

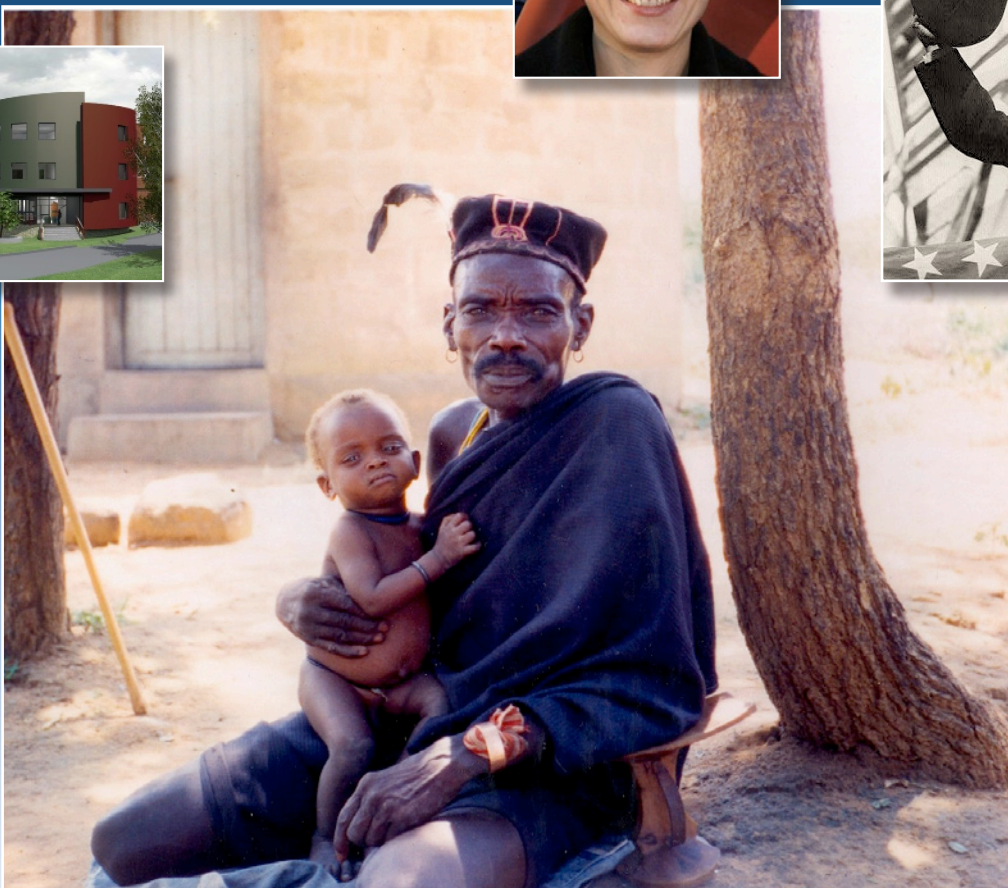
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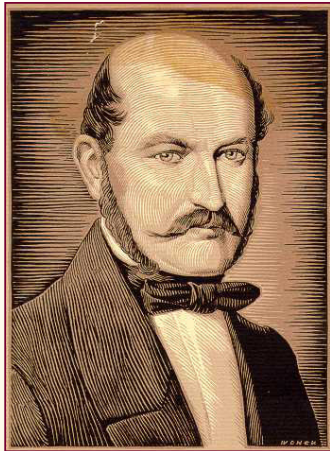
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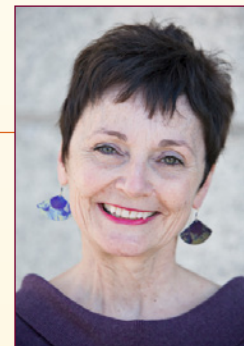
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INFLUENZA
FREQUENTLY COMPLICATED WITH
PNEUMONIA
IS PREVALENT AT THIS TIME THROUGHOUT AMERICA.
THIS THEATRE IS CO-OPERATING WITH THE DEPARTMENT OF HEALTH.
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must cough or Sneeze, do so in your own hand-
kerchief, and if the Coughing or Sneezing
Persists Leave The Theatre At Once.
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the Department Of Health in disseminating
the truth about Influenza, and thus serve
a great educational purpose.

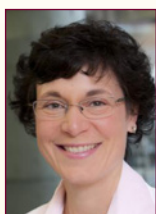
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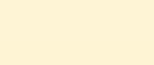
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RIMS thanks **Pfizer** for supporting the transformation of the 96-year-old *Rhode Island Medical Journal* into a 21st-century vehicle to serve the health care community in Rhode Island. A grant from Pfizer enabled the Rhode Island Medical Society to redesign the Journal for electronic distribution to a much wider audience, endowing it with an attractive new design and more diverse content, while making more efficient use of RIMS' resources and sparing the environment.

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My African Experiences

JOSEPH H. FRIEDMAN, MD
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I BECAME INTERESTED in Africa towards the end of college and decided to join the Peace Corps, thinking that Africa would be the most interesting continent to work in. I still cannot explain why Africa. I had not, back then, travelled outside of the United States and I had not been an Africophile.

Perhaps it was their then-recent independence movements, the interesting post-independence political activity and my complete lack of knowledge of things African that were the attractions. I went to a young professor in the African civilization department and asked for advice. He told me that Africans, in general, were very nice but that West Africans were the friendliest people in the world. On the other hand, East Africa had the big game, the Serengeti and other attractions. It turned out that I had few choices and ended up, quite happily, in Ghana. That was long before medical school. I loved my two years in Ghana, and decided I needed to return, either to Ghana or some other place on the continent.

Nine years later I went to the Medical Missionaries of Mary (MMM) Hospital in a somewhat remote region of Tanzania for my last three months of medical school. It was a great experience, even though it wasn't a teaching hospital.



The MMM was an Irish-based order and I found afternoon tea to be an extremely appealing ritual. Because I was at the end of my training and there were few doctors, I was given a lot of responsibility. After a few weeks I was put in charge of the men's medical and TB wards. I was also on call

during the night. My most memorable case involved a young woman brought in during the night when I was on call. She was unable to open her mouth. I was initially unable to close mine, but after a minute or two a voice ran through my head. It was Al Bannerman's. He was a Ghanaian-born neurologist who was one of my teachers in Manhattan. "When a patient can't open his mouth, think about tetanus and look for a laceration." I found the machete cut on the leg, noticed the mildly arched back and made the diagnosis of tetanus for the first and only time of my life. Sadly, she did not survive long. I also recall watching a teenager die from rabies, and a fetus, dead, stuck halfway out of the mother. I assisted in operations performed under a surgical light – a truck headlight.

It took 25 years before I returned to Africa, but I've been fortunate enough to spend very short periods in Malawi, Zambia and Kenya, and will visit Rwanda this year. The contrast between American medicine and impoverished

African medicine is enormous, as described in this wonderful issue of the medical journal. In Malawi, the housestaff hadn't seen Alzheimer's or Parkinson's diseases. People don't live long enough. It's quite a remarkable, if paradoxical, observation to feel lucky to live in a place where these disorders are common.

In Kenya, an American medical student asked me to evaluate a 9-year-old girl with a painless back mass and mild spastic paraparesis. It seemed obvious that the mass must be connected to the paraparesis but I was at a loss to think of what kind of tumor would be painless and yet so large. I wondered if the family could afford an MRI or the not as useful but cheaper CT scan. Luckily for me, the Kenyan housestaff simply diagnosed this as another case of Pott's disease. No tests were necessary.

Pellagra was fairly widespread. Young adults with psychotic behavior and a rash around the neck and hands seemed to be pretty common. And then I saw a case so unusual, apparently, that even the head of AMPATH, the American component of the Kenyan-American joint program in Eldoret, wasn't sure what it was. He called me over and I diagnosed Charcot joints, but I'd never seen them this severe before. I had seen deformed ankles, but never naked bones, with pieces protruding. I hadn't realized until then that that was, in fact, the "classical" presentation.

My Kenyan experience differed from



A classic presentation of a patient with Charcot joints.

the previous ones. Despite the great limitations, like not having electroencephalograms (EEG) or electromyograms (EMG) available, or not having a cell count, bacterial stain, fungal or TB stain, or culture of any type on cerebrospinal fluid (CSF), there were occasional CT scans or MRIs. These were impressively humbling. I trained in the era when CT's were being introduced. The training program tried to teach us to think and not order a standard test battery, then derisively called the "head one" and "head two" work-up. I've always tried to predict imaging findings based on the 150-year history of the neurological examination. And this may be one of the reasons I like practicing neurology in the Third World. It is exquisitely clinical. Unlike most modern medicine in the West, the exam matters. What I learned in Kenya was, maybe it didn't matter so much. After every mistake I went back over the case and never found where I went wrong. Lesions on wrong

sides. Lesions posteriorly that should have been anterior. Single abnormalities where there should have been many. These cases almost always eluded diagnosis and autopsies were rare. I learned more humility than practical neurology. But my enthusiasm for seeing more, and

teaching more hasn't been dampened. This issue of the RIMJ illustrates the enthusiasm, the accomplishments, the dire need for us lucky, wealthy Westerners to participate. The rewards for us as well as for them are boundless. Each American doctor or student has experienced a life-changing event. I

hope that more readers, whatever stage of training – and we are all hopefully in training – will take some time and make the leap to a new and mind-opening trans-oceanic experience. ❖

Author

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

Disclosures

Lectures: Teva, General Electric, UCB Consulting: Teva, Addex Pharm, UCB, Lundbeck

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Dr. Aronson in 2007 receiving Doctor of Medical Science (DMS) at Brown in 2007.

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A Versatile Chemical Called Chlorine

STANLEY M. ARONSON, MD
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TO AN AMERICAN adolescent, warm, moist air with a hint of chlorine can mean but one thing: An indoor swimming pool at the local gymnasium; to a housewife in Peoria, Ill., such a scent suggests her basement laundry room and its aromatic residue of bleaching agents; and to



a private in the Canadian overseas army peering from his sentry post guarding the approaches to the French city of Ypres, on the afternoon of April 22, 1916, it meant a radically new peril of trench warfare – a terror called poison gas.

The Swedish chemist, Carl Wilhelm Scheele, first recognized chlorine as a distinguishable chemical element in 1774. The elemental nature of chlorine was then verified in 1808 by the British chemist, Humphry Davy. Chlorine is vaguely green in color and so Davy selected the Greek word, *chloros* (pale green) as the derivative name for the isolated gas.

The 19th Century witnessed much research activity exploring the many sources and uses of chlorine in both organic and inorganic compounds, the most commonly encountered being sodium chloride (common table salt).

Chemists soon noted the oxidizing, bleaching and sterilizing qualities of a number of chlorine-containing products such as calcium hypochlorite and

a vast chemical industry was initiated with agents particularly for laundering purposes. And well before the germ theory of infectious disease had been proposed, physicians such as the Viennese Ignaz Semmelweis (1818–1865) were recommending that they wash their hands with these

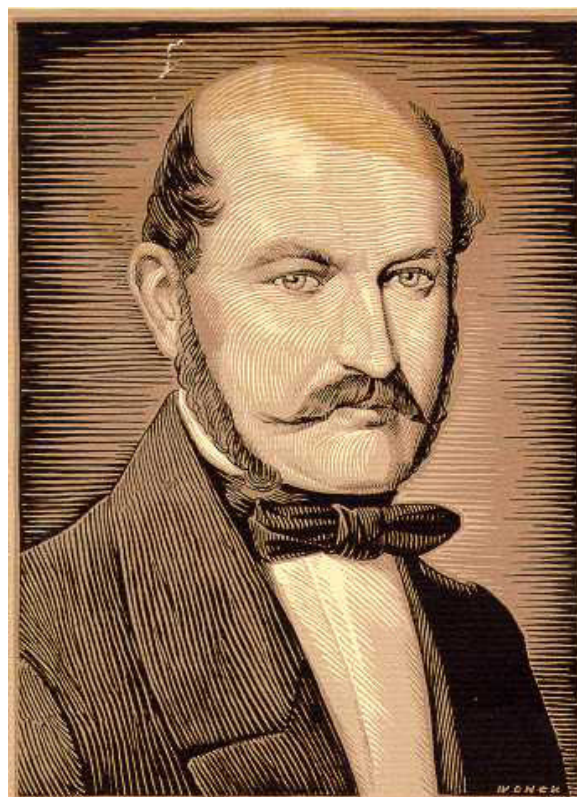
chloride-containing agents. And by the turn of the 20th Century, armies were routinely chlorinating their drinking water.

Given the known lethality of chlorine gas, it was inevitable that it also be exploited to injure, terrorize or otherwise incapacitate enemy troops. As an offensive weapon, it had been used sporadically by the colonial powers of Europe in suppressing various uprisings in Africa. But it was the German army fighting the Tsarist Russians in Poland in 1915 where chlorine gas was first used on a large scale.

On the early afternoon of April 22, 1915, the German army released 168 tons of chlorine gas against entrenched French troops guarding the city of Ypres. Propelled by an easterly breeze, the cloud of chlorine infiltrated the

trenches held by French Colonial units who then broke ranks and fled south. The 1st Canadian Division was quickly moved into the trenches; and on April 24 was subjected to a second massive wave of chlorine gas.

Counter-measures were hastily devised and included cloth pads moistened with urine held over the nose (urine was said to neutralize chlorine gas) and ultimately, the deployment of gasmasks. By 1918, 190,000 tons of poison gases had been employed by both Western Front



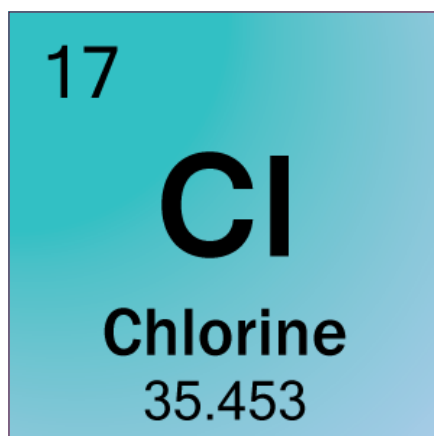
SEMMELEWEIS

armies resulting, by 1918, in 1,240,853 casualties and 88,498 immediate deaths ascribable to the various poison gases.

Numerous international gatherings have since assembled promises to refrain from initiating chemical warfare. While the Italian army routinely employed chemical agents in the Ethiopian War of 1935, chemical warfare agents had been idle during the global wars of 1939–1945.

Many nations currently possess immense supplies of chemical weapons, but the only documented use, following World War II, was during the Iran-Iraq wars of 1980–1988. Chlorine gas then retreated into history.

On June 27, 2011, a worker in an Arkansas poultry factory inadvertently poured a sodium hypochlorite cleansing solution into a 55-gallon drum containing residual acids. A cloud of chlorine gas was thus released into the factory interior affecting about 600 workers. There was an immediate evacuation of the work force yet 152 employees



required hospitalization for respiratory tract and ocular injuries, and another 195 required on-site medical care.

OSHA hazard rules state: “Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment.” Sadly, though, most of the workers (68%) in this plant spoke Spanish as their primary language and the worker who poured the hypochlorite solution could

not understand its English-language warning labels.

Chlorine is a versatile chemical of sundry and varied purposes. Its many products now include the world’s most commonly used condiment, bleaching and oxidizing agents and inexpensive chemicals to sterilize drinking and swimming water. But there is no moral substrate incorporated in chlorine’s atomic structure, or indeed any other chemical element. Ethical behavior remains the sole responsibility of humans. ❖

Author

Stanley M. Aronson, MD, is Editor emeritus of the *Rhode Island Medical Journal* and dean emeritus of the Warren Alpert Medical School of Brown University.

Disclosures

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The Brown Kenya Medical Exchange Program: An Overview

CHARLES SHERMAN, MD, MPH; JANE CARTER, MD
GUEST EDITORS

Karibu. Welcome.

The Brown Kenya Program has now been in existence for more than 15 years. During that time what started as a learning opportunity for a few medical trainees has developed into a comprehensive care, education, and research effort by countless Brown and Kenyan physicians. A large number of medical specialties are represented including emergency medicine, internal medicine, neurology, obstetrics and gynecology, pediatrics, psychiatry, and public health. All projects involve cross-cultural collaborations in which both groups greatly benefit.

The accomplishments have been many. From a clinical perspective, over 100,000 persons living with HIV/AIDS are now under supervised care. Approximately 70,000 symptomatic individuals have been screened for tuberculosis. And those with diabetes are much better managed with the creative use of cell phones and portable glucose monitors. Greater access and provision of care have ensured that HIV, TB, and diabetes are no longer death sentences for those living in Western Kenya.

The bidirectional medical educational exchange remains the keystone of the program. A rapidly increasing number of medical students, residents, fellows, and attending physicians have made the journey with most having life-changing experiences. Research has followed care and education and become a flourishing component. Each year, millions of dollars in grants support basic science and implementation projects in a variety of areas such as HIV, tuberculosis, cervical cancer, hypertension, COPD, and diabetes.

In this issue of the *Rhode Island Medical Journal* and next month's, we have



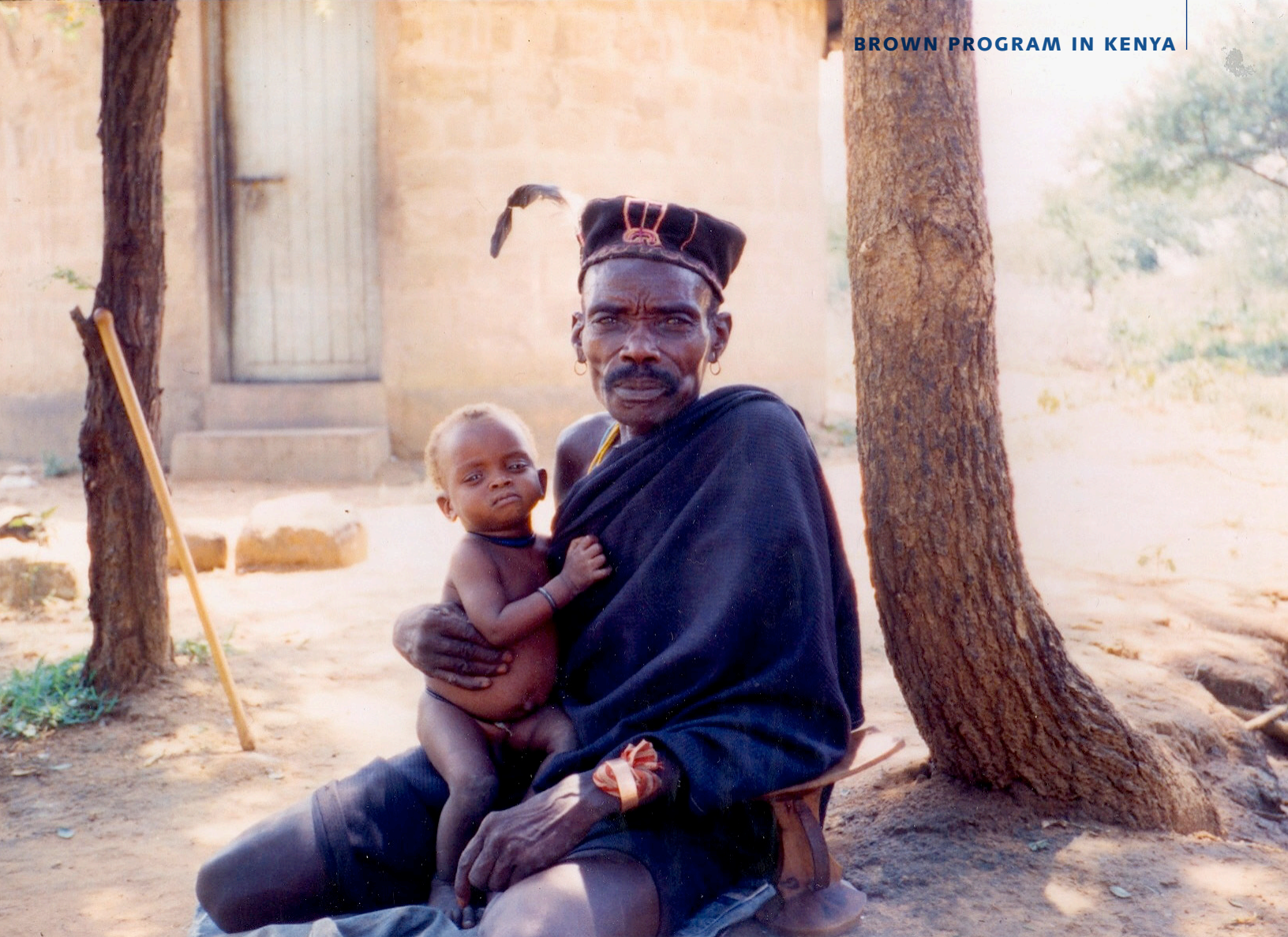
Dr. Chuck Sherman training a Kenyan physician,
Dr. David Lagat, in spirometry.



Dr. Jane Carter with a patient in Eldoret.



Dr. Jane Carter with her TB Team.



A Kenyan man with his grandchild at the TB Manyatta in West Pokot. The concept of the 'TB manyatta' was started by Dr. Tonelli, a Catholic sister, who in 1976 persuaded nomads in Wajir District with TB to construct their dwellings next to her health center to make it possible to receive supervised drug administration.

tried to capture the most important elements of the Brown Kenya Program, a daunting task.

Dr. Jane Carter starts with a detailed history of the program. Then, Janet O'Connell provides specific information for those who want to take part in the medical educational exchange. Dr. Charles Sherman has compiled selected comments from both Brown and Kenyan medical students and residents who have participated over the years. The similarity of experiences across the institutions is remarkable. There are several articles written by Brown faculty members and their children, illustrating the profound nature of living and working in Kenya.

In the October issue, Drs. Jane Kamuren and Dennis O'yiengo will share their unique perspective of being trained at both Brown and Moi University. The development of specialty care can be challenging, especially when done across two universities; Drs. Bud Kahn, James Myers, Geoff Berg, and Nick Califano write about the joys and frustrations of starting such efforts in a low-income country. Finally,

Dr. Rami Kantor provides an overview of the extensive collaborative research efforts between the two universities.

