Milwaukee Academy of Medicine

Volume XXV / September 2009

President's Remarks

by Seth Foldy, M.D., M.P.H.
President 2009

Reflections on Pandemic H1N1 and Next Steps

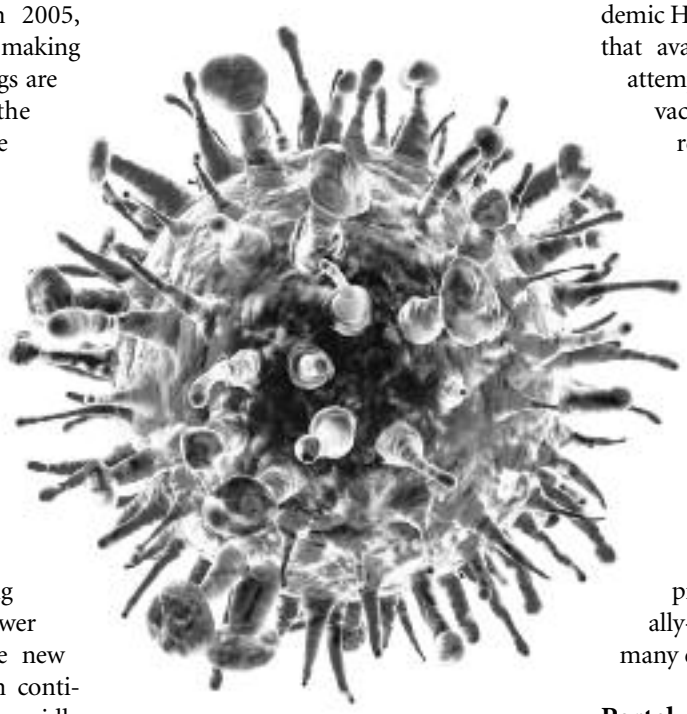
The pandemic is inevitable. When, is the question." wrote Nick Owen in his review of the Academy's 1,240th meeting (on avian influenza) in 2005, adding "Unless a new method of making antibodies is developed or new drugs are discovered in the interim and the resulting product distributed in time (all unlikely), we will have to fight… flu with the traditional handwashing, masks, quarantine and isolation."

Nick's predictions were largely borne out this spring, but influenza virus, by gene-swapping and mutation, keeps changing the rules. Here are some lessons and puzzles for medicine and public health.

Planning

"The plan is useless; it's the planning that's important," General Eisenhower once said. Contrary to plan, the new H1N1 pandemic arose in our own continent, not far away. The virus spread rapidly even before discovery. Nevertheless, the tools, relationships, lab networks, stockpiles and communication systems developed for pandemic influenza all found good use. Prompt alerting of clinicians to test possible cases, laboratory capacity, and cross-trained (and N-95 respirator-fit-tested) public health interviewers—these helped us rapidly assess the virulence of the new strain. This allowed public health authorities to balance the severity of control measures (like closings of schools and public events, travel bans, quarantine) against the relatively low observed morbidity and mortality rates of the virus.

That being said, the story might have been much different. It was only luck (a genetic toss of the dice) that pandemic H1N1 did not kill at the same rate as 1918 influenza. Whether our plans would have held up to a mass killer in our midst is unknown and unpleasant to contemplate.



Nor will the virus necessarily return from its Southern Hemisphere summer sojourn with the same virulence, drug sensitivity, or immunologic cross-reactivity to vaccines under development. Complacency should not replace concern.

