?

Some Questions About the Draft ACO Regulations

Peter Martin, Esq.



Peter Martin, Esq.

The long-awaited Accountable Care Organization (ACO) draft regulations present a detailed description of the potential benefits of re-designing the delivery of health care on the one hand and the financial, legal and organizational obstacles to such innovation on the other hand. Whether and how the federal government tilts the balance toward collaboration will determine the success of this

latest experiment in managing care.

No one can deny that the overall goals of the Medicare Shared Savings Program are laudable; the Program “promotes accountability for a patient population and coordinates items and services under [Medicare] parts A and B, and encourages investment in infrastructure and redesigned care processes for high quality and efficient service delivery.” Improving quality of care and lowering the growth in Medicare expenditures are considered to be linked endeavors made more urgent by ongoing federal budgetary constraints. The Shared Savings Program encourages providers to create ACOs by holding out the potential for extra Medicare reimbursement if the ACO meets quality standards and reduces per capita costs for an assigned Medicare population. Additional reimbursement is available if the ACO involves not just hospitals and physicians, but also rural and federally qualified health centers.

The Program’s financial incentives will be earned by ACOs that invest in information technology systems, evidence-based medicine and care coordination processes. ACOs will be evaluated regarding sixty-five separate quality of care “domains” focusing on both better care for individuals and better health for populations. Most ACOs will be rewarded for meeting these quality standards and reducing

costs if they save the Medicare program more than two percent below a benchmark for the ACO’s assigned patient population.

Arrayed against these incentives and attractive goals are daunting barriers, not the least of which is the estimated \$1.75 million upfront investment and first year operating costs for a typical ACO. Add to this certain long-standing legal barriers to collaboration among care givers, such as the antitrust, self-referral and anti-kick-back laws and the law prohibiting hospital payments to physicians to induce reduction or limitation of “medically necessary” services to Medicare beneficiaries. For tax-exempt organizations, there is the additional issue of whether participating in an ACO will be consistent with the organization’s charitable mission, and whether IRS limitations on participation in such a joint venture can be overcome, particularly if the ACO serves commercially-insured patients.

As usual, the devil will be in the details as we await the final ACO regulations from the Center for Medicare & Medicaid Services (CMS). Will the regulations be revised to make the financial incentives both sufficiently achievable and enticing to induce providers to overcome the many barriers to collaboration? Below are some issues that need addressing in order to answer that question.

The draft regulations propose that the ACO’s governing body be comprised of at least 75% providers and at least one Medicare beneficiary representative. Given the potential imbalance between institutional providers and physicians in financial contributions to an ACO start-up, can the parties agree on an equitable sharing of decision-making power on the ACO board?

Medicare beneficiaries will be retrospectively assigned to an ACO after the end of the ACO’s first year of operations. How can prospective ACO participants evaluate potential costs and revenues associated with caring for Medicare beneficiaries if it’s not clear which patients will eventually receive services from the ACO?

Hospitals and clinics are not required to be exclusive to the ACO, but primary care physicians are. Will the institutional participants be sufficiently engaged with the ACO to make the necessary commitment to its success? How will the ACO enforce the primary care physician's loyalty to the ACO given Massachusetts' ban on physician restrictive covenants?

CMS's setting of quality of care criteria and its assessment of an ACO's quality of care are not subject to administrative or judicial review. Does this mean that an ACO's only recourse in the event of a dispute on these matters is to terminate its contract and potentially forego potential savings withheld by CMS?

An ACO will be required to share risk by at least the third year of its contract with CMS. Will that discourage potential ACO participants who do not have established EHR systems or experience with risk-sharing? Is the 2% threshold too high to be overcome in the first three years of an ACO's existence? Will an ACO be able to establish or obtain the line of credit, surety bond, reinsurance or other repayment mechanism required by the regulations to demonstrate it can repay losses to the Medicare program of at least one percent of the ACO's per capita expenditures? Will state regulators require insurance licensing of ACOs which take on risk?

The fraud and abuse waiver regulations issued at the same time as the ACO regulations cover distributions of shared savings received from CMS by the ACO to its participants. Will they be expanded to include payments made by the ACO participants to establish or maintain the ACO? Will the waiver for patient inducement payments be clarified to protect payments to physicians to reduce or limit items or services that are not "medically necessary?"

Uncertainty hinders risk-taking. The sooner these and other questions are answered, and answered in a way that en-

courages health care providers to invest money, time and effort in a sustained manner in ACOs, the sooner we will know if this latest experiment in integrated delivery systems will succeed.

Peter J. Martin, Esquire, is a partner in the Worcester office of Bowditch & Dewey, LLP, whose practice concentrates on health care and non-profit law.

We Give You the Tools for Success!