The Brown Kenya Program has become an integral part of who we are as physicians and as people. We hope you will consider joining us in this most worthy of life's adventures.

Asante Sana. Thank you. ❖

Authors

Dr. Charles Sherman, Clinical Associate Professor of Medicine, the Alpert Medical School of Brown University, was the first Brown faculty member to travel to Eldoret in 1996. In 2013, Dr. Sherman was appointed as Director of Field Operations, East African Training Initiative, Ethiopian Pulmonary and Critical Care Medicine Training Program at the University of Addis Ababa in Ethiopia and Head of Global Pulmonary and Critical Care Medicine for the Brown University Global Health Initiative.

Dr. Jane Carter, Associate Professor of Medicine at the Alpert Medical School, has been the Director of the Brown Kenya Program since its inception.

Brown Kenya Program: The Growth of a Progressive Partnership

'It takes only one person's efforts to change the world'

JANE CARTER, MD



Dr. Jonathon Cohen, a T32 HIV training fellow at Brown, traveled to Kenya for one year to assist in training staff and staffing the clinic at Mosoriot.

Initiated in 1997, the Brown Kenya Medical Exchange Program was the first program to engage medical trainees and practitioners from all levels at Brown Medical School within a structured partnership with a low-income country partner medical school. Like many life successes, it grew out of some serendipity coupled with determination, dedication and long-term enthusiasm.

Moi University – Indiana University Partnership

In 1988 three faculty members of Indiana University (IU) traveled the world to identify a medical school with which to partner. Dr. Joe Mamlin, at that time the chairman of medicine at IU, dreamed of replicating an exchange program that he had led as a Peace Corps volunteer following his residency. That original program had been the first medical school in Afghanistan partnering with IU, a program that thrived until the advent of the Afghan-Soviet wars. Dr. Mamlin and his former chief resident, Dr. Robert Einterz, and several other IU faculty settled on Moi University School of Medicine (MUSOM) in Eldoret, Kenya. The essentials needed were in place – Moi University (MU) would open its doors in 1990. The curriculum was in English. The MU dean and the chairman were receptive to the exchange program. When the doors of the medical school opened in 1990, Dr. Einterz was the first U.S. faculty member living there for a year.

Asante (American Sub-Saharan Network for Teaching and Education) Consortium

The backbone of the exchange was set. Moi students rotated to IU for six weeks in their clinical years and IU students, residents and faculty rotated to MU. However, Drs. Einterz and Mamlin realized that despite the large faculty at IU, a single faculty in the United States could not sustain a continuous presence on the ground to contribute to care and teaching at MU. Thus, they started looking for partners to join a consortium. *Asante* had a double meaning – ‘thanks’ in Kiswahili but also an acronym for the American Sub-Saharan Network For Teaching and Education.

First Brown University Involvement

In 1996, Dr. Charles Sherman, pulmonary physician and faculty member at Brown, happened to glance at the *ACP Observer*, a journal he did not usually read. There was an advertisement from the IU group about its exchange, seeking volunteers. Dr. Sherman, having traveled through East Africa before medical school, approached one of the medical chief residents, Dr. Greg Kelly, and the two were off for a month of teaching and care. Both returned with one of the most common statements of all participants to date – “That was the most important experience of my career.” Dr.



Dr. Liz Dufort with one of her patients.

Sherman shared his experiences with two other pulmonary colleagues, Dr. Jane Carter and Dr. Jim Myers, both of whom signed up for a month rotation.

Within a year, Drs. Sherman, Carter and Myers had met with the dean of the Brown Medical School to discuss formal Brown Medical School inclusion in the program. Signing a bilateral MOU between MU and Brown paved the way for trainee credits and bilateral tuition waivers.

Early Asante Years

By 1999, The Asante Consortium included not only Brown but four other U.S. medical schools or university-based hospitals collaborating with Moi. Two MU medical students were hosted each year for six weeks of training at a U.S. institution, with all costs covered, and Moi University



Dr. Jonathon Cohen in a rural clinic in Mosoriot.

hosted four U.S. students throughout the year on a monthly rotational basis.

In 2000, not long after coming to Brown from Pittsburgh, Dr. Edward Wing, ID physician with a special interest in HIV as well as the chairman of the Department of Medicine, agreed to accompany Dr. Carter to review the program. Moved by the scope of the program – both in care, education and with a potential for research, Dr. Wing returned from that first visit to adopt the Brown Kenya Program formally into the Department of Medicine as a chairman's initiative. With this support, Brown became the second most active Asante partner, increasing the number of medical students training at Brown as well as supporting internal medicine residents from Kenya for six-month rotations.

AMPATH Development

Coincident with the development of the Asante Consortium, another health disaster was spreading across the globe, particularly through Sub-Saharan Africa – the HIV epidemic. In 2000 at MUSOM, HIV patients dominated the wards with a universal mortality. The courage of two Moi University medical students changed the mindset of the entire faculty – both U.S. and Kenyan. The two students had grown up together and both been admitted to medical school – an unusual coincidence considering that less than 250 individuals in the country matriculated into med school. When one did not return to school post-vacation, the second went looking for his friend and found him in a local hospital being treated for military TB. The friend arranged for transport back to Moi Referral Hospital where fellow students watched over him. His friend convinced him to be tested for HIV; the test was positive. On discharge from





the hospital, the patient walked back to the hostel to rejoin school but he was barred at the entrance by the staff. After several nights of sleeping on the grounds of the hospital, his friend declared that, "I am a medical student and I know how HIV is transmitted. My friend will be my roommate. There is nothing to fear." This bravery in the face of overwhelming stigma galvanized the faculty. That student was treated with donated antiretrovirals. The first HIV-care grant was written and funded by the Gates Foundation for a pilot of 50 patients, could they be treated.

In December 2001, Dr. Wing returned to Moi University and sat next to Dr. Joe Mamlin to train him in HIV care. The Academic Model for Prevention and Treatment of HIV (AMPATH) was started. Brown was involved in the opening of the first of the rural health centers – Mosoriot Health

Center – as well. Dr. Jonathon Cohen, a T32 HIV training fellow at Brown, traveled to Kenya for one year to assist in training staff and staffing the clinic at Mosoriot. Today there are 35 main clinics and 29 satellite clinics providing care for countless patients throughout Western Kenya.

AMPATH Consortium today

Today AMPATH has changed the acronym for which it stands – it is now the Academic Model for Providing Access to HealthCare. The same infrastructure that was built to provide care for individuals with HIV is now being used to build a primary-care infrastructure to address non-communicable diseases such as diabetes and hypertension. Six North American institutions (including Brown) remain, which underpin the medical exchange program, while over 20 other institutions are involved in the research programs. In 1997 there were no opportunities

to train beyond an internship at Moi, now there are now residency programs in all the major fields there as well as the beginnings of subspecialty tracks.

The goal of training physicians – whether they are Kenyan or American – as global leaders remains. The underlying mission of the collaboration remains: Lead with Care. The underlying story of AMPATH remains – it takes only one person's efforts to change the world. ❖

Author

Dr. Jane Carter is the Director of the Brown Kenya Program and an Associate Professor of Medicine at the Alpert School of Medicine at Brown University.

Practical Aspects of the Kenya Medical Exchange Program

JANET O'CONNELL, MPH

The Moi Teaching and Referral Hospital (MTRH) is located in Eldoret, in the western highlands of Kenya in East Africa. Eldoret is the fifth largest city in Kenya with a population of approximately 200,000. The climate is tropical with an elevation of 7,000 feet.

The hospital campus is a 15-minute walk from the gated residential compound, IU House. Residents, attendings and family members reside at IU House during their stay. Medical students are housed in the medical school dormitory with the Kenyan medical students across the street from the hospital. Both living situations are communal.

The medical center is a large multi-building compound with open walkways and lush gardens. The interior of the hospital has large, open, gender-segregated wards along with subspecialty units and outpatient clinics. The children's and mother and baby hospitals are contained within their own buildings on campus.

The central outpatient clinic – AMPATH – is part of the MTRH campus. There is also a network of smaller, rural health centers throughout the entire western Kenya/Rift Valley area.

The medical exchange is bilateral. Four Kenyan medical students come to Brown for six weeks each year. Two



Eldoret, Kenya

Kenyan registrars (housestaff) come to Brown every other year for four- to six-month rotations.

Brown participants include attendings, fellows, residents, medical students and researchers. All Brown rotators must be endorsed by three senior faculty members as well as attending a mandatory orientation lecture.

As an AMPATH consortium member, Brown has two dedicated months each year to schedule students and residents. Rotation opportunities often become available outside of the scheduled months for residents. Attendings, fellows and researchers rotate throughout the year. All rotations are scheduled and organized through the Kenya Program office at The Miriam Hospital.

Brown residents and students are placed on ward teams at MTRH and follow the



Moi Teaching and Referral Hospital

daily schedule of their respective teams. This is a very demanding clinical environment with a myriad of serious medical illnesses as well as a significant overlay of infectious diseases. The mortality on the inpatient wards averages 10% per day. The system operates as a 'pay-as-you-go' model, with each procedure and treatment negotiated with the patient and family members. The members of the ward team responsible for providing care also have the responsibility of ensuring that the proposed care plan is affordable.

It is important to evaluate the degree of difficulty of this rotation on a personal level in making the decision to undertake this very real challenge. The workload is quite heavy and clinically challenging. The emotional toll should not be understated. The high mortality rate and relatively young patient population makes for a very significant adjustment. There are medical risks to the rotators involved. Approximately 60% of the inpatient population is HIV-infected. A recent study documented a 4% tuberculin skin test conversion rate among rotators and their family members. The physical risks include a substantial rate of vehicle collisions

– great care must be taken when planning travel. The trip to Eldoret from the United States takes the better part of two days. The overall cost of the rotation is approximately \$3,500, excluding personal travel.

Travel within the country is encouraged. Kenya is a very beautiful country with an abundance of varied flora and fauna, including mountainous terrain, savannah and rain forest. Most rotators incorporate some travel into their itineraries. ❖

Author

Janet O'Connell, MPH, is the Brown Kenya Program Administrator.

Guest Editors' Acknowledgement

Janet O'Connell, MPH, has a diverse public health background in maternal and child health, infectious disease, and international health education. She is the person most responsible for oversight of all Program activities. She is a friendly, caring, and helpful presence in the office. Everyone associated with the Program, both at Brown and at Moi, greatly appreciate her efforts.

The Medical Exchange: Brown, Moi students/residents share their experiences

CHARLES B. SHERMAN, MD, MPH

INTRODUCTION

The Medical Exchange is one of the most important components of the Kenya Program. Since 1997, there have been more than 30 Brown medical students who have made the journey to Eldoret, and worked at the Moi Teaching and Referral Hospital (MTRH). In addition, there have been 63 Brown residents, representing the disciplines of internal medicine, psychiatry, pediatrics, obstetrics and gynecology, med/peds, neurology, and emergency medicine, who have traveled to Kenya. Eleven Brown Fellows from infectious disease, renal, and hematology-oncology have all completed part of their training there. Since 2006, there have been 24 Moi University 5th-year medical students and seven Moi University internal medicine registrars (residents) who have come to learn at Brown.

On both sides of the Medical Exchange, participants have returned from their travels with new medical knowledge about regional diseases, resource availability, and practice styles. They have all appreciated cultural differences and experienced personal and professional growth. And of course, there have been wild tales of strange foods tasted and dramatic weather experienced.

What follows are representative comments made by a few select participants of the Medical Exchange grouped by level of training and university of origin.

From Brown, the medical students who contributed are **ANDY LAI '05**, **SOPHIE CALIFANO '07**, and **NAIDA COLE '10**; the residents are **PHILLIP ANDREW CHAN '08** and **BARBARA NICKEL '12**.

From Moi, the medical students who contributed are **VIOLET AWORI '08**, and **GICHYOYA JUDY WAWIRA '08**; the registrars are **DAVID LAGAT '08** and **SARAH OWINO '08**.



Kenyan medical students gathered at the home of Dr. Jane Carter during their time in Rhode Island.

REGIONAL DISEASES

Brown University Medical Students

- The first thing you notice when you walk on the floor is the smell. I can't describe it. It isn't necessarily unpleasant (melena smells far worse) and has a hint of antiseptic...The second thing you notice is that all the people are young.
- I was looking over my logbook of patients and just thought how strange it was that I have been feeling spleens the size of watermelons, recognizing measles from across the room, treating cryptococcus and toxoplasmosis and of course so much TB and malaria, not to mention doing LPs with just a needle and a cotton swab.
- For the patients who are truly sick, they typically present at a disease stage much more advanced than what we are used to seeing in the United States.
- It's a very rich bilateral learning experience, however, as [the Kenyans] usually have much more experience with various diseases that we only read about in books, as well as physical diagnosis skills that we sometimes don't learn or practice adequately.

Moi University Medical Students

- In contrast to patients seen in Kenya, we [saw] very few infectious diseases. This gave me a chance to learn more about different conditions not very common in Kenya and appreciate them in greater depth.
- I got to see diseases that I hadn't seen before, like Lyme Disease, and how to manage them.



Kenyan medical students being vaccinated for Hep B in preparation to come to the United States. Brown purchases the vaccines for all the Kenyan medical school class.

Brown University Residents

- The diseases I have seen here the last few days are amazing! We have had toxoplasmosis, cryptococcus meningitis, lymphomas, lots of pulmonary TB, rheumatic heart disease, etc.
- The most surprising part of Kenya in my opinion thus far is the TB epidemic. I expected HIV but not as much TB. Overall, TB is a major problem here in Kenya. I cannot over emphasize that point.

RESOURCE AVAILABILITY

Brown University Medical Students

- We're used to having technology at our fingertips, but in Kenya you're really challenged to more frequently rely on your history and physical exam skills and constantly consider which test is truly necessary, given the patient's financial limitations.
- Last month I was sticking feeding tubes and trach masks in chronically vented patients with an average age of 85 and end-stage diseases (ie, strokes) who are going to die no matter what we do (costing upwards of \$12,000/day, and some have been in the hospital for months) and today I am watching a 25 y/o kid die because...?
- Some patients have their own bed but most share – some choose to sleep head to foot, and others sleep curled up together.
- Interesting medical tips of the day: you don't use generic medications here because they are often fake, containing water, diluted medication, or something worse.

Moi University Medical Students

- I was able to learn so much about the medical system in America as well as being exposed to the advanced biomedical technology, interventional therapy, and a wholesome and holistic approach to management of a patient.
- Cardiology was awesome, with many learning experiences: catheterization, pacemaker placement, CABG.
- We would investigate patients fully and treat them based on what the investigations revealed. It made me understand better the use of certain investigations as well as their indications; it was to me a real-life application of things I had only read about in books.
- It was not uncommon to know that this patient had Klebsiella pneumonia and E Coli cystitis rather than just pneumonia and urinary tract infection.
- The information system at RIH was commendable. It made me appreciate the value of good record keeping of a patient's data.

Brown University Residents

- I went to cardiology clinic today. All had heart failure from either rheumatic heart disease or dilated cardiomyopathy (attributed to viral causes), and ages ranged from 18-38. Most had end-stage heart failure. Most could also be fixed with a valve replacement. None had any means to get it.

Moi University Residents

- The amount of information available in this place is just amazing.
- Patient management was quite different from what I am used to, with a lot of support from the laboratories ... for example, we are used to doing a bone marrow aspirate or biopsy. Here they can do cytogenetic studies, they can do PCR, cardio-typing and use that for purposes of prognosis, so it makes patient treatment a lot more interesting and much better.

PRACTICE STYLES

Brown University Medical Students

- We spend much of rounds rushing to find patient charts. By around 10 a.m., there are enough students on our team that it is difficult to actually see the patients without pushing, and the presentations are done so quietly that it is often difficult to know which patient in the bed is being discussed.
- The interns have anywhere from 24-48 patients and nobody to depend on; the students and consultants (attendings) come and go, and the nurses are untrained, overworked.
- It is hard to make 'the wrong decision' on patient management. Everything is by trial and error. No lab tests seem to ever get done. And the ones that do get done aren't reliable. Another resident who has been here for 4 weeks told me he

has NEVER seen a positive CSF cell count. So all treatment is based on clinical suspicion. It is good in that it really forces you to do a detailed clinical history and exam. The flip side in America is that we always order every test in the book and often times we still don't know what is going on!

- Their family members (or sometimes the family members of the bedmate) who are not allowed in until afternoon, were usually around by the time we started procedures, and would hold [the patient's] hands and speak softly to them, watching carefully through the whole thing.
- An LP at home frightens me because it always looks complicated, between the sterile field, all the attachments and bottles involved. At Moi it is scary because students do them unsupervised, and they involve rubbing a cotton ball with "spirits" (purple liquid that I believe is rubbing alcohol, or something similar) on someone's back, watching the cotton ball turn completely brown with dirt, tossing it aside, putting on sterile gloves, and sticking an IV cannula into someone's back. I hesitated at first but, after seeing the number of cases of cryptococcal and tuberculous meningitis, I realized the benefits far outweighed the risks, and that it was not something I could afford to be timid about.
- For the remainder of the day, there would be five people sitting on one bed, sharing food and talking, singing prayers and wailing for the dead, and holding each other closely.
- It is not uncommon to have a patient die overnight or for that matter at any time of the day, and usually once they are gone they are not mentioned again. This seems cold until you realize how busy the hospital is, and how important it is that the interns be able to move on and get back to work.
- You'll also begin to learn the process of knowing when enough is "enough" in code-type situations, particularly in the context of a resource-poor environment. It can be frustrating knowing that simple interventions at the appropriate time may have prevented these outcomes.

Moi University Medical Students

- In our setting, there are very few providers for a large number of patients, and an intern can be in charge of over 40 patients, while a nurse can be in charge of over 50 patients. This makes it impossible to offer personalized and individualized care to the patient.
- The patients in America know so much about their illnesses and the preferred mode of management or treatment. Most people [in Kenya] have complete trust in their doctor and believe that he or she will provide the best care possible.
- The attending attends the ward rounds every day, unlike in Kenya. And they hold teaching sessions after the rounds, which was really appreciated. It was quite impressive



Mother and child at TB clinic.

to see the attending directly taking H&P's on almost every patient!

- I noted great efficiency in carrying out orders, lab samples were taken in time, medications were given in good time and arrangements to take patients for investigations and treatment were carried out with utmost efficiency.
- The medical system was great and shows how the hospitals in developing countries can embrace technology to improve patient management and filing of records. The health service delivery was mostly based on which investigations and what drugs a patient required rather than what the patient could afford.

Brown University Residents

- In Kenya, the attending only sees the patients once a week. I met the attending on my first day (2 days ago) but haven't seen him since. I am working with a Kenyan resident who for all intents and purposes functions as the attending and makes all the daily decision. Today she was not there. I was that person.

Moi University Residents

- Residents here are assigned a particular number of patients to take care of. Back at home, you have the whole of ward 2 to yourself and you are basically working with very little supervision.
- I liked the outpatient clinics here. They are quite organized. You don't get large groups of patients, you know, waiting, from morning to evening. People are given a time and they respect the time and they come.
- The difference [in patient care] again reflects the difference in terms of manpower and resources at Brown compared to ours at home.

CULTURAL DIFFERENCES

Brown University Medical Students

- Our first day, we went for a run, and came back to brace ourselves for the cold water, only to turn the taps and find none. One of the other students waiting in line behind us felt so sorry for us that she offered to lend both of us her bucket...one of the many moments where you are humbled by the realization of how privileged an existence we have at home.

Moi University Medical Students

- There is a big cultural difference in food, work ethics, and socialization.
- People are welcoming, courteous and considerate. However, more people should go to church.
- Accent can be a major hindering block to learning. Tell your teams to improve their diction so that communication can be more effective.

Brown University Residents

- I have been a member of three churches (and visited many more in America) and the churches in America tend to focus on its members; there is some community involvement, but rarely does the church make an impact on its community. In Kenya, the church has a palpable pulse in the community. It was refreshing to see people next to nothing have such excitement and energy for church and each other.
- The drive through Eldoret was interesting. I almost died five times. Here are some fun-filled facts about driving in Kenya:
- Cows are encouraged to wander onto the road. They are everywhere. Almost hit one. Reminded me of Vermont.
- There is no speed limit. The average speed on the two-way, single-lane road was 80 mph.
- The roads have no lines, and it doesn't matter what side of the road you drive on.
- When coming upon a biker (and there are many) you have to see exactly how close you can come to hitting them.
- You can pass slower moving cars at will.

Moi University Residents

- Initially I thought this was the worst place to live and I asked myself what the Americans did to deserve this, living in such temperatures. But, I learned to enjoy the snow, how white it was...Sometimes it was extremely cold but I kept warm.
- Every evening, we go to jog in the wonderful Brown University gym. Most weekends we have been walking around; we have been to Roger Williams Park. We went to Newport, a wonderful place. We also went to Boston. So we had fun.

PERSONAL GROWTH

Brown University Medical Students

- I think this is one of the most powerful things you can take from your experience – making the statistics and dispassionate descriptions we've read in books become more human, more emotional, and more real-enough to the extent that it will encourage us to find effective ways to address these issues in our future careers.
- The month in Eldoret has been an unparalleled learning and growth experience for me. It has strengthened my resolve to work in underserved areas here. I have enjoyed this month and am very grateful for the experience.

Moi University Medical Students

- [The Medical Exchange] helped us realize the importance of patient-centered care, helped me improve my clinical practices, helped me decide on future area of specialization, helped me become a competent doctor, encouraged me to take full responsibility of my patients.
- I am convinced that patients in Kenya die of things/illnesses that could be managed well.
- I was also able to see the accomplishments and achievements that can be made with teamwork and how much a change of attitude can accomplish in all aspects of life, for the betterment of humanity.
- The bridge between theory and practice of medicine was bridged and a wealth of valuable skills and knowledge on therapeutics was acquired.
- ...the challenge now rests with us to make this a reality after having a chance to see it working at RIH.
- I am back to Kenya with a totally changed perspective of approaching life in general. A big challenge lies ahead of me in ensuring that the good things I learned are implemented for the betterment of everyone in the society and especially within the health sector.