Progress

The speed with which we have been able to discover, characterize and develop countermeasures against pandemic H1N1 compared to emerging diseases like AIDS, and even SARS, shows the payoff of modest investments in infectious disease research combined with leaps in molecular biology. We should remember, however, that the infrastructure to track and respond to influenza has been deliberately built over decades, and that other novel infections give us considerably more difficulty. Looking ahead, the public health workforce seeking to vaccinate most Americans against pandemic H1N1 in autumn is a tiny remnant of that available in 1976, the last time we attempted such large scale short-notice vaccination. While the brisk spring response to pandemic H1N1 occasioned some public confidence, erosion of day-to-day public health capacity (documented in Laurie Garrett's trenchant book *Betrayal of Trust*) should give us great pause. As our medical colleague Chekhov once put it: "Any idiot can face a crisis; it is this day-to-day living that wears you out." Public health's emergency management in spring came at some cost of progress against more intractable problems like infant mortality, sexually-transmitted diseases, obesity and many environmental hazards.

Portal

Kim Pemble addressed our 1,265th meeting this January on the Wisconsin Health Information Exchange. When cryptosporidium gripped Milwaukee in 1993 a third of county residents had diarrhea and the Health Department had little way of knowing. During spring pandemic H1N1,

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Upcoming Fall Meetings

September 15, 2009:
2009 Bioethics Lecture

Stephen Latham, J.D., Ph.D.
Deputy Director,
Interdisciplinary
Center for Bioethics,
Yale University

Medical Futility, Ehtics and the Law: Can Physicians Just Say "No" to Patients and Families?

Nothing is more vexing to physicians than demands or expectation for treatment that physicians think will not help the patient (known as medical futility). But can a physician just say "no" to a patient or family who desperately want to try anything and are hoping for a miracle? What are the ethical and legal ramifications of refusing to provide requested treatment when a physician thinks that treatment is futile? Dr. Latham is a lawyer/bioethicist who teaches at Yale University and does clinical ethics consultations with the Pediatric Ethics Committee of Yale-New Haven's Children's Hospital. He is former Director of Ethics Standards for the AMA, and a former Research Fellow of the University of Edinburgh's Institute for Advanced Studies in the Humanities. ~

October 20, 2009:
Distinguished Achievement Award

James Thomson, V.M.D., Ph.D.

Professor, Department of Anatomy,
University of Wisconsin
School of Medicine and Public Health
Jim Kress Endowed Chair,
University of Wisconsin – Madison
Director of Regenerative Biology,
Morgridge Institute for Research

Stem Cell Research: Implications for the Future of Medicine

Stem cells may one day provide a cure for Parkinson's disease, multiple sclerosis, irreparably damaged nervous tissue, and more. James Thomson of the Morgridge Institute for Research, Madison, Wisconsin, will talk about the latest developments in stem cell research in "Stem Cell Research: Implications for the Future of Medicine."
James Thomson, director of regenerative biology at the Morgridge Institute and UW-Madison medical school professor, has conducted pioneering work in the isolation and culture of nonhuman primate and human embryonic stem cells and remains in the forefront of his field. He was the first researcher to grow human embryonic stem cells in the laboratory, an achievement that brought awards and accolades from all around the world. In 2007 Dr. Thomson's team succeeded in isolating similar pluripotent stem cells from human somatic cells, and in spring 2009 the journal Science published their discovery of vector-free induced pluripotent stem cells. ~

November 17, 2009:

Richard Weinshilboum, M.D.

Mary Lou and John H. Dasburg
Professor for Cancer
Genomics Research Chair,
Division of Clinical Pharmacology,
Professor of Molecular
Pharmacology & Experimental
Therapeutics and Medicine
Mayo Clinic

Pharmacogenomics and Individualized Drug Therapy

All meetings are held at
the University Club of Milwaukee,
924 E. Wells Street,
at the times listed below,
unless otherwise indicated
on the program announcement.
Members will receive specific
information on the speaker
and topic prior to each event.

Cocktails at 6 p.m.
Dinner at 6:30 p.m.
Program at 7:30 p.m.

Contact the Milwaukee
Academy of Medicine office
for reservations:
amy@milwaukee academyofmedicine.org
or 414/456-8249

As a reminder,
please make your dinner reservations
no later than 10 a.m. on the meeting date,
if possible.

**There is a charge for dinners reserved
unless canceled by 10 a.m.
on the meeting date.**

Reservations can be made
by phone or email.