Masters Degree Programs

- Healthcare Administration
- Nursing
- Occupational Therapy
- Speech Language Pathology

Day, Evening & Online
Courses Available!

worchester.edu/graduate

*We put your
mind to work.*

**The Graduate School**
WORCESTER STATE UNIVERSITY



University of Massachusetts Medical School Second Year Oath Ceremony

The oath which the class recites at the Second Year Oath Ceremony starts as an exercise in the first year physician-patient society class. It is part of the “physician as professional” strand of the six competencies for medical education. After having spent some months in classes and in longitudinal preceptors’ offices, students read and consider historical and modern oaths, reflect on what patients look for in physicians and on what sort of physicians they hope to become, and write down their ideas for a professional oath. A smaller group of students then turns those thoughts into a written oath. Students review and comment on the written oath, so it is a product of all. In the Second Year Oath Ceremony, held in the spring for second year medical students, the students commit themselves to the ideals in their oath



The Oath - Class of 2013

Before my family, my teachers, the profession, and every patient it serves, with humility and respect, I resolve to be a physician. To care for my patients, improve their health, and enhance their quality of life, I shall pursue these ideals:

As a caregiver:

May I come to the benefit of the sick, remembering that every decision I make will impact the lives of my patients and their loved ones. May I not simply treat the illness, but care for the whole person with warmth, empathy, and understanding. May I strive to treat every patient equally and without judgment or bias. May I recognize that it is my calling not only to save lives but also to comfort and care for the dying.

As a listener:

May I hear both the spoken and the unspoken. May I respect my patients’ trust and confidence, holding this privilege sacred.

As a lifelong learner:

May I respect the contributions of those preceding me and forever remain a student of medicine. May I engage in an ongoing process of self-reflection, finding and expanding the borders of my knowledge. May I use the best evidence available to improve the efficacy and safety of the care I provide.

As a teacher:

May I advance the art and science of medicine and share it with those who will follow me. May I use the knowledge I have to empower my patients as partners in their own care.

As a colleague:

May I know the limits of my abilities and not be afraid to say, “I don’t know.” May I hold myself accountable, while recognizing that I am part of a team, equally offering and accepting help and advice. May I admit mistakes and work tirelessly to remedy them and to prevent their recurrence.

As a person:

May I promote harmony and balance in my life outside of medicine, so that I may lead a satisfying life and better care for myself and for others. May I be inspired by my friends and family to be a better physician. May I always appreciate those who sacrifice along with me in this journey.

As a member of the community:

May I take pride in my profession and embrace the unique role that it carries. When compelled by experience, may I advocate for my patients, neighbors, and the medical profession. May I always cherish the gifts given to me by the University of Massachusetts Medical School and the Worcester community.

In pursuit of these ideals, may I long experience the joy of being a physician.

WDMS Remembers Its Colleagues

Charles Luyrink, MD
1929-2011

Dr. Charles Luyrink, 81, died at his home on March 1, 2011, surrounded by his loved ones. During his most productive and interesting life he was, among other achievements, a member of the Worcester District Medical Society, Chief of Pathology at Harrington Memorial Hospital for decades, and President of the Medical Staff at Harrington Memorial Hospital. Chuck was interested in improving quality before it became very fashionable. He was a friend and advisor to younger physicians at Harrington.

Dr. Luyrink received his medical degree from the Leiden University Medical School. He later came to the United States, where he completed an internship at Santa Monica Hospital (California) and residencies at Henry Ford Hospital in Detroit, MI and City Hospital in Worcester.

Some intriguing facets of Dr. Luyrink's life: Charles was born in the Netherlands in 1929. Chuck had an athletic career which playing on the Dutch National Hockey Team. Chuck was a skillful photographer. He was a student of history, particularly World War II, and he and his family were active in the resistance (to Naziism).

Dr. Luyrink is survived by his wife Patricia Luyrink and by his children and grandchildren. He is missed by them and many more.

Robert Lebow, MD



Explore Central Massachusetts' Cuisine.

Restaurants :: Reviews



Recipes :: Openings



Drinks :: Specials



News :: More...



*The Most Comprehensive Dining Website
in Central MA has Arrived!*

For more information and to reserve online advertising space
contact Paul Giorgio, President at (508) 756 - 5006
or pgiorgio@pagioinc.com

Top ranking for heart attack survival

it's all right here at UMass Memorial hospitals.

UMass Memorial Medical Center
#1 hospital in New England;
#3 in the nation

Marlborough Hospital
#2 in Massachusetts

HealthAlliance Hospital
#4 in Massachusetts

Ranking according to the U.S. Centers for Medicare and Medicaid Services.



UMassMemorial
Health Care

Heart & Vascular
CENTER OF EXCELLENCE

Member Hospitals: UMass Memorial Medical Center
Clinton Hospital • HealthAlliance Hospital • Marlborough Hospital • Wing Memorial Hospital and Medical Centers

When you're totally dedicated to outpatient endoscopy, it shows.



New England SCOPE offers more than just a new, state of the art facility designed expressly for endoscopy. We are dedicated to providing the fastest access in Central Massachusetts for colonoscopies and other procedures – often in as little as a week. Patients and physicians also benefit from a highly convenient location, quick report turnaround, and world class gastroenterologists skilled in the latest procedures, including small bowel capsule endoscopy. No wonder more and more physicians are turning to New England SCOPE for their patients' endoscopy needs.

New England SCOPE accepts most insurance plans.


New England
SCOPE

Surgical Center for Out Patient Endoscopy

630A Plantation St.
Worcester, MA

(508) 425-5446

www.fallonclinic.org/scope