Moi University Residents

- It is like when we came here, we were small babies...we have grown and matured medically.
- We realized that we are the generation of tomorrow. We have to work hard and change things in a positive perspective. ❖

The Rich Family's Mission to Eldoret

Kids recall babies, teens and lessons learned

Josiah D. Rich, MD, MPH is an infectious disease specialist and Professor of Medicine at the Alpert School of Medicine at Brown University. He and his wife, Pat, and their children, Nick, then 17, and Nola, then 14, spent the month of August 2010 in Eldoret. While Dr. Rich worked at the Moi Hospital, his family volunteered at a pediatric and teen center.



PHOTOS COURTESY OF JODY RICH, MD

JOSIAH D. RICH, MD, MPH

When we planned the trip our expectations were vague but we felt there was an opportunity to experience life in Eldoret that should not be missed. In preparation, we were concerned about where we'd stay, what we'd eat and how we would get along. But upon arriving in Eldoret, our concerns about ourselves were eclipsed by the community at IU house. We were quickly integrated into the rhythm of daily life and provided with many opportunities to help.

For each of us, the daily routine differed. Jody attended rounds, Pat and Nola helped out at the Sally Test Pediatric Center, and Nick volunteered at the Tumaini Teen Center. Each day we learned a little Kiswahili, a child's name, a way to comfort and a renewed belief in the strength of hope. The staff, patients and children we encountered, whether it was at the Moi Teaching and Referral Hospital (MTRH), Sally Test, the Tumaini Teen Center or the Imani Workshop, were endlessly generous with their time.

It was a privilege to visit MTRH/Moi and the lessons we learned about human dignity and the strength of hope will be with us forever. We are deeply indebted to Dr. and Mrs. Joe Mamlin for their generosity and vision in creating a collaborative community of support and education. ❖

NOLA RICH

In 2010, I spent a month at the Moi Hospital/Indiana University medical compound in Eldoret, Kenya with my father, mother and older brother. It was the summer before I would enter high school and start a new chapter of my life. My family and I prepared for this visit by getting vaccines and taking malaria medicine; reading up on Kenya, and packing carefully, bracing ourselves for this extraordinary trip. We were prepared for practically anything from mosquitoes to sunburns, but nothing could have prepared me for the emotional connection I felt for the people we met.

Upon arriving, we quickly settled into the compound where visiting faculty and their families lived. Everyone

ate meals together. We developed a comfortable daily rhythm in which we were able to check in with each other throughout the day and share our experiences.

Our daily routine had many highlights. Before leaving for Moi Teaching and Referral Hospital (MTRH) in the morning, my family and I took Kiswahili lessons from Wycliffe. He was a regular fixture in the common area of the compound waiting for his next student – always prepared with a lesson and always ready to engage anyone who passed with a Kiswahili greeting or short conversation. Wycliffe's lessons helped us progress from Kiswahili greetings to simple sentences and a sense of the culture. For instance, while we were learning the days of the week in Kiswahili, we also learned that in their culture Saturday is considered the first day of the week.

After our daily lessons with Wycliffe, we would leave the compound but

never without salutations from Happy Michael, the compound guard. You couldn't help but smile back at Happy Michael as he stood waving with both of his hands as we walked up the rutted dirt road leading toward MTRH.

My father would go off to do rounds at the hospital and my brother helped out at a teen center for street children. My mother and I would go to the Sally Test Pediatric Center at the Moi Hospital. The Sally Test Center was set up to provide a place for children who were long-term patients at Moi to have some normalcy during their stay. It was an area where children could play or keep up with their lessons or just be cared for in a setting that was away from the clinical areas and be normal kids. Most of the children I met at the Sally Test Center had been abandoned. Victims of poverty, their parents often just don't have the means to pay or stay with a sick child. Unfortunately, this creates a steady supply of orphaned children to

be cared for and demand for extra help and hands at the Sally Test Center.

I fell in love with the Sally Test Center and looked forward to each day there. My daily routine at the center consisted of holding baby Alex, who was only a few months old, and looking into his happy, chocolate eyes and hearing him try to turn his baby gibberish into my name. You wouldn't have known that he had been abandoned at the entrance to the hospital as an infant. He seemed so full of life and eager to explore the world around him. His little fingers would struggle to wrap around mine and he would look at me as though I was the most interesting person in the world. I will never forget the connection I felt to him.

When I wasn't holding Alex, I was playing with Sydney, a two-year-old orphan with malaria. Whether it was because I made a funny face or because he was being tickled or for no reason at all, Sydney was constantly giggling. He





had the most contagious laughter that would never fail to brighten my day. If Sydney was otherwise occupied there were always other children to attend to. For instance, there were the two young twin sisters who would always be tickling and wrestling with each other. They glowed with happiness and as soon as I met them I knew they had an incredibly strong connection with one another. They had severe burns all over their bodies because their father had lit their house on fire, killing their mother and other sister. However, if the burns weren't visible, I never would have known what tragedy they had endured. They were as happy and playful as any other children.

Each of these kids had a story, a history of courage, survival and perseverance that would devastate most human beings – but not these children. They were hopeful and happy, despite everything they had been through. They sang and danced and gave love with such ease. When we would sing, it would fill the room with love and happiness despite all that they had been through. They had accepted us and loved us with such ease that saying good-bye was truly heartbreaking. When they sang to me I appreciated the time I had with them, rather than think about the possibility of never hearing their voices again. I followed their lead as they showed me that our goodbye should be a happy moment, not a sad one. They were strong, and showed me how to be strong, too. ❖

NICK RICH

I can remember the scene vividly. I am passing around a soccer ball with friends on a makeshift field between a farm and a rushing grey river. The morning air feels clear and cool and from a distance, it might look like a typical day of good, healthy fun. But upon closer observation, the scene reveals itself as quite out-of-the-ordinary. Word has spread of the afternoon game for kids of all ages, and that participants can also attend a picnic afterwards. Kids pour in from every direction and mayhem seems imminent. We quickly form teams and start the game. The players run, pass, jump and kick with surprising agility and skill. Everyone is laughing and smiling and glistening from their exertion in the afternoon sun.

Despite the wholesomeness of the scene, there are a few hints that this is not taking place in Anytown, USA. Twice during the soccer game for example, the ball accidentally rolls into the nearby river. Each time, Javan, a sinewy 14-year-old, strips off his clothes and, in one fluid motion, plunges headfirst into the river to retrieve the ball. I look up in amazement at Javan's lack of hesitation to risk his health and wellbeing for a soccer ball. Burning trash heaps along the edges of the field teem with kids scrounging for scraps of food or metal to salvage. The field itself is located behind an industrial district and the river Javan dove into is a repository for both industrial and human waste.

The soccer game was actually an outreach activity in Eldoret, aimed at reaching homeless street kids; many addicted to sniffing glue. The purpose of the soccer game was to bond with the kids by playing a game, providing a meal, and telling them about the nearby Tumaini Center. The center is a drop-in program where teens could find refuge from their lives and struggles on the streets.

In the summer of 2010, while my father worked at the nearby Moi Hospital, I volunteered at the Tumaini Center and worked with its staff to help the street kids of Eldoret. The mission of the Tumaini Center is to provide hope for children who are considered a nuisance to society. As a volunteer, my role was to engage the participants by playing games and sharing meals that consisted of porridge or cooked corn meal.

The first meal I shared with them was particularly memorable. Not because it was an especially good meal, but because it was a rite of passage. To the street kids, I was a typical "Mzungu" – a white American. Sitting at the crowded table I lifted the mug of porridge to my mouth, and got the distinct sense that all eyes were on me. I suddenly realized how important this moment was to my relationship with these children. Although the purple-brown liquid smelled like rotten eggs and had the texture of old milk, I drank it down and managed a smile when I lowered the mug. In return, I received smiles of approval and a few giggles. Sharing their meals, the staple food that sustains them, helped dissolve a cultural barrier. Although I was still an outsider, they now accepted me as a friend.

Despite the distance, I still feel a strong connection to the Tumaini Center and the street kids. I hope that my contributions were as great as their influence was on me. I learned how the simple gesture of playing a game and sharing a meal can dissolve boundaries and create a trusting bond. I also learned how rewarding it is to go outside my comfort zone and learn about other cultures. I find it ironic that these kids, cast-off from society, have actually taught me so much about tolerance and hope. ❖

The Unexpected Path from Eldoret

JULIA GREENSPAN

Julia Greenspan is completing her yearlong AmeriCorps Vista program where she worked at the Rhode Island Free Clinic as a fund development coordinator. She plans on enrolling in an MPH program in the near future. She traveled to Eldoret in 2005 with her family, Dr. Neil Greenspan and his wife Debra, and brothers Aaron and Ben.

Despite being garrulous and outgoing, I have known people for weeks or months without them being aware that I traveled to Eldoret, Kenya, in high school. I often hesitate to share my experience, because despite the trip having immeasurable effects on me, my primary concern is that it will be minimized to be just a “cool story” to others. Like a stone dropped in a pond, the ripples from that trip have affected my entire life trajectory. The short, superficial synopsis of the trip is my parents decided to pack up my brothers and me and head to Kenya for a month in 2005. Needless to say, when I returned to Barrington High School that fall, I had quite a different summer vacation story than most of my peers.

As a 14-year-old, there were many different layers to my experience. First, the superficial memories – how strange I found it that there were wild lizards that would scuttle around inside the hospital; then, the poignant mental images – remembering how the path into town from the hospital was lined with shanty-style shops, all prominently advertising “COFFINS FOR SALE;” and finally, the core of my experience – having to leave the baby to whom I had grown attached crying in a crib as I walked away from the hospital for the last time.

I didn’t know what to expect when we left Logan Airport in Boston for



our trip, and I certainly couldn’t have predicted the lifelong implications of that month. What I had seen in the pediatric ward, especially the impact of HIV, left an imprint on my brain that I couldn’t seem to shake. When I left to begin school at Clark University three years later, I enrolled in a course called “The AIDS Pandemic.” During the first few semesters at Clark, I wandered between academic fields, unsure how I could fulfill the desire to help others, which had been sparked on my trip. During the fall of my junior year, I first heard the words “public health.” Intrigued, I researched the field. To put it simply, the rest has been history.

I have dabbled in various aspects of public health, interning at different types of organizations through the rest of my college career. In July 2013, I completed an AmeriCorps VISTA year of service at the Rhode Island Free Clinic, which allowed me to experience health

disparities right here, in our state. At this point, I am unsure what my next step is, but I know I will be pursuing my Master of Public Health in the next few years. By getting my MPH, I believe I will finally be able to feel like I am helping people in a way that I longed to as a 14-year-old in Kenya, but did not yet have the capability. The next time I return to Eldoret, I know that I will have the necessary skills.

Eight years later, it is not the details of my family’s trip to Kenya that stand out for me, but rather it is the desire to find a way to help others. For our family, it is hard to explain the experience that we had, and I know that we all took away something different from IU House and Moi Teaching & Referral Hospital. For me, my time in Kenya introduced me to public health, the field in which I want to devote my career, and for that alone, the trip was truly life-changing. ❖

Family Trip to Eldoret: ‘Shock and Awe’

LINDA NICI, MD AND LLOYD FEIT, MD

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The term “life-changing experience” is often used rather blithely to describe a myriad of events that occur throughout one’s lifetime. However, we would maintain that bringing three young and impressionable children (7, 11, and 15 years old) to a Third World country to work within its healthcare system is truly an appropriate use of the term.

My husband and I are physicians, a pulmonologist and a pediatric cardiologist respectively, so it seemed logical to volunteer our time to the Brown Kenya Program where our expertise might be valuable. As we contemplated this journey, we also considered how worthwhile it might be to bring our children with us to Kenya. Alyssa, Sara and Benjamin were growing up in a wonderful community but one where wants and needs were easily met and diversity was not the norm. We wanted them to experience a culture that would impress on them the realities of social and economic inequalities and perhaps give them a context upon which to base decisions about how to make their way in the world.

To be sure, the experience changed us more than we could have imagined, and far more than any help and expertise that we intended to bring to their system. Each of us initially reacted to the experience in Eldoret and the Moi Teaching and Referral Hospital with shock and awe – the sights, the smells, the incredible sadness of poorly treated illness, were at times horrific. At the same time, the kindness and humanity of so many of the people we met in the face of such conditions was incredible and inspiring. Lloyd and I spent our days teaching trainees and caring for some of the saddest cases we had ever seen; sad in part because bad outcomes were often related to lack of simple education or modest means. Alyssa, Sara and Ben spent their days in the childcare ward, playing with, caring for, and getting to know the remarkable children, some of whom had been abandoned by their families. They developed an empathy and understanding of a world that is so far away from their own experience, but enriches and informs it to this day.

We regularly recount our experiences, both happy and sad, talk about returning one day, and approach life with a perspective and appreciation that I can’t help but think would not be there without having chosen to spend this time together. Perhaps most importantly, we hope our kids internalized the lessons learned from watching the program directors and founders – Dr. Joe and Sarah Ellen Mamlin. Despite the seemingly constant challenges from ‘the system’ and so many other roadblocks, these people had a vision of change and kept their eyes on the prize. Isn’t that what any parent wants for their children? ❖

Unique opportunity to assimilate into the Kenyan experience

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I had the opportunity to visit Eldoret, Kenya, with my wife and four children for the month of July 2007. We were immediately made an integral part of the Brown Kenya Program. I engaged in teaching activities at the Moi Teaching and Referral Hospital, while my wife and children made the long hospital stays of the children in the Sally Test Pediatric Center more enjoyable.

Traveling to Africa is an experience all should enjoy. Our trip, however, allowed us to assimilate into the African culture in a way few others outside of medicine or mission work can understand. My children and I would walk daily to the hospital, stand in large crowds to enter, and shop in the city center. While downtown, they quickly realized the enormity of the crowds and the poverty. They always felt comfortable and wanted by the Kenyan people.

Two years after our trip, we invited a Kenyan whom we had befriended, to come to America for medical training over six weeks and stay in our home. My children came to better understand the difficulties living in Kenya through his eyes. This was a difficult time for him to travel, during the political clashes and violence. Despite this, he knew the opportunity could not be wasted. He explained to my children clearly how important it was to him and his family to fully utilize this opportunity.

Overall, the experience in Eldoret was life changing for all of us. We came to understand that many facets of life in the United States are taken for granted. Fresh water, living conditions, safety of travel (especially at night), personal safety/crime and infectious diseases are all challenges my family came in contact with first-hand. ❖

The Future of Generic HIV Drugs in Rhode Island

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ABSTRACT

The number of HIV-infected persons in the United States continues to increase and most patients with HIV will be on antiretroviral therapy (ART) for many decades. The introduction of generic antiretroviral medications has the potential for significant cost savings which may then be accompanied by improved access. State AIDS Drug Assistance Programs will be made more effective by the switch to generic ARTs. Cost savings and barriers to the introduction of generic ART are discussed.

KEYWORDS: HIV/AIDS, generic drugs, antiretrovirals, Rhode Island

INTRODUCTION

Over the past three decades, HIV has emerged as an important health and policy issue on a number of levels – global, national, as well as local. Currently, more than 1.1 million people are living with HIV/AIDS in the United States alone, of which a CDC-databased modeling estimated 3,730 to 4,061 live in Rhode Island.¹ However, since the development of antiretroviral therapy (ART), HIV is no longer a uniformly fatal ailment; instead, through the effective use of ART, HIV/AIDS has become a treatable chronic disease.

Although the importance of ART is clear, many low-income people living with HIV/AIDS in the United States face difficulties with access. Without insurance or other forms of support, ART is prohibitively expensive in the United States. The cost of ART differs significantly among countries.

In India, for example, where many generic antiretroviral medications are produced, the cost of the popular fixed-dose combination formulation of emtricitabine/tenofovir/efavirenz is approximately \$1,200 per year. This, in fact, represents one of the most expensive, non-nucleoside reverse transcriptase inhibitor-based ART regimens in India.² Meanwhile, in the United States, where almost all antiretroviral agents remain patented, the full out-of-pocket cost of a year's worth of this same combination therapy (branded as Atripla®) has been quoted by a local Rhode Island CVS Pharmacy at \$26,364 (oral communication, November 2012).

Even situated in the relative context of differing economic scales, the discrepancy between the cost of ART in India and the cost of ART in the United States is tremendous. The difference can be attributed in part to the dichotomy between patented and generic medications. Due to a number of international agreements and variations in drug patenting policy, generic antiretroviral medications already exist in many countries globally. When will such generic antiretroviral drugs be widely available in the United States, and in Rhode Island more specifically?

In fact, the more widespread introduction of generic antiretroviral drugs in the United States is not far in the future. Patents on some popular antiretroviral drugs have recently expired, and patents on many more are expected to expire in the near future. Of great relevance, the patent on efavirenz, a component of the previously mentioned drug regimen co-formulated as Atripla®, is expected to expire in late 2013. The expected patent expiry of the remaining two components of branded Atripla® are also just a few years away – emtricitabine in 2015 and tenofovir in 2017 (Table 1).³ With

Table 1. Key HIV drugs with recent or imminent patent expiries, by drug class

Drug Class	Drug	Brand name	Manufacturer	Patent expiry
Nucleoside reverse transcriptase inhibitors	Lamivudine	Epivir	GlaxoSmithKline	2010
	Abacavir	Ziagen	GlaxoSmithKline	2012
	Emtricitabine	Emtriva	Gilead	2015
	Tenofovir	Viread	Gilead	2017
Non-nucleoside reverse transcriptase inhibitors	Efavirenz	Sustiva	Bristol-Myers Squibb	2013
	Delavirdine	Rescriptor	Pfizer	2013
Protease inhibitors	Darunavir	Prezista	Tibotec	2015
	Tipranavir	Aptivus	Boehringer Ingelheim	2015
	Ritonavir	Norvir	Abbott	2016

these key antiretroviral patent expirations expected in the near future, it becomes important to consider the implications of the introduction of generic ART in Rhode Island.

HIV/AIDS IN RHODE ISLAND

In Rhode Island, the state Department of Health has published reports based on modeling from nationwide CDC statistics that estimated the total number of people living with HIV/AIDS in Rhode Island in 2011 to be between 3,730 and 4,061. Some uncertainty regarding the actual prevalence of HIV/AIDS in the state, however, still remains. Between 2000 and 2011, the time period for which reliable data has been processed, 1,548 cases of newly diagnosed HIV among Rhode Island residents were reported to the state Department of Health. This is but a minimum estimate; the true incidence of new infections is almost certainly greater.¹

The HIV/AIDS epidemic in Rhode Island reflects many nationwide trends in HIV/AIDS infection. For example, racial and ethnic minorities, particularly African Americans and Latinos, are vastly overrepresented in the epidemic.⁴ These same groups also represent those more likely to lack health insurance in the United States.⁵ Thus, overrepresentation in the HIV/AIDS epidemic, compounded with widespread lack of insurance coverage, likely makes access to ART especially difficult for minorities.

For low-income, under-insured or uninsured Rhode Island residents living with HIV/AIDS, the state AIDS Drug Assistance Program (ADAP) is key in facilitating access to costly but necessary HIV-associated medications. ADAP is a payer of last resort for patients who are otherwise unable to access life-sustaining ART. The RI ADAP requires a budget of nearly \$10 million a year. Prescription drugs, particularly antiretroviral medications, account for the vast majority of program expenditures.⁶ In 2010, the RI ADAP served a total of 846 drug-eligible clients, continuing the program's growth.⁷ But as a result of sequestration, many state programs are facing cuts in the federal grants supporting ADAP.

Access to and cost-savings in ART are especially important now, given the increasing number of people living with HIV/AIDS due to longer life expectancies from improved treatment, and recent changes in national HIV/AIDS treatment guidelines recommending that all ART-naïve people initiate treatment regardless of immunologic status.⁸ As a result, demand for ART will likely continue to increase; the introduction of cheaper generic antiretroviral drugs merits consideration.

Cost-savings

Generic antiretroviral drugs could significantly affect Rhode Island, and their widespread adoption is certain to bring welcome cost-savings to the state, as well as the state ADAP in particular.

Many of those living with HIV/AIDS in Rhode Island are already on ART. In the largest clinical population of people

living with HIV/AIDS in Rhode Island, as cared for at the Immunology Clinic at the Miriam Hospital, an estimated 80% of the patients in care are on ART and are virally suppressed. Nearby Thundermist Health Center, which cares for an additional 73 patients, offers similar data (Dr. Brian Montague, DO, oral communication, March 2013). Overall, local infectious disease physicians estimate the current rate of ART use among all people living with HIV/AIDS in Rhode Island to be 60% (Dr. Timothy Flanagan, MD and Dr. Brian Montague, DO, oral communication, March 2013). The population of HIV-positive patients in care in Rhode Island can be conservatively estimated to be 2,000 individuals, as it has been published that the 1,500 HIV-positive patients cared for at The Miriam Hospital represent over 75% of the HIV care provided within Rhode Island.⁴

Given these numbers, a rough estimate of cost-savings in Rhode Island resulting from the future availability of generic antiretrovirals, as illustrated by the specific example of the commonly-used ART regimen Atripla® (emtricitabine/tenofovir/efavirenz), can be calculated with the following assumptions: 2,000 people living with HIV/AIDS are in care in Rhode Island, 80% of those in care are on ART, 50% would benefit from going on the generic regimen in question, and a 50% cost-savings would result from going generic (the full cost of Atripla® from a local CVS Pharmacy is \$26,364 per year). This would result in approximately \$10.5 million a year in savings on HIV drugs in Rhode Island alone.