From the Academy's Rare Book Collection: Al-Razi

Review by H.D. Kerr, M.D.

Almansoris Liber Nonus, is one of the incunabula, books printed in the first fifty years after Gutenberg's invention of movable type. The author, al-Razi (aka Rhazes) was a celebrated Persian physician of the ninth century. Another of his books, Kitab fi al-Jadari wa-al-Hasbah (A Treatise on the Small-Pox and Measles), is in the Academy Library in translation. William Greenhill (1814-1894), the translator, was a physician educated at Oxford in Greek and Latin and was persuaded to learn Arabic by Richard Burton. Greenhill was an editor of the British Medical Journal, had a thriving clinical practice, and maintained a strong interest in public health.

The Academy library contains two works of Al-Razi

Razi, Abu Bakr Muhammad ibn Zakariya, (865-c925). Almansoris Liber Nonus Cum Expositione Syllani. Venetiis : P. Tussignano, 1490.

Razi Abu Bakr Muhammad ibn Zakariya (865-c925). A Treatise on the Small-Pox and Measles, by Abu Becr Mohammed ibn Zacariya Al-Razi (commonly called Rhazes). Translated from the original Arabic by William Alexander Greenhill. The Sydenham Society, London, 1848.

Al-Razi was born in Rayy, a city in Persia just south of modern day Tehran that was a way station on the Silk Road. He lived most of his life there or in Baghdad. Al-Razi's early interests were in music, philosophy, literature, and chemistry. He is said to have taken up medicine when he was forced to seek medical care for eye damage related to his working with chemicals, but nevertheless late in life he became blind.

He relished the practice of medicine both in practical diagnostic and therapeutic challenges and in its ethical aspects. His detailed casebooks document his struggles and failures and his references to past authorities and colleagues. Galen's works, in particular, challenged and aided him. With evident pride he wrote that he had found inaccuracies in Galen and had criticized them citing Galen's admonition to future physicians that they seek the truth and reject dogma. He travelled widely, taught medicine, and was devoted to his patients no matter what their origin or station in life. His methods included reliance on keen observation and development of differential diagnosis.

Al-Razi advocated the use of books in learning medicine and their continued use to refine practice. His 250 books and treatises are replete with detailed references, some being the only linkage to ancient writers. His books covered the breadth of medicine and included one on diseases of children, another on disorders that involve the soul and body, and a home medical compendium for the lay public. He was widely respected for his knowledge and experience. This led to his appointments as director of the hospitals in Rayy and later Baghdad.

Many of the references al-Razi valued so highly had been translated into Arabic by Hunayn ibn Ishaq al-Ibadi (d 873), a Syriac Christian physician to the Abbasid caliph in Baghdad. Beginning at age 17 he translated nearly all the available works of Greek medicine and half of the Aristotelian writings. These included Hippocrates and Galen, numerous commentaries, and mathematical treatises. By doing so he originated the classical Arabic vocabulary of science and medicine (1). He built a bridge backward to the ancient world and gave substance and continuity to the Arab world and eventually Europe.

Al-Razi's most popular work was al-Hawi (The Comprehensive Book of Medicine), an encyclopedic casebook of 23 volumes. In 1279 it was translated into Latin by Faraj ben Salim, a Sicilian-Jewish physician employed by Charles d'Anjou and sold widely in Europe under the title "Continens Liber". This earned al-Razi a place in the First Circle of Dante's Inferno as