In particular, cost-savings to the Rhode Island ADAP would especially benefit the state health care system. In recent years, ADAPs have lacked funding and have been forced to institute unfortunate cost-containment measures, such as waiting lists and limited drug formularies. Although no waiting list currently exists for the RI ADAP, the long-term sustainability of the program is questionable, especially given the increasing number of people living with HIV/AIDS and the new guidelines recommending universal ART. A rough estimate of cost-savings to the state ADAP resulting from the availability of the generic components of popular branded Atripla® can be reached. Given that the RI ADAP served 846 HIV-positive clients in 2010 and that the full cost of out-of-pocket Atripla® from a local CVS Pharmacy is \$26,364 per year, and assuming that half of all patients would benefit from being on the generic regimen in question and that a 50% cost reduction would be experienced from going generic, the RI ADAP could potentially save as much as \$5.6 million a year.⁷

Although, with the full implementation of health care reform in the near future, Medicaid expansion and subsidized private insurance may transition as many as 40% of the people currently dependent on ADAP to Medicaid, it will not change the significance of the cost-savings to the state resulting from adoption of generic ART. The health care system as a whole stands to benefit greatly, no matter the details of coverage.

Barriers to generics

Although generic antiretroviral drugs in the United States appear promising, a number of potential barriers to their widespread adoption exist.

Concerns about the efficacy of generic antiretrovirals, for example, exist despite numerous studies showing their efficacy in reducing morbidity and mortality, as well as in eliciting high levels of patient compliance and drug tolerance. Importantly, generic ART has been found to be just as effective as brand name ART in reducing viral load.^{2, 9, 10} Quality-assured generic drugs and originator branded drugs, then, ought to be considered equally safe and efficacious. Additionally, in the United States, much of the doubt surrounding the clinical viability of generic-based ART stems not necessarily from the pharmacological efficacy of the generic medication itself, but rather from the expected lack of generic fixed-dose combination antiretroviral formulations. Typically, fixed-dose combination formulations allow for a simple one pill once per day dosing regimen. However, because generic antiretroviral agents will only be available separately, going generic in the United States would likely mean requiring patients to take multiple pills per day, thus increasing their pill burden. Higher pill burden has been suggested to cause lower adherence, which would affect the overall efficacy of the treatment regimen. However, studies have shown that it may not be the number of pills taken per dose, but rather the number of daily doses, that is key to determining patient adherence.^{11,12} Nonetheless, a number of health care providers may be resistant to accept generics-based antiretroviral therapy, fearing that they may be making an unfavorable trade-off in choosing cost considerations over treatment integrity.

Furthermore, the practice of drug rebates among ADAPs, including the RI ADAP, may complicate the widespread adoption of generic antiretroviral drugs. The RI ADAP negotiates with pharmaceutical companies for discounts in its purchase of antiretroviral drugs; these discounts often take the form of drug rebates. Drug rebates require ADAPs to purchase drugs from companies at sans-rebate face value; only after drug purchase and distribution do pharmaceutical companies reimburse ADAPs with the negotiated rebate value. The specifics of the negotiation process and resulting rebates are not released to the public. Underfunded ADAPs often rely on drug rebates to supplement budgets, providing a welcome source of flex spending money. Nationally, drug rebates account for 33% of the overall national ADAP budget in fiscal year 2011. In Rhode Island, the state ADAP has been reported to have received drug rebates constituting approximately \$1 million in fiscal year 2011, 10% of the overall yearly ADAP budget.⁶ These drug rebates may be problematic, as they ultimately serve as a tool for pharmaceutical companies to hook ADAPs into maintaining artificially high antiretroviral drug prices. Because the provision of drug rebates incentivizes ADAPs to keep buying branded drugs from the parent pharmaceutical company and reduces

the need to seek out cheap generic alternatives, drug rebates may represent a significant institutional barrier against the future widespread adoption of generic ARV agents in Rhode Island, as well as the United States more generally.

CONCLUSION

The introduction of generic antiretroviral medications has the potential to significantly benefit patients and the health care system alike. Generic antiretrovirals have been shown to be safe and efficacious, allowing for more patients to access affordable, life-saving ART. Furthermore, generic antiretrovirals will also lead to great cost-savings for the health care system generally, as well as the ADAP specifically. Although certain barriers may pose difficulties to their widespread adoption, generic drugs offer a promising path for the future of HIV care.

Acknowledgements

This research has been facilitated by the infrastructure and resources provided by the Lifespan/Tufts/Brown Center for AIDS Research (NIH, P30AI042853). The project described was supported by Grant Number P30AI042853 from the National Institute of Allergy and Infectious Diseases. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute Of Allergy And Infectious Diseases or the National Institute of Health.

References

1. 2011 Rhode Island HIV/AIDS Epidemiologic Profile with Surrogate Data. Rhode Island Department of Health website. <http://www.health.ri.gov/publications/epidemiologicalprofiles/2011HIVAIDSWithSurrogateData.pdf>. Published September 2012. Accessed February 13, 2013.
2. Pujari S, Dravid A, Gupte N, Joshix K, Bele V. Effectiveness and Safety of Generic Fixed-Dose Combination of Tenofovir/Emtricitabine/Efavirenz in HIV-1-Infected Patients in Western India. *Journal of the International AIDS Society*. 2008;10:196 doi:10.1186/1758-2652-10-8-196.
3. Maxmen A. Generic HIV drugs will widen US treatment net. *Nature*. 2012;488(7411):267 doi:10.1038/488267a.
4. Leeper S, Fillion K, Gillani F, Ross H, Rana A, Tashima K. Decade of HIV in Rhode Island: Demographic and Clinical Characteristics of Patients Diagnosed in 2001 and 2010. *Rhode Island Medical Journal*. February 2013;35-39.
5. Becker G. Effects of being uninsured on ethnic minorities' management of chronic illness. *West J Med*. 2001;175(1):19-23.
6. The Kaiser Family Foundation. State Health Facts website. <http://kff.org/statedata/>. Accessed January 2013.
7. Ryan White HIV Care Program. Rhode Island Department of Health website. <http://www.health.ri.gov/programs/ryanwhite-hivcare/>. Accessed January 2013.
8. U.S. Department of Health and Human Services. Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents. *AIDSinfo*. 2013. <http://aidsinfo.nih.gov/guidelines/html/1/adult-and-adolescent-arv-guidelines/0/>. Updated February 12, 2013. Accessed March 3, 2013.
9. Laurent C, Kouanfack C, Koulla-Shira S, et al. Effectiveness and safety of a generic fixed-dose combination of Nevirapine, stavudine, and lamivudine in HIV-1 infected adults in Cameroon: open-label multicentre trial. *Lancet*. 2004;364:29-34. doi: 10.1016/S0140-6736(04)16586-0.

10. Stringer JS, Mwango AJ, Giganti MJ, et al. Effectiveness of generic and proprietary first-line anti-retroviral regimens in a primary health care setting in Lusaka, Zambia: a cohort study. *Int J Epidemiol.* 2012;41(2):448-59. doi: 10.1093/ije/dys022.
11. Buscher A, Hartman C, Kallen MA, Giordano TP. Impact of antiretroviral dosing frequency and pill burden on adherence among newly diagnosed, antiretroviral-naive HIV patients. *Int J STD AIDS.* 2012;23(5):351-5. doi: 10.1258/ijsa.2011.011292.
12. Claxton AJ, Cramer J, Pierce C. A systematic review of the associations between dose regimens and medication compliance. *Clin Ther.* 2001;23:1296-1310. doi: 10.1016/S0149-2918(01)80109-0.

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RI Influenza Surveillance Summary 2012–2013

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The United States experienced a severe and prolonged influenza season between October 2012 and April 2013. Influenza A (H3N2), influenza A (H1N1), and influenza B viruses co-circulated. Compared with recent influenza seasons, this season had a higher percentage of outpatient and Emergency Department (ED) visits for influenza-like illness (ILI), higher rates of hospitalizations, and more deaths.¹ Rhode Island was no exception to this national trend.

The circulating strains of influenza were a good match to the vaccine strains, but vaccine effectiveness was observed to be poor. Vaccine effectiveness (adjusted for age, site, race/ethnicity, self-rated health, and days from illness onset to enrollment) against influenza A and B virus infections associated with medically attended acute respiratory illness was 56%.² The circulating influenza A strains were sensitive to oseltamivir and zanamivir.

METHODOLOGY

The Division of Infectious Disease and Epidemiology (IDE) at the Rhode Island Department of Health (HEALTH) has a robust year round influenza surveillance system composed of six component surveillance systems. These include a sentinel provider network (Influenza-like Illness Network or ILINet), syndromic surveillance from emergency departments, laboratory surveillance, hospitalization reporting, institutional outbreak reporting of respiratory illness clusters and school absenteeism reporting. Continually collecting, monitoring and analyzing data from all of these components provides a comprehensive understanding of the spread and severity of influenza activity in Rhode Island.

Sentinel Providers

Rhode Island has a network of 20 physician practices that have agreed to be year round sentinel providers. These practices are geographically dispersed throughout the state and are representative of the state population as a whole. These sentinels submit a weekly report to the Centers for Disease Control and Prevention (CDC), which includes the total number of patients seen that week, and the total number of patients seen for influenza-like illness. Influenza-like illness is defined as a fever $\geq 100^{\circ}\text{F}$ (37.80°C) and cough and/or sore throat, in the absence of a known cause. Sentinel providers record the total number of patient visits and number of patient visits for ILI by age group (0–4 years, 5–24 years, 25–49, 50–64 years, ≥ 65 years). Participating sentinel physicians are also required to submit swabs to the State Health

Laboratory (SHL) for testing three times during the year: at the beginning, middle, and end of the influenza season. These test results provide information on circulating strains. Sentinel data are regularly monitored by IDE in order to assess geographic spread of influenza activity by county, age distribution, and strain type.

Laboratory Surveillance

The Rhode Island State Health Laboratory analyzes specimens collected from sentinel providers using polymerase chain reaction (PCR) methods. If the specimen is positive for influenza, the SHL will “type” the strain of influenza, which would detect any novel influenza strains in the process. In addition, the SHL supports confirmation of outbreak specimens for institutional outbreak scenarios. Unsubtypeable specimens from hospital laboratories are also typed by the SHL or sent on to CDC for typing. Laboratory testing provides critical information for national surveillance efforts on whether the circulating strain is a match with the vaccine strains, and also to determine sensitivity to antiviral agents.

Syndromic Surveillance

Eight acute care hospital emergency departments throughout Rhode Island report chief complaint data through a web-based system called Realtime Outbreak Detection Surveillance System (RODS). The chief complaints are classified into syndromes from a list of symptoms. The syndromes are respiratory, constitutional, gastrointestinal, hemorrhagic and neurologic. The system also captures “all visits” or denominator data. The system updates every four hours and is able to generate alerts based on statistically significant deviations from a threshold norm calculated from historical data. Constitutional symptoms most closely resemble those of influenza (fever, myalgia, or chief complaint of flu). Syndrome trends are also analyzed by child vs. adult distribution, hospital and zip code. The RODS system is continually monitored by IDE for constitutional syndrome in order to assess the number of people who are seeking care at emergency departments for ILI.

Hospital Reporting

The eleven major acute care hospitals in Rhode Island submit hospitalization data to IDE on an ongoing basis. The data are typically submitted weekly, but in severe influenza seasons, the data are submitted daily. Data include demographic information on each individual hospitalized with laboratory-confirmed influenza. These data are critical to

determining severity of circulating influenza and inform hospital capacity decisions as part of statewide planning.

Respiratory Outbreaks in Institutions

All respiratory outbreaks, defined as one confirmed case of influenza or two cases of influenza-like illness, must be reported to IDE. The Division of Infectious Disease and Epidemiology conducts daily monitoring with the facility, assesses attack rates among the residents as well as the staff, and reviews infection control procedures and antiviral prophylaxis recommendations to prevent the outbreak from spreading. In addition, IDE coordinates specimen submission to the SHL to confirm the outbreak and determine which strain of influenza is causing illness.

School Absenteeism

Increases above normal trends in school absenteeism can serve as an indicator of influenza activity within a school. In an effort to detect outbreaks, IDE monitors school absenteeism data reported through the Rhode Island Department of Education (RIDE). If higher than expected baseline school absenteeism rates are detected for three consecutive days, IDE contacts the school nurse teacher, inquires about the reason for the increased absenteeism, and reviews infection control measures should influenza-like illness be the reason for the increased absenteeism.

RESULTS

Sentinel Providers

During the 2012-2013 influenza season, data from sentinel providers indicated that ILI began to increase during MMWR week 47 (week ending 11/24/2012; ILI=0.31), and spread very rapidly. Influenza was declared widespread throughout the state during week 49 (week ending 12/8/2012; ILI = 1.21%), and peaked at 4.05% in MMWR week 52 (week ending 12/26/2012). The percent ILI continued to decrease for the next six weeks until ILI was 0.91% in week 6 (week ending 2/9/2013), below the north east regional baseline of 1.0%. (Figure 1)

Laboratory Surveillance

During this time, the SHL tested 483 specimens for influenza. Of the 319 confirmed influenza specimens tested, 200 (90%) were Influenza A (H3 N2), 5 (2%) were 2009 influenza A H1N1, and 26 (8%) were influenza B. (Figure 2)

Syndromic Surveillance

Data from the syndromic surveillance system mimicked the trend seen by the sentinel providers. Chief complaint data for constitutional syndrome began to increase during week 47 with a value of 5.9%. It continued to increase until it peaked at 9.7% in week 52, and then proceeded to decrease steadily back down to 5.8% in week seven. (Figure 3)

Figure 1.

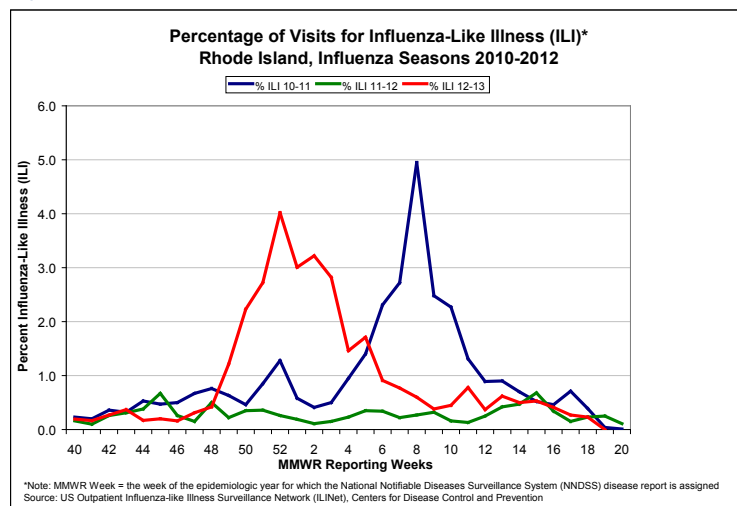


Figure 2.

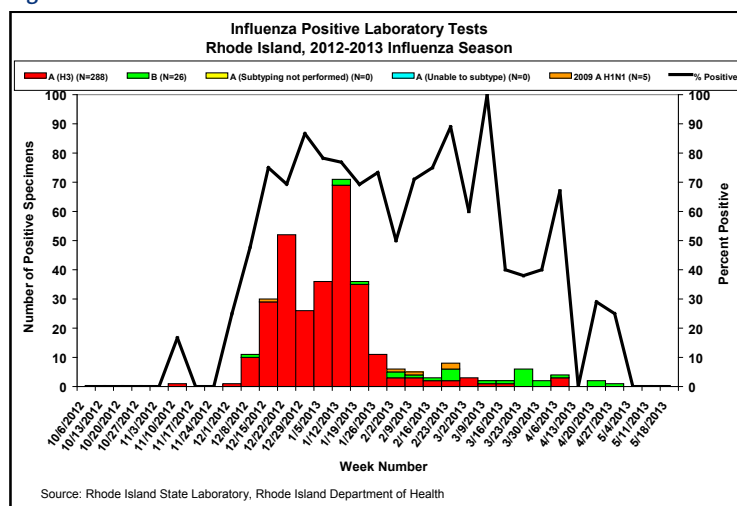
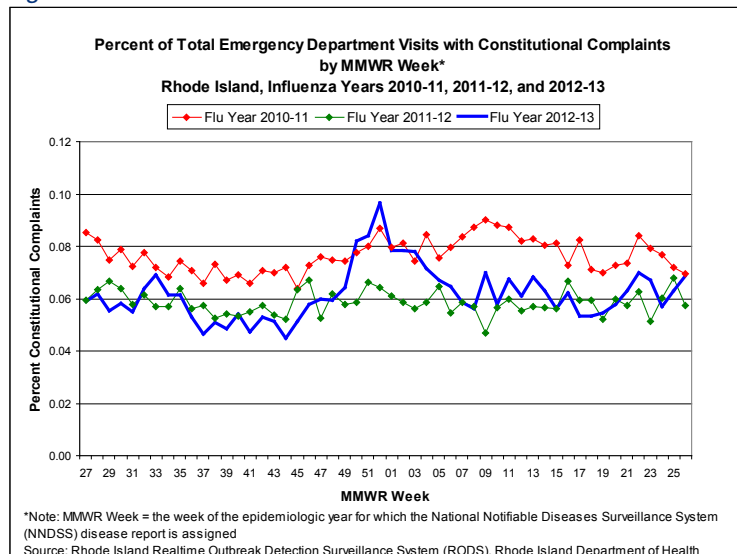


Figure 3.



Hospital Reporting

There were 831 hospitalizations during the 2012–2013 influenza season in Rhode Island. Among these, 792 (95.3%) were influenza A; 29 (3.5%) were influenza B; and 10 (1.2%) were 2009 novel influenza A strain H1N1.

More than half (484; 58.2%) of the 831 individuals who were hospitalized were aged 65 or older. The distribution of these hospitalizations among other age groups was as follows: 50–64, $n = 150$ (18.1%); 25–49, $n = 114$ (13.7%); 5–24, $n = 56$ (6.7%); and 0–4, $n = 27$ (3.3%).

Respiratory Outbreaks in Institutions

There were a total of 69 respiratory outbreaks during the 2012–2013 influenza season, 94% of which were in long-term care facilities. The remaining outbreaks were in schools and adult day care centers. The attack rate among residents ranged from 0 to 44%, and the attack rate among staff ranged from 0 to 95%. The Rhode Island Department of Health declared each outbreak over when there were no new cases for ten consecutive days after the illness onset date of the last case.

School Absenteeism

On average, 60% of schools reported their absenteeism data each week. Reporting improved as time went on with 53% of schools reporting during the beginning of influenza season (September–November 2012) and nearly 70% (mean of 65%) reporting for January to April 2013. The highest increase in absenteeism was observed during Thanksgiving week and Christmas week, suggesting that absenteeism was more likely a result of the holidays than influenza-like illness. Increased absenteeism rates for three consecutive days were observed for schools 21 times during the 2012–2013 influenza season. Phone calls to school nurse teachers at these times indicated that outbreaks of influenza-like illness were not the likely cause of absenteeism.

DISCUSSION

The 2012–2013 influenza season hit earlier than in previous years, with the Rhode Island Department of Health declaring influenza to be widespread throughout the state on December 5, 2012. This declaration was made based on the CDC's definition of widespread, which means there is increased influenza-like illness or confirmed outbreaks in at least half of the state's regions³ (in Rhode Island a region is a county).

The predominant strain of influenza during the 2012–2013 season was influenza A, H3N2. This strain of influenza is known for increased severity, which was reflected in the high rate of ED visits, hospitalizations and deaths. Currently only pediatric influenza deaths are reportable in Rhode Island, so IDE cannot quantify the number of influenza-related deaths among adults during the 2012–2013 season. There were no pediatric deaths this past season, and there have not been any pediatric influenza deaths since the pandemic in 2009–2010.

The Rhode Island Department of Health's multi-faceted influenza surveillance system allows IDE to have a complete understanding of the spread and severity of influenza throughout the state. Should there be a gap in one aspect of the surveillance system, the remaining components provide sufficient data to monitor influenza trends and inform policy decisions.

Acknowledgements

Special thanks to Jessica Signore, Disease Intervention Specialist in the Division of Infectious Disease and Epidemiology at the Rhode Island Department of Health for her diligence in compiling influenza data; and special thanks to the sentinel providers, laboratories, emergency departments, medical record departments and reporting hospitals, institutions, and schools who report data regularly and make influenza surveillance possible.

References

1. Influenza Activity - United States, 2012-13 Season and Composition of the 2013 -14 Influenza Vaccine. *Morbidity and Mortality Weekly Report (MMWR)*. Weekly. June 14, 2013 / 62(23);473-479. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6223a5.htm>
2. Interim Adjusted Estimates of Seasonal Influenza Vaccine Effectiveness- United States, February 2013. *Morbidity and Mortality Weekly Report (MMWR)*. Weekly. February 22, 2013 / 62(07);119-123. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6207a2.htm>
3. Overview of Influenza Surveillance in the United States. October 5, 2012. Centers for Disease Control and Prevention. <http://www.cdc.gov/flu/pdf/weekly/overview.pdf>

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Rhode Island Monthly Vital Statistics Report

Provisional Occurrence Data from the Division of Vital Records

VITAL EVENTS	REPORTING PERIOD		
	MARCH 2013	12 MONTHS ENDING WITH MARCH 2013	
	Number	Number	Rates
Live Births	957	11,726	11.1*
Deaths	906	9,787	9.3*
Infant Deaths	8	81	6.9#
Neonatal Deaths	3	60	5.1#
Marriages	250	6,262	5.9*
Divorces	289	3,421	3.3*
Induced Terminations	No data available		
Spontaneous Fetal Deaths	No data available		
Under 20 weeks gestation	No data available		
20+ weeks gestation	No data available		

* Rates per 1,000 estimated population

Rates per 1,000 live births

Underlying Cause of Death Category	REPORTING PERIOD			
	SEPTEMBER 2012	12 MONTHS ENDING WITH SEPTEMBER 2012		
	Number (a)	Number (a)	Rates (b)	YPLL (c)
Diseases of the Heart	178	2,328	221.0	3,339.5
Malignant Neoplasms	192	2,189	207.8	5,582.0
Cerebrovascular Disease	40	434	41.2	642.0
Injuries (Accident/Suicide/Homicide)	48	703	66.7	9,172.5
COPD	20	493	46.8	455.0

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

(b) Rates per 100,000 estimated population of 1,052,567 (www.census.gov)

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

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

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

Reexpansion Pulmonary Edema Following Thoracentesis

RASHA ALQADI, MD; CAROLINA FONSECA-VALENCIA, MD; MICHAEL VISCUSI, SYED R. LATIF, MD

INTRODUCTION

Thoracentesis is a common procedure performed for both diagnostic and therapeutic purposes. As with any procedure there are potential complications associated with removing pleural fluid from the intrathoracic space. Among these is the phenomenon known as reexpansion pulmonary edema (RPE).

Case Report

An 89-year-old gentleman with a past medical history significant for severe aortic stenosis and atrial fibrillation on warfarin therapy presented to the Providence VA Medical Center for placement of a right-sided chest tube. Several weeks prior, the patient had fallen at home and developed a hemothorax after sustaining several rib fractures. At the time of his fall, he had undergone a thoracentesis with 1 liter of bloody fluid removed. He returned for a repeat thoracentesis as he had persistent symptoms of shortness of breath and a repeat chest x-ray demonstrated re-accumulation of the pleural fluid (Figure 1).

The thoracentesis procedure itself went well without any significant complications and 2 liters of bloody fluid were removed. During the procedure, the chest tube was placed and attached to wall suction. The patient was subsequently admitted to the hospital for post-thoracentesis observation. A short time later, a rapid response was called due to hypoxia and respiratory distress when the patient's oxygen saturation noted to be in the low 50's despite being on a 100% nonrebreather. He was placed on BiPAP, given Furosemide 60mg and Morphine 2mg, both intravenously. The patient was subsequently transferred to the ICU and had a repeat chest x-ray (Figure 2) that demonstrated improvement in the size of the pleural effusion but the interval development of a new right lower lobe interstitial infiltrate in the area of the re-expanded lung. The diagnosis of reexpansion pulmonary edema was made on this basis and BiPAP was continued for a total of 24 hours.

The patient's respiratory status improved over subsequent days and serial chest x-rays demonstrated improvement of the right lower lobe opacities. During this period the patient



Figure 1. Chest x-ray on day of admission demonstrating a large right pleural effusion.

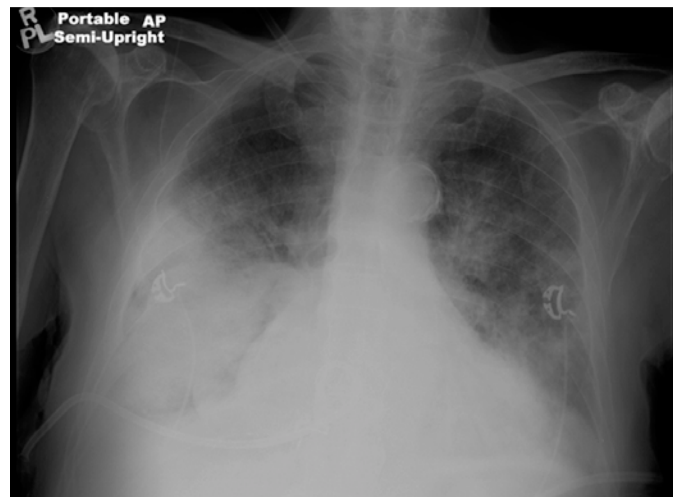


Figure 2. Post-thoracentesis x-ray taken during development of respiratory distress. This is notable for chest tube placement and significant rightsided pulmonary opacification.

became leukopenic with a white blood cell count dropping from a baseline of 10.8 k/mm³ to a nadir of 3.9 k/mm³. On the day of discharge his white blood cell count had recovered and was noted to be 5.8 k/mm³. His chest x-ray on the day of discharge demonstrated almost complete resolution of the opacities (Figure 3).



Figure 3. PA and lateral on day of discharge (hospital day 8) demonstrating marked improvement in the pulmonary edema.

DISCUSSION

Pulmonary edema can, among other things, be caused by rapid re-inflation of a collapsed lung after treatment of a pneumothorax or pleural effusion. This is usually an iatrogenic complication termed “reexpansion pulmonary edema” (RPE). The first reported case of RPE described by Carlson in 1958, was of a patient who developed RPE after treatment of a total lung collapse secondary to a pneumothorax.¹ However, the condition had already been identified as early as the beginning of the 19th century where it was recommended to treat pleural effusions with thoracentesis, using high amounts of suction.² The precise incidence of RPE is not known, but it is generally considered to be very low.^{3,4}

The clinical presentation of RPE is characterized by a rapid onset of dyspnea and tachypnea, which most often occur within 1 hour of reexpansion of the collapsed lung.⁵ Coughing may precede the development of RPE and hypotension may also occur due to hypovolemia from third spacing of intravascular fluid into lung parenchyma.^{5,6}

Risk factors for RPE development include a greater degree and longer duration of lung collapse, a rapid reexpansion after thoracentesis and the use of negative pressure for treatment.⁷ Reexpansion pulmonary edema may also occur after thoracoscopy and talc insufflations and is thought to be secondary to an inflammatory reaction caused by the talc.⁸ The reported mortality rate for RPE is not clear, but has ranged from 0% to 20% in different case reports.^{9,10,11}

While the exact pathophysiology of RPE is unknown, animal models have been studied to help elucidate the

cause. It is thought that RPE occurs most frequently when a chronically collapsed lung is rapidly reinflated using high suction. In a collapsed lung, blood flow is significantly reduced because of hypoxic pulmonary vasoconstriction. With reexpansion of the lung pulmonary vasoconstriction resolves and the alveoli become oxygenated. The lung reperfuses bringing in oxygen supply and reactive oxygen species may form. During reperfusion, there are increases in lipid and polypeptide mediators and immune complexes leading to endothelial damage. This alters the flow of monocytes, macrophages, and polymorphonuclear leukocytes (PMNs) to the alveolar-capillary membrane.¹² Interestingly, due to this inflammatory response, there could be a paradoxical systemic leukopenia on routine blood work.¹³ The endpoint of the reexpansion injury is an increase in permeability of the endothelial cells, which then can lead to pulmonary edema.¹²

Molecules that have been linked to the pro-inflammatory process in RPE include IL-8 and monocyte chemoattractant proteins. Xanthine oxidase (XOD), a main endogenous source of reactive oxygen species was shown in a rat model to induce apoptosis of the endothelium, increasing vascular permeability and pulmonary edema.^{14,15,16,17} Additionally, the GTP-binding protein Rho and its target Rho-Kinase (ROCK) identified by Sawafuji et al. has been implicated in permeability changes causing RPE as well.¹⁵

In terms of prevention of development of RPE the consensus statement of the American College of Chest Physicians states that a chest catheter or tube be used to reexpand the lung; the catheter or tube should be attached to a Heimlich valve or water seal without suction; however, suction should be used if the lung does not reexpand adequately with water seal drainage and it may be applied immediately after chest tube insertion in a clinically unstable patient or even in a stable patient.¹⁶ The guidelines of the British Thoracic Society (BTS) state that suction should not be applied initially to a chest tube that has been placed to treat a pneumothorax, but it can be applied after 48 hours if there is still an air leak or pneumothorax present.¹⁷ If suction is needed, 10 to 20 CmH₂O has been recommended.¹⁸

Treatment for RPE remains supportive. The cornerstone is positive-pressure mechanical ventilation and utilization of positive end-expiratory pressure (PEEP) to help reexpand collapsed alveoli, increase functional residual capacity, and reduce shunting. Treatment also may include diuresis and vasopressor support. The use of the prostaglandin analog misoprostil, ibuprofen, and indocin has been reported but its benefit is not clear. Other possible therapeutic options include placing the patient in lateral decubitus position with the involved side nondependent to help reduce perfusion and edema and intrapulmonary shunting. In the lateral decubitus position, there would be greater perfusion to the dependent lung because of the effects of gravity.

The role of pharmaceuticals in treating RPE remains uncertain; only anecdotal evidence exists supporting the use of any drug or combination of drugs. Four of 11 published

cases reviewed did not indicate the use of any drugs in the acute management of RPE.^{19,20,21,22} In RPE case reports where pharmaceutical interventions were reported, diuretics such as furosemide were the most commonly used agents.²³ Colloids, crystalloids, or albumin were used in several cases to influence osmotic pressure.^{24,25,26,27} Epinephrine and dopamine have been used for vasopressor support.²⁸ Two review articles cited the potential for misoprostol, a prostaglandin analog, and indomethacin and ibuprofen, non-steroidal anti-inflammatory drugs (NSAIDs), to be used for their “cytoprotective and anti-inflammatory effects.”^{29,30} Methylprednisolone was used in two cases, including once to no therapeutic effect in combination with furosemide, glycopyrrolate, diphenhydramine, epinephrine, and inhaled albuterol.^{31,32} Nevertheless, a proper drug regimen in the management of REPE is not readily apparent. The decision to use or not use pharmaceuticals in treating RPE should be based on the prevailing needs of the individual patient.

References

- Carlson RI, Classen KL, Gollan F, et al. Pulmonary edema following the rapid expansion of a totally collapsed lung due to pneumothorax: A clinical and experimental study. *Surg Forum*. 9:367-371, 1958.
- Riesman D. Albuminous expectoration following thoracentesis. *Am J Med Sci*. 123:620-630, 1902.
- Matsuura Y, Nomimura T, Murakami H, et al. Clinical analysis of reexpansion pulmonary edema. *Chest*. 100:1562-1566, 1991.
- Tan HC, Mak KH, Johan A, et al. Cardiac output increases prior to development of pulmonary edema after re-expansion of spontaneous pneumothorax. *Respir Med*. 96:461-465, 2002.
- Sherman SC. Reexpansion pulmonary edema: A case report and review of the current literature. *J Emerg Med*. 24:23-27, 2000.
- Cinnella G, Dambrosio M, Birenza N, et al. Reexpansion pulmonary edema with acute hypovolemia. *Intensive Care Med*. 24:1117, 1998.
- Murphy K, Tomlanovich MC. Unilateral pulmonary edema after drainage of a spontaneous pneumothorax: A case report and review of the world literature. *J Emerg Med*. 1:29-36, 1983.
- de Campos JRM, Vargas FS, Werebe EDC, et al. Thoracoscopy talc poudrage. *Chest*. 119:801-806, 2001.
- Mills M, Balsch BF. Spontaneous pneumothorax: A series of 400 cases. *Ann Thorac Surg*. 122:286-297, 1965.
- Brooks JW. Open thoracotomy in the management of spontaneous pneumothorax. *Ann Surg*. 177:798-805, 1973.
- Mahfood S, Hix WR, Aaron BL, et al. Reexpansion pulmonary edema. *Ann Thorac Surg*. 45:340-345, 1998.
- Sivrikoz MC, Tuncozgun B, Cekmen M, et al. The role of tissue reperfusion in the reexpansion injury of the lungs. *Euro J Cardiothorac Surg*. 22:721-727, 2002.
- Her C, Mandy S. Acute respiratory distress syndrome of the contralateral lung after reexpansion pulmonary edema of a collapsed lung. *J Clin Anesth*. 16:244-250, 2004.
- Nakamura M, Fujishima S, Sawafuji M, et al. Importance of interleukin-8 in the development of reexpansion lung injury in rabbits. *Am J Respir Crit Care Med*. 161:1030-1036, 2000.
- Sawafuji M, Ishizaka A, Kohno M, et al. Role of Rho-kinase in reexpansion pulmonary edema in rabbits. *Am J Physiol Lung Cell Mol Physiol*. 289:L946-L953, 2005.
- Bauman MH, Strange C, Heffner JE, et al. Management of spontaneous pneumothorax—An American College of Chest Physicians Delphi consensus statement. *Chest*. 119:590-602, 2001.
- Henry M, Arnold T, Harvey J, et al. BTS guidelines for the management of spontaneous pneumothorax. *Thorax*. 58:ii39-ii52, 2003 (suppl 2).
- Munnell E. Thoracic drainage. *Ann Thorac Surg*. 63:1497-1502, 1997.
- Dias OM, Teixeira LR, Vargas FS. Reexpansion pulmonary edema after therapeutic thoracentesis. *Clinics (Sao Paulo)*. 2010; 65:1387-9.
- Tung YW, Lin F, Yang MS, Wu CW, Cheung KS. Bilateral developing reexpansion pulmonary edema treated with extracorporeal membrane oxygenation. *Ann Thorac Surg*. 2010; 89:1268-71.
- Gordon AH, Grant GP, Kaul SK. Reexpansion pulmonary edema after resolution of tension pneumothorax in the contralateral lung of a previously lung injured patient. *J Clin Anesth*. 2004; 16:289-92.
- Sherman SC. Reexpansion pulmonary edema: a case report and review of the current literature. *J Emerg Med*. 2003; 24:23-7.
- Iqbal M, Multz AS, Rossoff LJ, Lackner RP. Reexpansion pulmonary edema after VATS successfully treated with continuous positive airway pressure. *Ann Thorac Surg*. 2000; 70:669-71.
- Paksu MS, Paksu S, Akgun M, Kalayci AG, Baysal K. Bilateral reexpansion pulmonary edema associated with pleural empyema: a case report. *Eur J Pediatr*. 2011; 170:1205-7.
- Sohara Y. Reexpansion pulmonary edema. *Ann Thorac Cardiovasc Surg*. 2008; 14:205-9.
- Critchley LA, Au HK, Yim AP. Reexpansion pulmonary edema occurring after thoracoscopic drainage of a pleural effusion. *J Clin Anesth*. 1996; 8:591-4.
- DuBose J, Perciballi J, Timmer S, Kujawaski EJ. Bilateral reexpansion pulmonary edema after treatment of spontaneous pneumothorax. *Curr Surg*. 2004; 61:376-9.
- Yanagitate F, Dohi S, Hamaya Y, Tsujito T. Reexpansion pulmonary edema after thoracoscopic mediastinal tumor resection. *Anesth Analg*. 2001; 92:1416-7.
- Neustein SM. Reexpansion pulmonary edema. *J Cardiothorac Vasc Anesth*. 2007; 21:887-91.
- Trachiotis GD, Vricella LA, Aaron BL, Hix WR. As originally published in 1988: Reexpansion pulmonary edema. Updated in 1997. *Ann Thorac Surg*. 1997; 63:1206-7.
- Fujino S, Tezuka N, Inoue S, Ichinose M, Hanaoka J, Sawai S, et al. Reexpansion pulmonary edema due to high-frequency jet ventilation: report of a case. *Surg Today*. 2000; 30:1110-1.
- Shires AL, Green TM, Owen HL, Hansen TN, Iqbal Z, Markan S, et al. Case 4—2009. Severe reexpansion pulmonary edema after minimally invasive aortic valve replacement: management using extracorporeal membrane oxygenation. *J Cardiothorac Vasc Anesth*. 2009; 23:549-54.

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**Joseph H. Friedman, MD****Stanley M. Aronson, MD**

RIMS Annual Banquet & Inauguration of Officers

**Saturday, September 21, 2013
Warwick Country Club**

We are proud to honor the following award recipients:

Joseph H. Friedman, MD *Dr. Charles L. Hill Award*

Stanley M. Aronson, MD *Dr. Herbert Rakatansky Award*

The following new leadership team was duly elected by the RIMS Council on June 10, and will be installed in office on September 21:

Elaine C. Jones, MD *President*

Peter Karczmar, MD *President-Elect*

Russell A. Settipane, MD *Vice President*

Elizabeth B. Lange, MD *Secretary*

Jose Polanco, MD *Treasurer*

Councilors at Large

Bradley J. Collins, MD

Dieter Pohl, MD

Ira M. Singer, MD

Patrick J. Sweeney, MD, MPH, PhD

Adjunct Councilors at Large

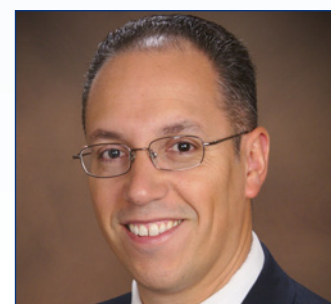
David M. Bourassa, MD

Joel M. Kaufman, MD

Delegates to AMA

Alyn L. Adrain, MD

Peter A. Hollmann, MD

**Alyn L. Adrain, MD**
Past President 2012–2013**Elaine C. Jones, MD**
President**Peter Karczmar, MD**
President-Elect**Russell A. Settipane, MD**
Vice President**Elizabeth B. Lange, MD**
Secretary**Jose Polanco, MD**
Treasurer



Why You Should Join the Rhode Island Medical Society

The Rhode Island Medical Society delivers valuable member benefits that help physicians, residents, medical students, physician-assistants, and retired practitioners every single day. As a member, you can take an active role in shaping a better health care future.

RIMS offers discounts for group membership, spouses, military, and those beginning their practices. Medical students can join for free.



Above: State House press conference on health care, Brown MSS at the AMA, CPT update seminar, bike helmet distribution, medical student volunteers; Upper right: Meeting of RIMS membership committee



APPLY FOR MEMBERSHIP ONLINE

RIMS MEMBERSHIP BENEFITS INCLUDE:

Discounts on career management resources

Insurance, collections, medical banking, and document shredding services

Discounts on Continuing Medical Education

InReach online CME program discounts;
RIMS is an ACCME accrediting agency

Powerful advocacy at every level

Advantages include representation, advocacy, leadership opportunities, and referrals

Complimentary subscriptions

Publications include *Rhode Island Medical Journal*, *Rhode Island Medical News*, annual *Directory of Members*; RIMS members have library privileges at Brown University

Member Portal on www.rimed.org

Password access to pay dues, access contact information for colleagues and RIMS leadership, RSVP to RIMS events, and share your thoughts with colleagues and RIMS

SPECIAL NOTICE: 2014 AMA DUES PAYMENTS

The American Medical Association (AMA) will direct bill its Rhode Island members for their 2014 dues. Beginning August 2013, AMA members will receive a separate dues statement from the AMA instead of paying AMA membership dues through the Rhode Island Medical Society (RIMS) membership invoice. This is simply an operational change so that both RIMS and AMA can concentrate on their respective member satisfaction. There remains no requirement for RIMS members to join the AMA.

Please let us know if you have questions concerning this change by emailing [Megan Turcotte](mailto:Megan.Turcotte@rimed.org) or phoning 401-331-3207.

NIH grants Brown \$11M for brain research

KATHRYN TRINGALE



Neuroscientist Jerome Sanes will direct a new research center at Brown where junior faculty members, paired with a senior faculty member, will study different aspects of attention and behavior.

PROVIDENCE – With a five-year, \$11 million major new federal grant, Brown University has established a research center to study key questions in the neuroscience of attention and related behaviors. The COBRE Center for Central Nervous System Function will encompass five projects, each led by a junior faculty member with mentoring from a more senior professor, with the dual goals of better explaining the brain and generating potential new ideas for addressing disorders such as autism.

“Attention is a gateway to human behavior, normal or abnormal,” said **JEROME SANES**, professor of neuroscience and a neuroimaging expert who will lead the new center, with help from deputy director **SHEILA BLUMSTEIN**, the Albert D. Mead professor of cognitive, linguistic and psychological sciences, and **JOHN DAVENPORT**, associate director of Brown’s Institute for Brain Science. “There is a wide range of functions that depend upon attention,” Sanes said. “You can list many of them just by thinking about what you do every day, such as deciding where to go, what to eat, and remembering yesterday’s events.”

COBRE, which stands for Centers of Biomedical Research Excellence, is a

program of the National Institute for General Medical Sciences (NIGMS) that helps bolster research and mentoring of promising young faculty members.

The new NIGMS grant of \$11 million over the next five years, including more than \$2.5 million this year, will fund underlying research and administrative cores for the center and support these projects:

DIMA AMSO, assistant professor of cognitive, linguistic, and psychological sciences, will study the development of visual selective attention, the process by which the brain focuses on what’s relevant instead of on distractions. She will look at healthy development and how it is disrupted in autism spectrum disorders. Mentor: Blumstein

DR. WAEL ASAAD, assistant professor of neurosurgery, will focus on how the basal ganglia integrates sensory information from the cortex and motivational information from subcortical structures to generate learning. Mentor: John Donoghue, neuroscientist, engineer and Henry Merritt Writston Professor

DR. ERIC MORROW, assistant professor of molecular biology, cell biology, and biochemistry, will use a combination of genetics, neuroimaging, and

psychiatric diagnosis techniques to determine whether autism patients with significant levels of obsessive-compulsive behaviors have a unique subtype of autism. Mentors: Sorin Istrail, professor of computer science, and Dr. Steven Rasmussen, professor of psychiatry and human behavior

JOO-HYUN SONG, assistant professor of cognitive, linguistic, and psychological sciences, will study how multiple neural systems in the brain work together when someone selects one target over distractors such as deciding to pick up a one object vs. another that differs in color. Mentor: Sanes

MICHAEL WORDEN, research assistant professor of neuroscience, will examine cases in which the brain must adapt to visual stimuli that conflict in that they seem to call for incompatible behavioral responses (such as arrows pointing in opposite directions). He will look at the effect of such adaptation on visual processing. Mentor: David Sheinberg, professor of neuroscience

Sanes said the research core, which will focus on developing methods and protocols for experimental design and analysis, will serve as a resource for helping brain science investigators across campus and Brown’s affiliated hospitals to plan new studies and analyze collected data.

With the new grant, the projects are now beginning and the cores are starting up, Sanes said. Some of this year’s money will be used to acquire new research equipment such as eye-tracking systems and noninvasive neural recording equipment, such as EEGs. A portion of the funds will also go to bolster the University’s OSCAR computing cluster.