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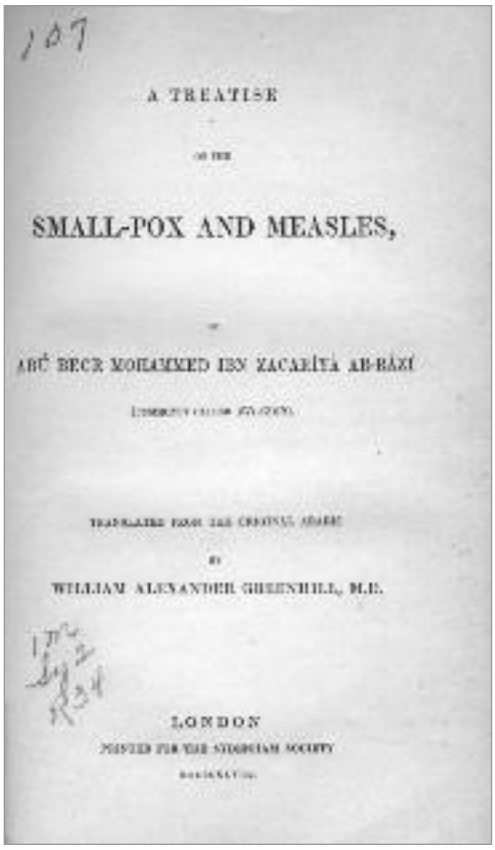
he who made the "great commentary."

The "Book of Medicine Dedicated to Mansir", written in 903, was a 10 part compendium dedicated to the governor of Rayy. The parts included anatomy, temperaments, food and simple medicines, means of preserving health, skin diseases and cosmetics, diseases of people on a journey, surgery, poisons, treatment of diseases, and fevers. It was translated into Latin in Toledo by Gerard of Cremona (1114-1187) and called "Liber ad Almansoris". It was one of the most widely read medical manuals in Europe for centuries. The ninth part consisting of therapeutics frequently circulated alone and was entitled "Almansoris Liber Nonus". Many editions with many commentators were published over centuries (2). Greenhill notes that the work of al-Razi was remarkable for combining erudition with clinical experience and that he expressed his ideas and descriptions with clarity and logic.

Testimony to al-Razi's fame as one of the great physicians and of his influence in the Islamic world extending to Europe is the fact that he was included in the Prologue of the Canterbury Tales. Chaucer (1340-1400) was the son of a wine merchant, a well traveled diplomat, a supervisor of public works, and one of the most learned people of his time. In introducing his travelers the author tells us that his Doctour of Phisyk is fully attuned to the stars, knowledgeable in the cause of every malady, knows well the great physicians of the past, and loves gold. The fifteen physicians he names include Asculapius, Dioscorides, Rufus, Hippocrates, Galen, Rhazes, Avicenna, and Averrois (3). Ideas, methods, and knowledge had traveled over centuries propelled by brilliant and earnest people to influence science and the practice of medicine even in Britain. ~

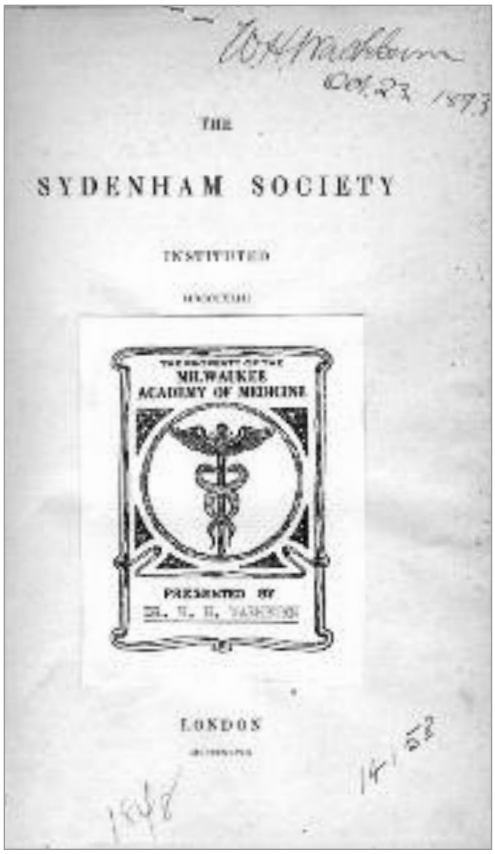

A TREATISE

SMALL-POX AND MEASLES,

ABŪ BECR MOHAMMED IBN ZACARĪYA AR-RĀZĪ

WILLIAM ALEXANDER GREENHILL, M.D.