Overall, Sanes said, the grant and new center provide the resources to build Brown’s foundation for future neuroscience research in health and brain disorders. ❖

Dr. Phipps assumes OB-GYN leadership positions at Brown, CNE

PROVIDENCE – Brown University and Care New England Health System have named **DR. MAUREEN G. PHIPPS** the new chair of the Department of Obstetrics and Gynecology and assistant dean for Teaching and Research on Women's Health in the Warren Alpert Medical School of Brown University, and chief of Obstetrics and Gynecology at Women & Infants Hospital of Rhode Island and the executive chief of Obstetrics and Gynecology at Care New England.

Brown Provost Dr. Mark Schlissel, interim dean of medicine and biological sciences, and Constance A. Howes, president and CEO of Women & Infants, and Dennis D. Keefe, president and CEO at Care New England, made the joint announcement in August. The appointments were effective Sept. 1.

Dr. Phipps, who will hold the Chace-Joukowsky Professorship in Obstetrics and Gynecology, said her vision is to develop interdisciplinary and inter-institutional programs that facilitate research, curriculum development and integrated clinical programs linked to translational research in women's health. These responsibilities dovetail with the medical school-hospital affiliation agreement signed in 2012, which designates Women & Infants as the major teaching affiliate for services unique to women and newborns for the Warren Alpert Medical School and the Care New England hospitals.

"I am honored and excited to have been selected to serve as chair of Obstetrics & Gynecology at Brown and Women & Infants Hospital and to lead this talented department with its unmatched quality clinical care in all areas of obstetrics and gynecology, unyielding commitment to patient safety, resolute dedication to resident and medical student education and passion for research and innovation," Dr. Phipps said. "My focus as chair and assistant dean will be to work collaboratively to grow academic and clinical



Dr. Maureen G. Phipps

leaders, enhance models for clinical and teaching excellence, and advance innovative science and community partnerships."

Dr. Schlissel praised Dr. Phipps as someone who embodies excellence in each of the many roles her position requires: physician, teacher, researcher, administrator and community leader at the hospital, in the medical school, and in the school of public health.

"I am very pleased that Dr. Phipps has accepted this appointment," Dr. Schlissel said. "Time and again she has demonstrated a remarkable ability to lead our shared efforts to advance women's health and obstetric care, moving us forward in the classroom, the clinic, the community and in research."

About Dr. Phipps

Dr. Phipps, professor in the Departments of Obstetrics & Gynecology and Epidemiology at the Warren Alpert Medical School of Brown University and in the Brown School of Public Health, has led numerous initiatives at Brown, Women & Infants and in Rhode Island. She served as department chair in an interim capacity; directed the

Brown/Women & Infants Hospital National Center of Excellence in Women's Health; led the Rhode Island Task Force on Preterm Birth; was co-principal investigator for the Brown University National Children's Study Center; and chairs the Rhode Island Chapter of the March of Dimes Board.

In addition to the National Children's Study Center, Dr. Phipps has been the principal investigator or co-investigator in numerous projects and programs funded through the National Institutes of Health and other agencies, including the Women's Reproductive Health Research Scholars Program; the Children's Environmental Health Formative Center; ESCUCHE-a program to improve health and science literacy; FIT for Delivery; Project REACH, a study to prevent postpartum depression in adolescent mothers; and several other projects related to women's health and obstetric outcomes.

Dr. Phipps has been recognized on numerous occasions as an outstanding teacher and mentor, including being recognized nationally with the American Congress of Obstetrics & Gynecology Mentor Award for District I (National Recognition Award), the Council on Residency Education in Obstetrics and Gynecology Excellence in Teaching Award (National Recognition Award), and the Association of Professors of Gynecology and Obstetrics Excellence in Teaching Award (National Recognition Award). She earned her medical degree from the University of Vermont College of Medicine and her residency in obstetrics in gynecology from Brown/Women & Infants. She completed her master's in public health at the University of Michigan School of Public Health, and a fellowship through the Robert Wood Johnson Clinical Scholar Program. ❖

CNE, Memorial finalize affiliation

PAWTUCKET – More than a year after launching the process to affiliate, leadership from Care New England Health System (CNE) and Memorial Hospital of Rhode Island (MHRI) gathered Sept. 3 and ceremoniously signed the closing paperwork signifying the completion of the deal.

Dennis Keefe, president and CEO of CNE, and Arthur DeBlois III, interim president and CEO of MHRI, were flanked by Memorial employees and system leadership as they finalized the regulatory process for Memorial to become the fourth hospital partner in CNE, joining Butler, Kent and Women & Infants hospitals. CNE also includes the Care New England Wellness Center and the VNA of Care New England.

"It is very exciting to be at this point, and to officially welcome Memorial Hospital to Care New England," Keefe said. "The system as a whole has been keenly focused on improving the way health care is delivered to our patients and their families. Memorial Hospital and its rich legacy in the Blackstone Valley is an ideal addition to our system."

DeBlois also reflected on the turning page in Memorial's history book.

"Memorial has a proud legacy of serving the people of this area and we look forward to continuing to do so as part of the Care New England health system," DeBlois said. "This new venture for Memorial ensures we will also be able to provide an expanded constellation of specialty services to our patients."

Donald Grebien, mayor of the City of Pawtucket and a vocal supporter of

the affiliation, echoed both Keefe and DeBlois' enthusiasm.

"For more than a century, Memorial Hospital has been an outstanding community partner with the City of Pawtucket and, most importantly, an outstanding care provider for the people of the city, the Blackstone Valley and beyond. Indeed, in the first annual report for the hospital, its president stated, 'It was organized and is conducted for the benefit of the community' and that has been true ever since," Grebien said.



Dennis Keefe, president and CEO of CNE, and Arthur DeBlois III, interim president and CEO of MHRI, finalized the regulatory process for Memorial to become the fourth hospital partner in CNE on Sept. 3.

Affiliation history

The closing came two months after the affiliation received state approval from Director of Health Michael Fine, MD, and Attorney General Peter Kilmartin, capping a rigorous yet highly collaborative and constructive review process. This process included public review by the Health Services Council as part of the Department of Health's (DOH) Change in Effective Control review, and review by the DOH at Attorney General's Office under Rhode Island's Hospital Conversions Act.

Based on their reviews, state officials determined that the affiliation met the criteria and standards set by state law. The affiliation was also endorsed by physicians, civic leaders and organizations, businesses, public officials and other members of the community who spoke at a public hearing in June or submitted letters of support during the review process.

CNE and MHRI envision that their partnership will bring to the expanded and enhanced CNE system:

- Improvement of quality of clinical programs and services
- Patient access to a broader continuum of services over an expanded service area
- Development of signature service lines, including women's health, behavioral health, primary care, cardiovascular services, and home health
- Maintenance of the strong academic and research platform that is essential to fostering clinical excellence and innovation
- Enhancement of physician recruitment, retention and integration initiatives
- Improvement of facilities, technology and information technology platforms
- Development of an integrated delivery system in which patient care is coordinated across the full continuum of care for population health management
- Operational efficiencies to improve performance and reduce costs ❖

Kent Hospital introduces Advanced Heart Failure Program

WARWICK – Kent Hospital announced the development of a new Advanced Heart Failure Program on July 29, in conjunction with the Center for Advanced Heart Disease at Brigham and Women's Hospital of Boston.

GARRICK C. STEWART, MD, MPH, a member of the Brigham and Women's Cardiovascular Associates at Kent Hospital, will direct it. He will also co-direct the Care New England Heart Failure Management Program, a population health management program focused on reducing readmissions for heart failure.

Dr. Stewart is a board certified advanced heart failure and transplant cardiologist, as well as an instructor in medicine at Harvard Medical School and associate physician at Brigham and Women's Hospital in Boston. His current research focuses on the appropriate use of devices in patients with heart failure, particularly on the timely deployment of ventricular assist devices. He is a member of the International Society of Heart and Lung Transplan-



Garrick C. Stewart, MD

tation and the Heart Failure Society of America.

"We are extremely excited to add the advanced heart failure program to the cardiology services at Kent Hospital and also to welcome Dr. Garrick Stewart to Kent Hospital," said **CHES-TER HEDGEPEETH, MD, PhD**, executive chief of cardiology at Kent Hospital.

"Dr. Stewart brings specialized experience to our team. We hope to apply this advanced care and clinical expertise to the increasing cases of chronic heart failure in our community."

Heart failure services to be provided include:

- Comprehensive heart failure evaluation
- Individualized medical therapies
- Multidisciplinary care
- Evidence based disease management program
- Education about dietary and lifestyle choices
- Access to clinical trials for heart failure
- Evaluation for advanced heart therapies, including mechanical heart pumps and heart transplantation

In January 2013, a major expansion of cardiology services at Kent Hospital was announced through an agreement with Brigham and Women's Hospital of Boston. ♦

RI Hospital 150th Anniversary Seascape

From left, Gov. Lincoln Chafee, Providence Mayor Angel Taveras and Timothy J. Babineau, MD, president and chief executive officer of Lifespan, and president of Rhode Island Hospital, at the unveiling of the Rhode Island Hospital 150th anniversary mural at the I-95 underpass on Eddy Street in Providence in late July. Public Art Works created the seascape.



RHODE ISLAND HOSPITAL

Butler to dedicate \$17M Patient Care Center Sept. 25

PROVIDENCE – The new \$17 million Patient Care Center at Butler Hospital will hold a dedication on Wednesday, Sept. 25 at 10 a.m. with guided tours slated from 9 to 10 a.m. and 11 a.m. to noon.

The 49,000 square-foot center includes an expanded Patient Assessment Services (PAS) area and a new 26-bed adult inpatient care unit. More than double the size of the hospital's existing area, it includes private evaluation and exam rooms, two waiting areas – one a separate secured waiting area for highly acute patients – and affords greater privacy for patients and families. ❖



The new Patient Care Center at Butler Hospital.

BUTLER HOSPITAL



CNE

Front, from left, Albert J. Puerini, MD, of Rhode Island Primary Care Physicians and Dennis Keefe, president and CEO of Care New England, signed agreement to affiliate in July.

Rear, from left, are Martin Kerzer, DO; Richard K. Ohnmacht, MD; Noah Benedict, RIPC's chief operating officer; and Domenic Delmonico, CNE vice president for managed care contracting.

Rhode Island Primary Care Physicians to Affiliate with CNE

PROVIDENCE – The Care New England Health System (CNE) and the Rhode Island Primary Care Physicians Corporation (RIPCPC) executed an affiliation agreement in late July, following Care New England's affiliation with Memorial Hospital of Rhode Island, which was approved by state regulators earlier in July.

Seventy physicians from RIPCPC have signed on. The goal is to build an integrated health care system, including physicians, nurses, hospitals, specialists, labs, home care and others who are included in a patient's total health care.

Albert J. Puerini, MD, president and CEO of RIPCPC, said, "Since its formation in 1994, RIPCPC has a proud and strong track record introducing innovative approaches to health care delivery through our physicians and practices, and we look forward to taking it to the next level with our Care New England affiliation. We will ultimately work to introduce 'disease pods' which will foster a new collaborative approach to enhanced care management for such issues as congestive heart failure and diabetes."

According to Dennis Keefe, president and CEO of Care New England, through management of the care of populations for defined periods of time for a set dollar amount, the new approach to health care delivery encourages more effectiveness and efficiency with a focus on keeping individuals well and out of the hospital. At the same time, there are incentives in place in these new arrangements which reward providers for improved patient care outcomes and improved patient satisfaction. ❖

Women & Infants, Brown to offer Women's Mental Health Fellowship

Applications are being accepted for a Fellow to begin training in July 2014

PROVIDENCE – Women & Infants Hospital of Rhode Island and The Warren Alpert Medical School of Brown University have formed a 12-month Women's Mental Health Fellowship. The advanced study will be geared toward psychiatrists wishing to obtain specialized clinical training in the unique psychiatric needs of pregnant and postpartum women, the impact of infertility on women, and the impact of maternal mental illness on infants and children.

It will be the fourth such fellowship nationwide and the 12th fellowship offered through Brown at Women & Infants. "This is a tremendous accomplishment and testimony to the breadth of services available for women at Women & Infants," said Constance Howes, the hospital's president and CEO. "It would be difficult to create a comprehensive educational program that covers so many aspects of a woman's life and health without such a broad base of services."

The fellowship is designed to offer focused clinical training in women's mental health with an emphasis on perinatal psychiatry, according to **NEHA HUDEPOHL, MD**, an attending psychiatrist in Women & Infants' Center for Women's Behavioral Health and director of the new fellowship program.

Fellows will receive in-depth exposure to and training in:

- Pharmacology for pregnant and breastfeeding women
- Attachment disorders in the postpartum period
- Interpersonal psychotherapy
- Perinatal loss
- Substance abuse in perinatal women through the hospital's Project Link program
- Sociocultural influences on perinatal psychiatric illness
- Influence of menstrual cycle on mood disorders
- Trauma-based disorders
- Impact of maternal mental illness on the developing fetus and infant
- Interplay between cancer and women's mental health
- Infertility's impact on a woman's mental health

"Fellows will work in the various areas within the Center for Women's Behavioral Health – including our Day Hospital for perinatal mental health concerns, an academic inpatient consultation-liaison service, and at Project Link for women struggling with addictions in the perinatal period," Dr. Hudepohl said, adding that the Butler Hospital Women's Partial Hospital Program will also give fellows an opportunity to train with women who are chronically suicidal and meet criteria for Borderline Personality Disorder.

Women's Mental Health fellows can opt to focus their studies even more specifically on one of the program's core areas, add electives to supplement their training, and develop a research project in women's mental health under the supervision of a research mentor.

"Women & Infants provides multiple opportunities for exploring women's mental health," explained **MARGARET HOWARD, PHD**, a clinical psychologist, director of the Day Hospital, and associate program director of the new fellowship. "The fellows can spend time, for example, in the hospital's different clinic sites and provide outpatient psychiatric consultation for women with cancer, chronic medical conditions or infertility concerns."

Applications will be accepted starting September 1, 2013, for a fellow to begin training in July 2014. Applicants must have completed a residency or plan to complete a residency in general adult psychiatry prior to the start of the fellowship program and be board certified or eligible with the American Board of Psychiatry and Neurology in adult psychiatry. For more information on the fellowship, physicians can go to womenandinfants.org or call the Center for Women's Behavioral Health at 401-459-7955. ❖



Neha Hudepohl, MD, will direct the new fellowship.

PHOTOS: W&I



Margaret Howard, PhD, is the fellowship's associate program director.

RI-CART receives \$1.2 million grant to create statewide autism registry and network

EAST PROVIDENCE – The Rhode Island Consortium for Autism Research and Treatment (RI-CART), a group of the state's leading experts on autism research, education, health and services, has received a \$1.2 million grant to create a first-of-its-kind confidential registry of every individual diagnosed with autism in Rhode Island. Awarded by the Simons Foundation, the grant will help RI-CART create a data and resource continuum for thousands of children and adults in the state with autism spectrum disorders. The RI-CART resource will be used to support critically-needed research projects. Participation in the project will facilitate communication between clinical experts and families as well as provide families with important information for navigating state autism services. The registry project is also supported by funds from the Brown University Institute for Brain Science, the Norman Prince Neuroscience Institute, and the Alpert Medical School Department of Psychiatry and Human Behavior which catalyzed RI-CART activities in the fall of 2012.

"This effort will link families and researchers to spur important and innovative research on the causes and treatments for individuals with autism and related conditions," said **STEPHEN SHEINKOPF, PhD**, a clinical researcher at Women & Infants Hospital, assistant professor at The Warren Alpert Medical School of Brown University and co-director of the RI-CART project. "As a partnership between researchers and families, the RI-CART resource will be a uniquely collaborative approach to research."

As part of the project, members of the RI-CART team with advanced training in autism assessment will offer to administer the Autism Diagnostic Observation Schedule (ADOS) to each individual enrolled in the project. Only a fraction of individuals with autism in Rhode Island currently have access to the ADOS, which is considered a 'gold standard' measure of autism symptoms. Offering the ADOS to all children and adults with autism could greatly improve the accuracy of autism diagnoses, as well as potentially improve the treatment that families receive. Participants will also have access to resource staff who can provide information on autism and available services, and who can help connect families to resources in the community.

During the next three years, RI-CART hopes to enroll over 1,000 children and adults with autism. This will be the first step in the long-term goal of enrolling all individuals with autism in Rhode Island in this unique research network.

"The Framingham Heart Study – through collaboration between a community and researchers – helped identify many of the major causative factors and characteristics of heart disease. While there has been much hopeful progress in autism research in recent years particularly as a result of ambitious team science, we are behind in our understanding and treatment by comparison to other medical conditions, such as heart disease", said **ERIC MORROW MD, PhD**, an assistant professor in biology at Brown University and genetics researcher at Bradley Hospital. Dr. Morrow is the principal investigator on the Simons grant. He will lead the project with Sheinkopf, which will also collect DNA, and other bio-samples, including those that will allow studies of environmental exposures.

For more information about RI-CART call 401-432-1200, email RICART@Lifespan.org, or visit www.AutismRI.org. ❖

NIH awards URI researchers \$11.4M to continue study on dengue virus

PROVIDENCE – University of Rhode Island Research **PROFESSOR ALAN ROTHMAN** and colleagues in the Institute for Immunology and Informatics have been awarded \$11.4 million from the National Institutes of Health for ongoing research on dengue virus, a potentially deadly mosquito-borne disease.

Working alongside Rothman on the project in Rhode Island will be URI Assistant Research **PROFESSOR CAREY MEDIN** and **DR. JENNIFER FRIEDMAN** of Rhode Island Hospital.

Rothman heads the Laboratory of Viral Immunity and Pathogenesis at URI's Institute for Immunology and Informatics on the Providence campus. His research involves clinical and basic research studies on pathogenesis and immunity of emerging and re-emerging viral infections.

Field studies for the project will be conducted by collaborators in Thailand and the Philippines who will look at natural dengue virus transmission in humans. This research will also include collaboration with a phase-three vaccine trial. Laboratory research will take place in the United States, Europe and Asia. ❖

Four RI hospitals to receive additional \$5.75 million in Medicare payments

WARWICK – U.S. Senators Jack Reed and Sheldon Whitehouse and U.S. Representatives James Langevin and David Cicilline announced in August that Kent, Newport, South County, and Westerly Hospitals will receive an additional \$5.75 million in Medicare payments as a result of the renewal of a “wage index” adjustment by the Centers for Medicare and Medicaid Services (CMS) that accounts for different labor costs across the country.

The new wage index is estimated to increase the Medicare reimbursements made to each of these four hospitals by the following amounts:

NEWPORT HOSPITAL is estimated to receive an additional \$968,000 in Medicare reimbursement in FY14.

KENT HOSPITAL is estimated to receive an additional \$2.7 million in Medicare reimbursement in FY14.

SOUTH COUNTY HOSPITAL is estimated to receive an additional \$1.09 million in Medicare reimbursement in FY14.

WESTERLY HOSPITAL is estimated to receive an additional \$990,000 in Medicare reimbursement in FY14. ❖

CPAP reduces risk of death in people with COPD and sleep apnea

More time on CPAP was associated with reduced mortality after controlling for common risk factors

DARIEN, IL – A new study suggests that continuous positive airway pressure (CPAP) therapy reduces the mortality rate in people who have both chronic obstructive pulmonary disease (COPD) and obstructive sleep apnea (OSA), which the authors refer to as “the overlap syndrome.”

“This study adds to the growing body of literature regarding the combined impact of OSA in patients with COPD,” said lead author and principal investigator **MICHAEL L. STANCHINA, MD**, clinical assistant professor of medicine at the Alpert Medical School of Brown University and physician at Rhode Island Hospital. “We have shown that more time on CPAP in patients with the overlap syndrome was associated with a reduced risk of death, after controlling for common risk factors.”

The study is in the Aug. 15 issue of the *Journal of Clinical Sleep Medicine*, which is published by the American Academy of Sleep Medicine. It involved a post hoc analysis of 10,272 outpatients. Dr. Stanchina’s team identified a study sample of 3,396 patients from 2007-2010 who had COPD or OSA. This sample included 227 overlap syndrome patients who had both COPD and OSA. All patients in the overlap group were treated with CPAP therapy, and objective treatment compliance data were collected for the first one to three months of use. Seventeen patients with the overlap syndrome died.

Multivariate analysis revealed that hours of CPAP use at night is an independent predictor of mortality (hazard ratio = 0.71) in patients with COPD and OSA. Results show that overlap syndrome patients who use CPAP have a significantly higher survival than those who do not. Even minimal use of CPAP was associated with some reduction in the risk of death, and this benefit increased with more nightly hours of CPAP therapy.

“We were most surprised to find that any level of CPAP use in this cohort, over no use, was associated with some mortality benefit,” said Dr. Stanchina.

To request a copy of the study, email lcclmer@aasmnet.org. ❖



Kate Lally, MD

Kent Hospital's Palliative Care Program featured on news with Diane Sawyer

NEW YORK – ABC World News Tonight with Diane Sawyer featured Kent Hospital's Palliative Care Program along with Kent Hospital resident physicians, in a segment focused on The Conversation Project, a national initiative dedicated to helping people talk about their wishes for end-of-life care.

The segment focused on residents being taught how to interact with their patients preparing for end-of-life care. **DR. KATE LALLY**, the director of palliative care at Kent, introduced a program to the residents to teach them how to talk to patients about their options, at any stage of illness.

This effort is all part of a bigger national initiative, The Conversation Project, which is dedicated to helping people talk about their wishes for end-of-life care. Care New England Health System has joined a national Initiative with other pioneering organizations to support a new effort by the Institute for Healthcare Improvement (IHI). The initiative is to better prepare health care providers to receive and respect patients' wishes about end-of-life care and is a critical companion to The Conversation Project. ❖

ABC's article on Kent Hospital:
<http://abcnews.go.com/blogs/health/2013/08/09/young-doctors-pave-way-for-end-of-life-conversations/>

Center for Bariatric Surgery at Miriam Marks One-Year Anniversary



Members of the Center for Bariatric Surgery at The Miriam Hospital recently celebrated the one-year anniversary of the Center with some of their patients. At far left is Siva Vithiananthan, MD; and at far right is G. Dean Royce, MD. Arthur Sampson, president of The Miriam Hospital, is next to Dr. Royce. Kellie Armstrong, RN, Bariatric Surgery Program coordinator, is next to Dr. Vithiananthan.

PROVIDENCE – The Center for Bariatric Surgery at The Miriam Hospital – a combined program that unites nationally recognized bariatric surgeons and staff from Rhode Island and The Miriam hospitals into a single program on one campus – recently celebrated its one-year anniversary.

The Miriam Hospital has been offering weight loss surgery since 2007, before the program united with the bariatric surgery program at Rhode Island Hospital. The combined Center performed 315 total bariatric-related cases in its first year and continues to offer a variety of widely attended seminars and support groups for both patients and their families.

It provides different minimally invasive, or laparoscopic, bariatric surgical techniques, including:

- laparoscopic Roux-en-Y gastric bypass
- gastric banding
- laparoscopic gastric sleeve resection
- bilio-pancreatic duodenal switch surgery procedures

The Center also includes a 20-bed surgical intensive care unit. A bariatric surgeon is also available around-the-clock for any emergencies or consults.

Many former bariatric patients attended a special anniversary reception, where they had the opportunity to thank and celebrate with the surgeons, physicians, nurses, dietitians and other



Siva Vithiananthan, MD

team members who cared for them both before and long after their surgeries.

“Our goal is not just to help people lose weight, but we want to change their lives by giving them the tools they need to lead a healthier lifestyle,” said **SIVA VITHIANANTHAN, MD**, chief of minimally invasive and bariatric surgery at The Miriam Hospital and

director of the Center for Bariatric Surgery. “It is incredibly rewarding to hear from former patients who tell us how they are now off of their blood pressure medication or are running half marathons and accomplishing other feats they never thought were possible before coming to us for bariatric surgery.”

“Hearing from patients whose lives have literally been transformed by our surgeons and the entire bariatric care team was both a moving experience and a sober reminder of the toll the obesity epidemic continues to have here in Rhode Island,” said **ARTHUR J. SAMPSON**, president of The Miriam Hospital. ♦

Both Rhode Island and The Miriam hospitals have been recognized as American Society for Metabolic and Bariatric Surgery (ASMBS) Bariatric Surgery Centers of Excellence®. The designation recognizes surgical programs with a demonstrated track record of excellence in providing superior and comprehensive bariatric surgery care. The Miriam also has been designated a Blue Distinction Center for Bariatric Surgery by Blue Cross Blue Shield of Rhode Island.

Dr. Chu introduces EX-MAZE procedure at RIH for high-risk A-fib patients



Anthony Chu, MD

PROVIDENCE – Rhode Island Hospital is the one of the first hospitals in New England, and the only hospital in the Boston region, to perform a novel pro-

cedure designed to deliver energy to both the inside and outside of the heart to treat atrial fibrillation (A-fib). One of the first physicians in the country to perform this procedure, **ANTHONY CHU, MD**, is the director of complex ablations within the arrhythmia services section at the Cardiovascular Institute of the Rhode Island and Miriam hospitals.

Prior to this, he was the director of atrial fibrillation at the Reading Hospital Medical Center in Pennsylvania and a clinical faculty member of the Thomas Jefferson University Cardiovascular Division. He is a graduate of the Yale University School of Medicine.

The procedure, known as “EX-MAZE,” is a minimally invasive surgical procedure designed to treat patients with long-standing A-fib. Many of these patients have had prior failed therapies including patients who have had prior cardiac ablation procedures. The

technique uses radiofrequency energy to create “lines of block,” which modify cardiac electrical connections from blood vessels (known as pulmonary veins) attached to the top left chamber of the heart (left atrium). Radiofrequency energy is delivered both on the inside (endocardial) and outside (epicardial) surfaces of the heart. This technique effectively blocks the electrical signals from the pulmonary veins that cause the atrial fibrillation.

“This novel approach to a common but complex problem is great news for patients with long-standing atrial fibrillation,” Dr. Chu said. “For this patient population, all other medical therapy and traditional cardiac ablation approaches have been exhausted. This approach is not only minimally invasive (i.e. does not involve cardiac bypass), but also offers excellent outcomes with short recovery times.” ❖

Quality Institute, BCBS offer incentives to increase enrollment in CurrentCare

PROVIDENCE – The Rhode Island Quality Institute (RIQI) and Blue Cross & Blue Shield of Rhode Island (BCBSRI) recently announced the launch of an incentive program for Rhode Island primary care physicians (PCPs) to adopt and use CurrentCare, Rhode Island’s health information exchange.

“We are very excited about this program,” said **JONATHAN LEVISS, MD**, chief medical officer at Rhode Island Quality Institute. “By creating financial incentives for providers who adopt CurrentCare, the Blue Cross & Blue Shield of Rhode Island Incentive Program encourages improved patient care across the state.”

“CurrentCare has tremendous advantages for both patients and providers that make care more coordinated, safe and patient-centered,” said **DR. GUS MANOCCHIA**, chief medical officer for BCBSRI.

Key areas

Under the incentive program, eligible providers (those in family practice, pediatrics or internal medicine who are in compliance with BCBSRI’s EHR payment policy) may receive up to \$10,000 in incentives per practice related to three key areas:

- **CurrentCare enrollment:** To qualify for incentives, PCP practices must enroll the greater of the following: at least 200 patients per affiliated PCP or enroll a number of patients equivalent to at least 50 percent of their BCBSRI members.
- **Viewer and Hospital Alerts:** PCP practices can qualify for additional incentive if at least 75 percent of their staff is trained on the online portal known as CurrentCare Viewer and the practice enables CurrentCare Hospital Alerts.
- **Implementation of a Direct Messaging Account:** This allows for secure electronic communication between providers who use different electronic medical record systems.

FEATURED ONLINE CME PROGRAMS



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**RHODE ISLAND
MEDICAL SOCIETY**

SEPTEMBER

THE RHODE ISLAND MEDICAL SOCIETY HOSTS

Data Breach and Your Practice: New Regulations and Their Implications

Wednesday, September 25, 2013

RIMS, 235 Promenade Street, Suite 500, Providence RI

7:30–8 am Continental Breakfast

8–9 am Expert Panel Presentations

9–9:30 am Q&A

I 2013 regulations and example of a local incident

Jeffrey F. Chase-Lubitz, Esq. Donoghue Barrett & Singal, PC

II A case study and compliance audit for a medical practice

Chris Sheehan, Compliance Agent, Shred-it

III How to safeguard your practice

David White, Partner, Butler & Messier Insurance

Program/Reply form

Attendance is free; RSVP by September 20 is required as space is limited.

Contact Megan Turcotte

Signs, Symptoms and Questions Related to Diagnostic Imaging and Interventional Radiology

September 25, 2013, 12–5 pm

The Providence Marriott, Providence RI

Ordering the correct imaging studies to address various clinical signs and symptoms in an efficient and cost effective manner

is complicated and is in constant flux based on newly published data and emerging technologies. This half day educational event reviews current appropriate imaging work up to address common clinical signs and symptoms encountered in the out-patient primary care setting. Clinicians will leave with new knowledge and resources to help diagnose and treat their patients with complicated but common medical problems.

Registration deadline for Israeli Trade Mission led by Dr. Fine

Deadline: Sept. 27, 2013 Trip dates: Nov. 8–16, 2013

Dr. Michael Fine, director of the Rhode Island Department of Health, will lead a trade mission to Israel Nov. 8-16, geared to physicians, CEOs, research and development executives, leaders in the healthcare and life science industries, and university and hospital officials. The trip will include visits to medical, biomedical and pharmaceutical facilities, medical schools, life science incubators and EMS facilities.

Participants will also meet with industry leaders and government officials from the Ministry of Health, Industry and Trade Labor, and Office of the Chief Scientist to explore collaborative research and business opportunities.

For more information or to register, contact Katherine Therieau (278-9100, ext. 139 or ktherieau@riedc.com), director of international trade for the R.I. Economic Development Corporation.

OCTOBER

Pediatric Global Health Conference – Focus on Haiti: Building Local Capacities through Sustainable Partnerships

Saturday, Oct. 12, 2013 (*all day*)

Alpert Medical School of Brown University

222 Richmond Street

This regional CME event for physicians, clinicians, nurses, allied professionals, residents and students is hosted by the Brown University Global Health Initiative and Hasbro Children's Hospital. The conference will include a keynote address, lectures, panel discussions, and breakout sessions centered on significant pediatric global health issues including: building and sustaining international partnerships, millennium development goals, and the art of medicine in developing countries, with many of the breakout sessions focused specifically on Haiti.

Hasbro Children's Hospital is part of the St. Damien Collaborative to Improve Pediatrics in Haiti (SCIPH) a new consortium of six US-based Children's Hospitals dedicated to building

capacity for pediatric care in Haiti at St. Damien Hospital for sick children. St. Damien is the premier pediatric hospital in Haiti, providing services free of charge, and is funded through donations from benefactors all over the world, primarily in Europe and the United States.

The conference will culminate in an evening benefit that will support both The Haitian Project and St. Damien Pediatric Hospital. Conference Brochure

Keynote speakers

Dr. Linda Arnold, current chairperson of the American Academy of Pediatrics Section on International Child Health, and Associate Professor of Pediatrics (Emergency Medicine) at Yale University, CT.

Dr. Jean Hugues Henrys, Dean of the University of Notre Dame d'Haiti, Faculty of Medicine and Health Sciences, Port-au-Prince, Haiti.

Contact Global Health Initiative: 401-863-1499

OCTOBER

**Bridging Neurology & Psychiatry:
Movement Disorders**

Saturday, October 12, 2013
The Joseph B. Martin Conference Center
at Harvard Medical School
Boston, Massachusetts

This full day course is aimed at reviewing the interface between neurology and psychiatry to enhance the clinician's ability to recognize and classify movement disorders in psychiatric patients and psychiatric problems in movement disorder patients. Behavior problems are the major determinants of quality of life in Parkinson's disease yet they are often not recognized. Similarly, movement disorders caused by antipsychotics frequently go unrecognized.

World renowned experts in movement and psychiatric disorders will review drug-induced movement disorders, psychogenic movement disorders and movement disorders associated with primary psychiatric disorders.



This course is designed for neurologists, psychiatrists, primary care physicians, nurses, psychologists, pharmacists, physician assistants, social workers, medical students and fellows.

Click to download the Course Program.

Register Online: <http://www.worldwide-medicalexchange.org/content/movement-disorder-course>

**Rhode Island Medical Women's Association Meeting**

Monday, Oct. 21, 2013
Registration: 6–6:30 pm
Presentation & Dinner: 7 pm
Chapel Grille, 3000 Chapel View
Blvd., Cranston

Topic: Professional Development
Speaker Terrie Fox Wetle, MS, PhD
Dean, Brown School of Public Health

Cost: Students, residents: \$30; RIMWA
members: \$40; non-members/guests: \$40
For more information, to register:

Jane Coutu, 401-528-3288

1st International Carpometacarpal Workshop (ICMCW)

October 25–26, 2013
Hotel Viking, Newport, RI

Keynote Lectures

Matt Tocheri PhD, Smithsonian National Museum of Natural History, Washington, DC

Dr. Tocheri is a paleoanthropologist whose research interests focus on the evolutionary history and functional morphology of the human and great ape family, the Hominidae. His work on the wrist of *Homo floresiensis*, the so-called 'hobbits' of human evolution, received worldwide attention after it was published in 2007 in the journal *Science*.

David Felson MD, MPH, Boston University, Boston MA

Dr. Felson is a Professor of Medicine and Public Health, and Principal Investigator of the NIH-funded Boston University Multipurpose Arthritis and Musculoskeletal Diseases Center and the Boston University Multidisciplinary Research Center. An expert on the epidemiology and pathophysiology of osteoarthritis, Dr. Felson has led numerous large cohort studies in osteoarthritis, with the goal of elucidating risk factors for the disease, as well as its natural history.

Meeting Chairs

J.J. Trey Crisco, PhD

Amy L. Ladd, MD

Arnold-Peter C. Weiss, MD

Recognition

Partnership to Reduce Cancer honors Dr. Ed Martin

PROVIDENCE — **ED MARTIN, MD, MPH**, was recently honored by the Partnership to Reduce Cancer in Rhode Island with



Edward Martin, MD

their Healthcare Professional Award. Dr. Martin serves as the chief medical officer for Home & Hospice Care of Rhode Island (HHCRI), and for the past 25 years has been providing compassionate, skilled care to the seriously ill and their families.

The recognition was delivered on June 19 at the 2013 Rhode Island Cancer Partnership Annual Summit in Warwick.

"Dr. Martin has dedicated his career to helping ensure the highest level of care and quality of life for Rhode Islanders and their families dealing with end-of-life. We are so very proud of his work," said Diana Franchitto, President & CEO of Home & Hospice Care of Rhode Island.

In addition to his position at Home & Hospice Care of Rhode Island, Dr. Martin is a staff physician at several Providence hospitals, including The Miriam Hospital, Rhode Island Hospital, and Roger Williams Medical Center.

A clinical associate professor of medicine at the Warren Alpert Medical School of Brown University, Dr. Martin presently serves on the National Council of Hospice and Palliative Professionals Physician Section Steering Committee, National Hospital and Palliative Care Organization Regulatory Committee and American Academy of Hospice and Palliative Medicine Business Practices Committee.

National Appointment

Bradley Hasbro Children's Research Center psychiatrist elected president of American Academy of Child and Adolescent Psychiatry

PROVIDENCE — **GREGORY FRITZ, MD**, director of the Bradley Hasbro Children's Research Center (BHCRC) has been elected president of the American Academy of Child and Adolescent Psychiatry (AACAP). He will begin his term as president-elect in October.

In his new position, Dr. Fritz will work in collaboration with other AACAP leaders, elected officials and regulators to advance the mission of AACAP on behalf of the members and the patients and families they serve.

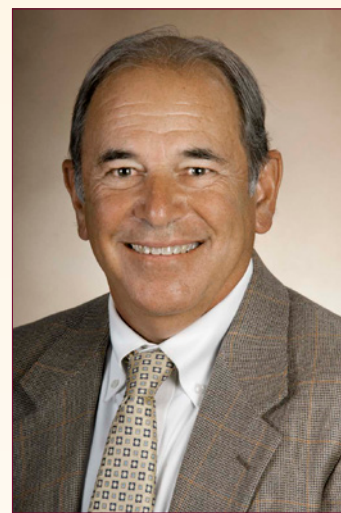
"Greg has been a tireless advocate for access to mental health services for children and teens," said Henry Sachs, MD, chief medical officer at Bradley Hospital. "I can think of no one better to lead this national group in the pursuit of improved access to high quality care for children and adolescents in need and increased emphasis on prevention for all children."

In addition to his role as director of the BHCRC, Dr. Fritz is also academic director of Bradley Hospital. He is also director of the division of child and adolescent psychiatry at Rhode Island Hospital, and a professor and vice co-chair for child psychiatry in the department of psychiatry and human behavior at The Warren Alpert Medical School of Brown University.

Dr. Fritz graduated with honors from Brown University in 1967 and earned his medical degree from Tufts University School of Medicine in 1971. From 1977 to 1985, he was a faculty member in the department of psychiatry and behavioral science at Stanford University School of Medicine, during which he was director of consultation-liaison psychiatry at the Children's Hospital at Stanford.

In 1985, Dr. Fritz moved to Rhode Island to build a comprehensive pediatric psychiatry service at what is now Hasbro Children's Hospital. Under his leadership, the program has grown to be one of the premiere academic sites for pediatric psychosomatic medicine.

Dr. Fritz will spend two years as president elect and then in October 2015 he will transition into the position of president until 2017. He will then spend another two years on the Executive Committee as past president. Overall, he will spend six years on the AACAP executive committee.



Gregory Fritz, MD

LIFESPAN

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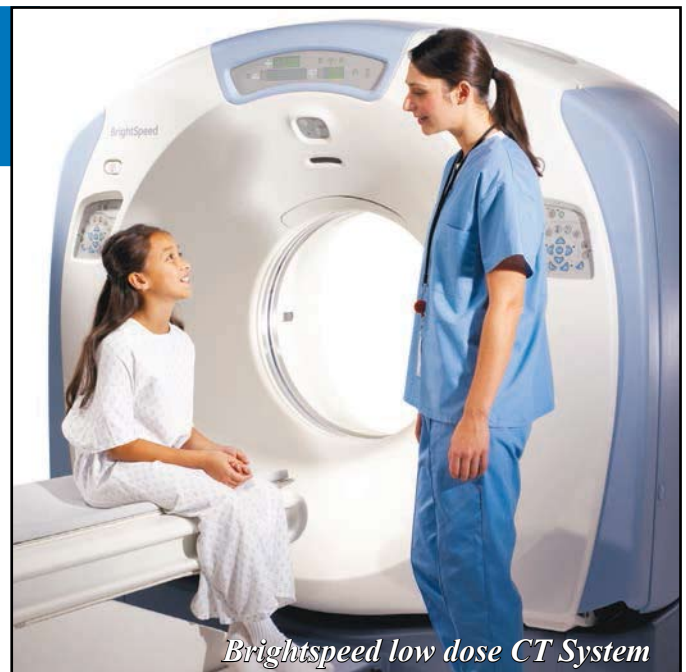
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Appointments

Rhode Island Hospital appoints new senior V-P and chief medical officer

Latha Sivaprasad, MD, arrives from Beth Israel Medical Center in New York

PROVIDENCE – Rhode Island Hospital has appointed **LATHA SIVAPRASAD, MD, FHM, FACP**, as senior vice president and chief medical officer, effective September 1, 2013. Dr. Sivaprasad, an internal medicine physician, comes to Rhode Island Hospital from Beth Israel Medical Center in New York.

Dr. Sivaprasad will be responsible for graduate medical education and medical staff affairs as well as enhancing quality, safety, effectiveness and efficiency of health care delivery at Rhode Island Hospital. She will serve as a physician voice in providing strategic direction for the hospital on issues related to medical staff growth, educational program structure, clinical program development and broader academic medical center priorities. Additionally, she will play a pivotal role in the hospital's ongoing efforts to provide a high quality patient experience.

She succeeds John B. Murphy, MD, who now serves as executive vice president for physician affairs for Lifespan, of which Rhode Island Hospital is a founding partner.

At Beth Israel Medical Center, she served as associate chief medical officer and chief patient experience officer, and previously as medical director of quality and patient safety. Prior to that, she served as an academic hospitalist at Beth Israel Hospital in New York, N.Y.; Montefiore Medical Center in Bronx, N.Y.; and St. John's Mercy Medical Center in St. Louis, Mo. She also has held academic appointments at Albert Einstein College of Medicine and Washington University School of Medicine.

The recipient of numerous awards for quality outcomes and measures, Dr. Sivaprasad is a member of many professional associations including Alpha Omega Alpha, the American Society of Professionals in Patient Safety, the Healthcare Information Management Systems Society, the Alliance for Continuing Medical Education, and the Society of Hospital Medicine.

She received her undergraduate and medical degrees from the University of Missouri in Kansas City, completed her internship and residency in internal medicine at Barnes Jewish Hospital, and completed a fellowship in quality and patient safety at Beth Israel Medical Center.



Latha Sivaprasad, MD

Jelalian elected president of American Psychological Association division

PROVIDENCE - **ELISSA JELALIAN, PHD**, a staff psychologist at the Bradley Hasbro Children's Research Center (BHCRC) has been elected president of Division 54 of the American Psychological Association (APA). Jelalian is scheduled to begin her term as president elect in January 2014.

Division 54 of the APA, or the Society of Pediatric Psychology, is dedicated to child psychology and promotes the health and development of children, adolescents, and their families through use of evidence-based methods.

Jelalian has been a staff psychologist in the department of child and family psychiatry at Rhode Island Hospital since 1992, where she currently serves as the coordinator of pediatric psychology. Jelalian is co-coordinator of psychological services to pediatric oncology at Hasbro Children's Hospital and director of the hospital's Adolescent Weight Management program.

She is also associate professor of psychiatry and human behavior and pediatrics at The Warren Alpert Medical School of Brown University.

Jelalian's specialty is in the development and implementation of innovative weight control interventions for children and adolescents, as well as evaluation of statewide policy to promote healthier school nutrition and physical activity environments. Her research has been supported by the National Institutes of Health since 1999 and has had a significant impact on the study of behavioral weight control interventions for adolescents.



Elissa Jelalian, PhD

Dr. Brown joins Westerly OB-GYN practice

WESTERLY – **SHEREENE BROWN, MD**, has joined the L+M Medical Group Obstetrics and Gynecology practice in Westerly.

A member of both the Westerly and Lawrence + Memorial Hospital medical staffs, Dr. Brown will provide women in the greater Westerly/Stonington area with patient-focused obstetric and gynecological care, including pre- and post-natal services.

All delivery services will be offered at L+M Hospital in New London.

Dr. Brown is board eligible in Obstetrics and Gynecology, and received her medical degree from SUNY Buffalo School of Medicine and Biomedical Sciences in Buffalo. She completed her residency at SUNY Upstate Medical University in Syracuse.



Shereene Brown, MD



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Appointments



Susanne J. Patrick-MacKinnon, MD

Dr. Patrick-MacKinnon joins Southcoast

BRISTOL — **SUSANNE J. PATRICK-MACKINNON, MD**, has joined Southcoast Physicians Group Neurology. Dr. Patrick-MacKinnon is a neurologist in private practice in Bristol since 2003. She also serves as a staff neurologist at Newport Hospital and is a clinical instructor in neurosciences at Brown University.

Dr. Patrick-MacKinnon received her medical degree from the University of Massachusetts Medical School in Worcester. Following her internship in internal medicine at Baystate Medical Center in Springfield, she completed a residency and fellowship in neurology, and a fellowship in epilepsy at

Yale-New Haven Hospital in New Haven, Conn.

Dr. Patrick-MacKinnon has been widely recognized for her community service. In 2007 she was presented with the Community Service Award from the James L. Maher Center of Rhode Island, and in 2005 she received the Outstanding Community Service Award from Newport County Community Mental Health Center in Middletown, R.I.

Dr. Patrick-MacKinnon is board certified in psychiatry and neurology.

RWMC names Dr. Iwamoto interim chairman of dermatology

PROVIDENCE — **SATORI IWAMOTO, MD, PhD**, has been named interim chairman of the Department of Dermatology at Roger Williams Medical Center. Dr. Iwamoto is chief of Mohs Micrographic Surgery and program director for the training fellowship.

While Dr. Iwamoto serves in an interim capacity, a search committee, chaired by **Timothy Shafman, MD**, is conducting a national search for a new chairman. **Dr. Vincent Falanga**, who most recently served as chairman, has assumed a new position at Boston University.



Satori Iwamoto, MD

Dr. Kozel joins Southcoast Physicians Group

PORTSMOUTH — **RANDY B. KOZEL, MD**, has joined Southcoast Physicians Group Neurology and will see patients at 112 Clock Tower Square in Portsmouth. Prior to joining Southcoast, Dr. Kozel was the chief of neurology at Newport Hospital and served as department head of neurology for the U.S. Naval Hospital in Yokosuka, Japan.

Dr. Kozel received his medical degree from the Georgetown University School of Medicine in Washington, D.C. He completed his internship in categorical psychiatry and his residency in neurology at the National Naval Medical Center in Bethesda, MD.

Dr. Kozel is board certified in neurology and is a member of the American Academy of Neurology.



Randy B. Kozel, MD

Sheldon Malcolm, DO, joins Southcoast Physicians Group

DARTMOUTH, MASS.— **SHELDON MALCOLM, DO**, specialist in family medicine, has joined Southcoast Physicians Group.

Prior to joining Southcoast, Dr. Malcolm provided care for several years in underserved areas across the world including Haiti and Ecuador. He received his medical degree from the University of New England College of Osteopathic Medicine in Biddeford, Maine, and completed his residency in family medicine at Memorial Hospital of Rhode Island in Pawtucket.

Dr. Malcolm is a member of the American Medical Association and the American Osteopathic Association.



Sheldon Malcolm, DO

Dr. Colagiovanni named president of medical staff at Fatima

NORTH PROVIDENCE — **DR. STEVEN COLAGIOVANNI** has been elected president of the medical staff at Fatima Hospital. He succeeds Dr. Roberto Ortiz. Dr. Colagiovanni, who previously served as president from 2005 to 2008, is the founding partner, president and CEO of Consultants In Urology, Inc.

He earned a medical degree from Tufts University School of Medicine and completed his general surgery and urology training at Brown University School of Medicine. Dr. Colagiovanni is certified by the American Board of Urology and is also a member of the American Urological Association and the Rhode Island Urological Society.



Dr. Steven Colagiovanni

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Obituaries



FAIZA FAWAZ ESTRUP, MD, PHD, died on July 14th, 2013 of pancreatic cancer. She was a renowned scientist, rheumatologist, educator, linguist, chef, and painter – a renaissance woman. She leaves a loving husband, Professor Peder J. Estrup, and extended family in Lebanon, Denmark, Austria, and the United States.

Dr. Estrup received her bachelor's degree in physics from Boston University and her master's and PhD in

molecular biophysics and biochemistry from Yale University, where she was a Higgins Scholar. She then completed a year of postdoctoral fellowship at the University of Geneva. After returning to the United States, she helped set up the first research biophysics lab at the Bell Labs in New Jersey. Prior to coming to Brown she was a visiting assistant professor of chemistry and molecular biology at Haverford College.

She obtained her medical degree from Brown University Medical School in 1975 and was a practicing rheumatologist and medical director of the Arthritis Center of Rheumatology for 20 years at the Memorial Hospital of R.I. She was a Fellow of the American College of Physicians, and a Founding Fellow of the American College of Rheumatology, and a member of the Rhode Island Medical Society since 1977.

In 1999, Dr. Estrup was appointed the first Associate Dean of Medicine at Brown University for Clinical Faculty. She became Clinical Professor of Medicine, was voted the R.I. woman Physician of the Year 2002, and was the recipient of the 2002 Brown Medical School Excellence in Teaching Award. Dr. Estrup was chosen as one of America's Top Physicians for the years 2003 to 2007.

In 2004, the Estrups retired in Santa Barbara. A memorial service was held on Aug. 31.

In lieu of flowers donations may be made to the American College of Rheumatology Research and Education Foundation, 2200 Lake Blvd, NE, Atlanta, Georgia, 30319.

J. DOUGLAS NISBET, MD, 83, of Naples, Florida and Warwick, passed away on Aug. 12, 2013 at Kent Hospital. He was the husband of the late Lois M. (Barber) Nisbet.

Dr. Nisbet was an OB-GYN physician at Kent and Women & Infants hospitals. He also served in the United States Navy Medical Corps. He was a graduate of Providence College and New York Medical College and served his residency at Rhode Island Hospital and Providence Lying-In Hospital.

Dr. Nisbet was a man of tremendous intelligence, pride, integrity and love of family. An avid golfer, sailor, reader and spectator of his grandchildren's sporting events, he was a



tremendous inspiration and role model to all.

He was the beloved father of J. Douglas Nisbet II, MD, and his wife Debra; Steven A. Nisbet, Esq., and his wife Julie; Matthew S. Nisbet, CPA, and his wife Deborah; Deborah R. Sadak and her husband John and the late Mark B. Nisbet, husband of Diane Garvey. He was the caring brother of William Nisbet, MD, and the late Thomas Nisbet. He was also the cherished grandfather of 13.

Gifts in his memory to The American Cancer Society, 931 Jefferson Blvd., Ste 3004, Warwick RI 02886 would be appreciated.

SIEGFRIED MAX PUESCHEL, MD, PHD, JD, MPH died Sept. 2, 2013 at the age of 82 years. He was born in Silesia, Germany on July 28, 1931. His family was relocated as refugees to Emsland, Germany following the end of World War II. He trained as a butcher, baker, and farmer prior to obtaining the opportunity to finish his schooling at Braunschweig College. He then chose to pursue a career in medicine at Dusseldorf Academy, graduating in 1960 with his medical degree.



He emigrated to the United States and began his internship in New Jersey, where he met his wife of 31 years, Eny Vergara. They later had four children, Siegfried Jr., Christian, Pamela, and Jeanette. His later training in pediatrics and biomedical

genetics led him to Harvard University's Boston Children's Hospital and McGill University's Montreal Children's Hospital, respectively. He returned to Harvard in 1965 as a professor of pediatrics, where he obtained his master's in public health.

After 10 years of clinical service and research, he was recruited to Brown University's Rhode Island Hospital as the Director of the Child Development Center. In 1985, he obtained his PhD in psychology from the University of Rhode Island.

He was invited to speak all over the world on the topic of Down Syndrome, even meeting with Pope John Paul II and the queen of Spain. He was involved in multiple organizations including the National Down Syndrome Congress, the National Down Syndrome Society, and the Association for Retarded Citizens. He partially retired in 1994, becoming a professor emeritus at Brown University. He added upon his prior studies at Southern New England School of Law, graduating with his Juris Doctorate in 1996.


He volunteered his medical services for numerous organizations including Special Olympics and Habitat for Humanity, as well as several mission trips organized by Christ Church of East Greenwich.

He was an accomplished athlete running 38 marathons. He enjoyed mountaineering, climbing Mounts Kilimanjaro and Shasta, among others. At age 70, he climbed to the base camp of Mount Everest and obtained his black belt in Tae Kwan Do. He was also a lover of the arts and an avid gardener.

Due to illness, he retired in January 2013. He is survived by his two surviving children, Siegfried R. Pueschel, Jr. of Riverside, RI, and Jeanette Pueschel Larson of Asheville, NC, as well as five grandchildren.

Donations in his memory can be sent to the Down Syndrome Society of Rhode Island, 99 Bald Hill Road, Cranston, RI, 02920.

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And Calm of Mind All Passion Spent

STANLEY M. ARONSON, MD

THE LATIN, *pati*, MEANT SUFFERING; AND THUS FROM THE RELATED noun, *passio*, in the Early Christian era, arose the specific sense of suffering in the act of religious martyrdom. The word passion then became part of a name to many formal expressions of piety such as odes, oratorios and choral pieces of religious intent.

The word passed through French as *passion*; and then, unchanged in spelling, as the English word, passion. Its meaning evolved, over the centuries, from a sense of pain and suffering, to an expression of religious faith, then to an intensity of feeling (any feeling), and more recently to signify heightened sexual attraction. Inevitably, there are some, for a variety of reasons, who would avoid passion. "Give me that man that is not passion's slave," Hamlet murmured.

The medical derivatives of the Latin, *pati*, include the English word, patient, indicating someone in the act of suffering; and in a broader sense, someone bearing affliction with calmness (and thus its obverse derivatives, impassive and impatient). The word, passive, has also taken on the clinical meaning of something or someone not visibly reacting, recessive, quiescent, or a patient enduring pain without complaint or resistance.

Passion has also infiltrated the medical pharmacopeia. The dried petals of the passion-flower (*passiflora incarnata*), a climbing herb of the sub-tropics, had been widely used by physicians, through the 19th Century, for the treatment of minor burns, dysmenorrhea and chronic limb pains.

A frequent synonym for passion is enthusiasm. The word comes to us from the Greek, *entheos*, meaning enthralled or encouraged by god; and therefore, as with passion, was often expressed to convey the sense of divine inspiration.

William Osler (1849–1919), the eminent Canadian physician, once observed: "Natural man has only two primal passions: to get and to beget."





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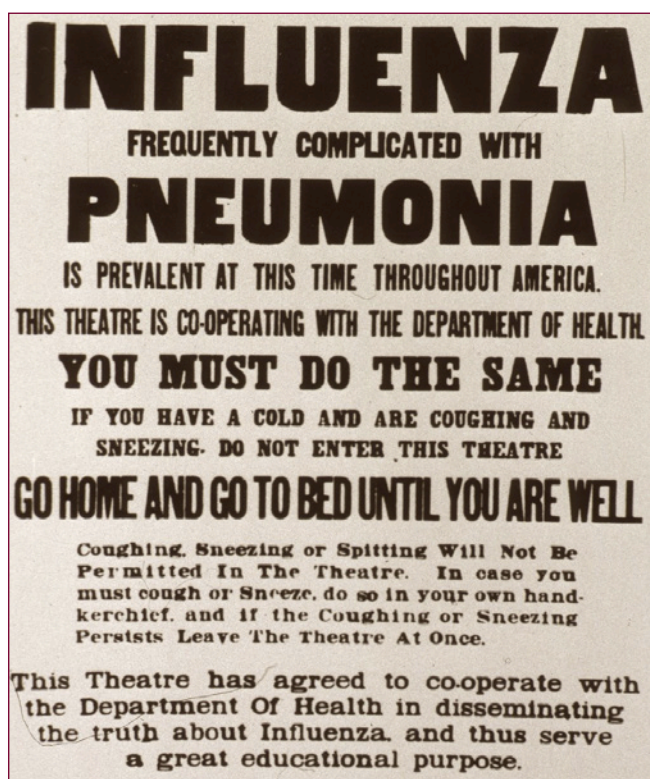
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Twin Perils of September 1918: The Great War and the Influenza Pandemic

'The police have been ordered strictly to enforce the anti-spitting laws in all public places.'

BY MARY KORR
RIMJ MANAGING EDITOR



Influenza poster from 1918

Ninety-five years ago, World War 1 and the Great Influenza Pandemic, also known as the Spanish flu, took its terrible worldwide toll. At first, in September 1918, after a milder outbreak the previous winter, Rhode Island health officials stated there was no evidence the outbreak was anything more than the familiar gripe and issued the standard precautions.

State Board of Health Secretary **DR. BYRON U. RICHARDS**, in local newspaper accounts, urged the general populace: "When you send for your doctor, put in your call early in the morning, for

our doctors can only stand a certain amount of work, and a high percentage of our physicians have already gone into the service."

He explained that the prevalence of the disease in the Army and Navy training camps throughout the area resulted from the conditions there that were favorable for contact infection.

However, the death from the flu of **JOHN STANLEY HARDMAN**, a Brown University student and a medical assistant in the U.S. Naval Reserve Force, in Newport on Sept. 21, 1918, was still unusual enough to be reported in the daily newspapers. According to influenza archives at the

U.S. Dept. of Health & Human Services (HHS), Hardman was nursing two men suffering from influenza, and then contracted the disease. Within 36 hours, he succumbed, his fiancé by his side. They were to be married Oct. 1.

Flu breaks out on troop transport

For one physician, the twin perils of war and disease would prove equally deadly. Rhode Island Hospital pediatrician and infectious disease specialist **DR. WILLIAM HENRY BUFFUM**, 41, a lieutenant in the Naval Reserve Force, boarded the troop transport *Oxfordshire*

in New York City on Sept. 25, 1918, bound for Liverpool, England.

According to the 1919 publication, *Brown University in the War* (Dr. Buffum was an 1898 alumnus), influenza broke out on the crowded transport. He tended to the sick soldiers on the two-week stormy voyage.

When the ship arrived in Liverpool on Oct. 8, Dr. Buffum became symptomatic. Two days later, he developed pneumonia and was sent to the Great Army and Navy Hospital in Liverpool, "where he died after several hours of unconsciousness on Oct. 13," according to the Brown remembrance.

A colleague from Dr. Buffum's days at Harvard Medical School, class of



Dr. William Henry Buffum

1902, later recalled his friend. "He had a scientific type of mind which deemed satisfactory proof, and his conclusions, given only after he was convinced, were soon found to be accurate and reliable ...to the day of his death he remained to his friends the same steady, likeable and dependable fellow."

Home front

Meanwhile on the home front, the Sept. 26, 1918 *Providence Daily Journal* reported that the Spanish influenza situation is "considered serious," and that 168 cases were being treated in Providence, according to the figures released by the city's superintendent of health, **DR. CHARLES V. CHAPIN**.

The numbers indicated fewer admissions to the Newport Naval Hospital, but also noted the severity of the patients there with pneumonia.

The *Journal* also reported that "15 nurses at St. Joseph's Hospital are ill with the disease and **DR. DENNETT L. RICHARDSON**, superintendent of the City Hospital, has it, and two of Westerly's 10 physicians were confined to bed."

The good news was that "vigorous steps have been taken by the State and city authorities. The police have been ordered strictly to enforce the anti-spitting laws in all public places."

As the number of influenza patients swelled area hospitals, Dr. Chapin and

other health officials worked to increase the number of beds. According to the Oct. 6, 1918 issue of the *Journal*, Rhode Island Hospital added 75 beds, St. Joseph's added 25, with the ability to add 40 more if the situation warranted. The John W. Keefe Surgery "tendered the use of that institution," and stipulated that it had 40 beds but "the city must supply the nurses."

Within a few days the Rhode Island Hospital had admitted nearly 300 influenza patients.



Dr. Charles V. Chapin was the Providence superintendent of health during the 1918 influenza pandemic. In 1927, the Rhode Island Medical Society held an appreciation for Dr. Chapin, who served as president of RIMS from 1907–1908, at the unveiling of his portrait in the medical library building.

Physicians reported over 6,700 cases during the period from Oct. 3-9. During that same week, the death rate in the city was 159: 61 from influenza and the remainder from pneumonia.



Former President Theodore Roosevelt rode into Providence at the height of the flu outbreak.

Dr. Chapin urges Liberty Bond Rally with Roosevelt be allowed

As the second wave of the influenza crisis deepened in the fall of 1918, Providence city officials closed schools, theaters, motion picture houses and banned public meetings. One event, however, was allowed to proceed. Former President Theodore Roosevelt was the planned speaker at a Liberty Loan rally, to be held on Oct. 17, 1918, at the Billy Sunday tabernacle in downtown Providence, a temporary structure erected near Union Station for a series of revivalist meetings.

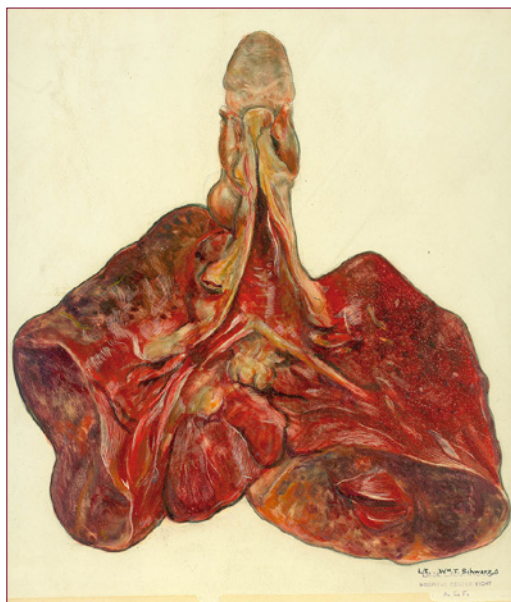
While Dr. Byron Richards and a majority of the members of the state board of health urged Gov. Robert L. Beeckman to cancel the event, Dr. Charles V. Chapin, Providence superintendent of health, disagreed and said he saw no reason for not holding the meeting, as long as those who felt sick did not attend. The Liberty Loan committee and the governor agreed with Dr. Chapin and the rally took place.

At the event, Roosevelt appealed to the man of moderate means to subscribe to Liberty Bonds. He roused the Providence crowd with fighting words and said: "We will accept no peace save the peace that follows unconditional surrender and we will get that peace with the machine gun and not with the typewriter. Germany needn't bother about terms. She is not going to be consulted. We will settle on terms with our allies. Germany's part will be limited to saying 'yes, sir.'"

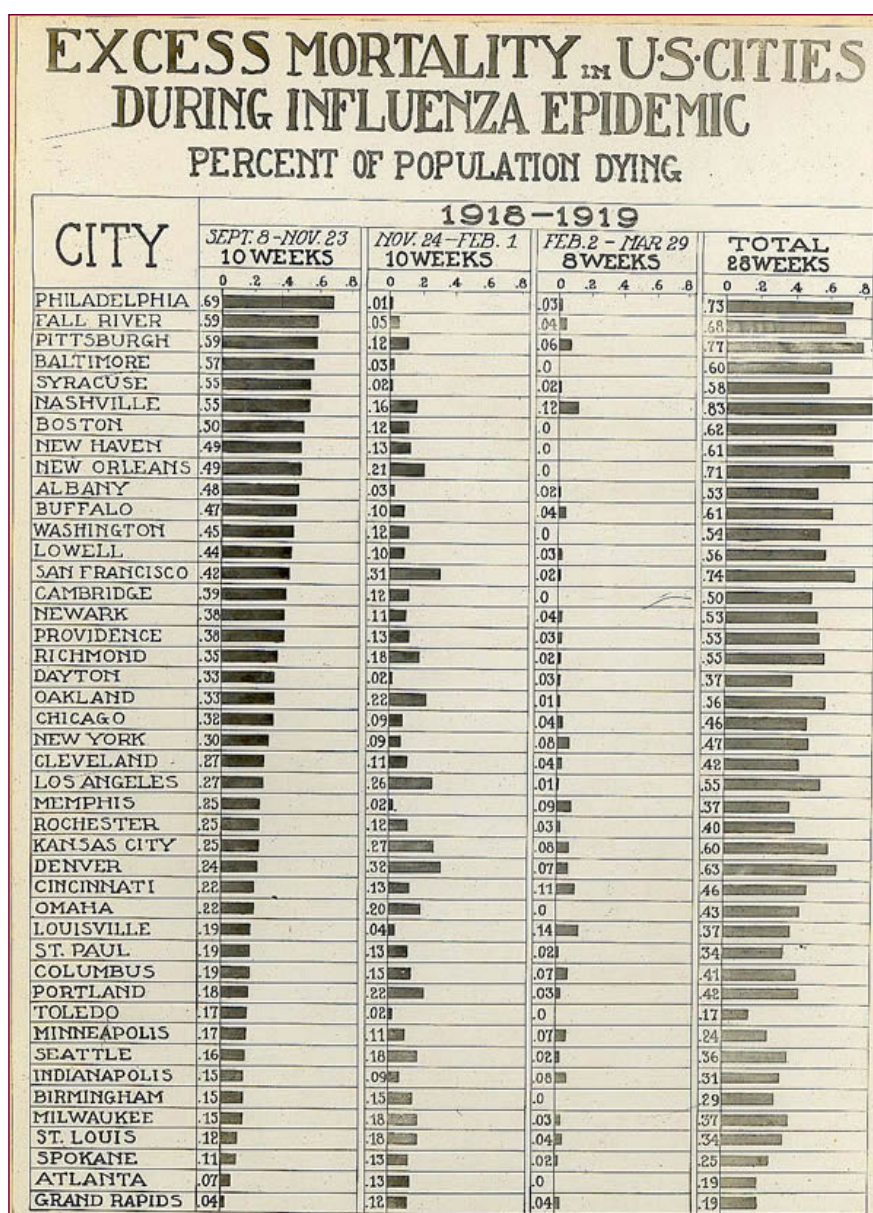
The armistice to end the war was signed the following month but the third wave of the influenza epidemic continued into 1919. More people died from what was decades later determined to be the H1N1 flu strain than from fighting in World War I.

Although the pandemic tapered off during the late fall in Rhode Island and nationwide, influenza remained a threat until the summer of 1919. The pandemic killed an estimated 675,000 Americans and between 20–40 million people worldwide and was unusual in that it was deadliest for those aged 20 to 40 years old.

According to the HHS archives, a year after the pandemic, “Dr. Richards asked the Public Health Service for access to an experimental influenza vaccine. This request for a vaccine was not unusual; many state health departments begged the PHS for access to a vaccine both during and immediately after the pandemic. There were, however, no effective vaccines at this time. ❖



Artist's rendering of the lungs of Pvt. HD Cauvel, who died Oct. 8, 1918, from influenza and pneumonia. The picture shows the red lung type of pneumonia, which was peculiar to the pandemic.



Mortality figures published during the pandemic.