LONDON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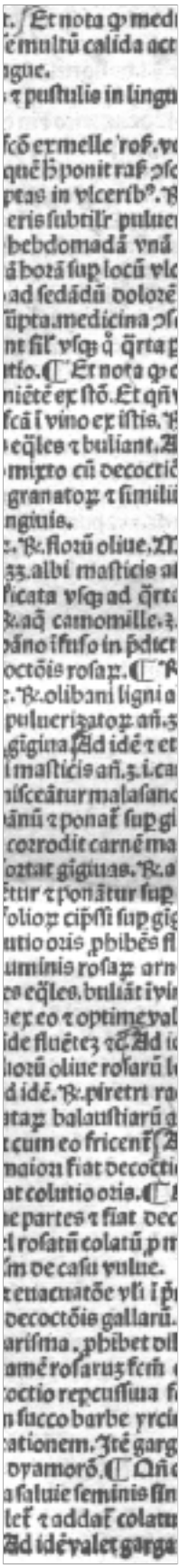

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1. Osler, W. The evolution of modern medicine. 1913. http://arthursclassicnovels.com/arthurs/science/evlmed10.html
2. Al-Razi, the Clinician. Islamic Culture and the Medical Arts. US National Library of Medicine, 1999. http://www.nlm.nih.gov/exhibition/islamic_medical/islamic_06.html
3. Hopper, Vincent P. Chaucer's Canterbury Tales: An Interlinear Translation. Barron's Educational Series, Inc. Great Neck, NY, 1948.

President's Remarks continued from page 1

health agencies could track real-time the rate of influenza-like symptoms presenting to almost every Milwaukee emergency room as well as their contribution to several hospitals' admissions. Thus in Milwaukee, public health had a real-time, if hazy, portal on whether the novel virus was causing increases in hospital admissions, and of the impact of the outbreak on healthcare utilization. Such questions once consumed considerable labor! This portal is not currently available elsewhere in Wisconsin, but we hope we will gain vision there too before long.

Partnership

In the teeth of a novel outbreak, public health relies heavily on physicians and nurses to stay abreast of rapidly changing recommendations from diagnostics to infection control to therapeutics. Some Academy members have told me they had trouble keeping up-to-date. The Division of Public Health even resorted to posters reading "Don't let June fool you—Think Flu!" to remind clinicians that pandemic H1N1 remained common. The Wisconsin Division of Public Health held daily teleconference webcasts during peak change, but neither professional associations nor hospital staff organizations seemed willing or able to "push" updates to physicians and other professionals. Email (nor, God forbid, Twitter) is no panacea, because a large proportion of physicians are too busy or technophobic to keep up with a mailbox. I dream of a time when clinicians do much of their work in electronic medical records linked by health exchanges, and there will then be one electronic environment where everyone can both learn and contribute information about fast moving outbreaks! Despite the difficulties in communication, physicians played a critical role in recognizing and testing possible cases, cooperating with infection control and other extraordinary tasks in an extraordinary time.

Preparation

The months ahead bring many unknowns, but planning is focused on:

H1N1 Vaccine. In addition to the annual seasonal influenza vaccine there will likely be a new H1N1 vaccine available in mid-fall or later. Adequacy of vaccine supply is unpredictable. Early shipments will be focused on healthcare workers and children (in part to reduce community transmission), others at high risk from influenza, including pregnant women, those with chronic diseases and young adults. People (including physicians!) should also receive *seasonal* flu vaccine in early fall–more than ever!

Surveillance. We will closely monitor hospitalizations, deaths and drug resistance to adjust public health interventions.

Reduce transmission Policies and recommendations for schools, workplaces and homes will be refined from ongoing experience. Staying home while sick and frequent handwashing will remain important for everyone. Policies to increase distancing between people at work and play may be needed, so organizations should review and upgrade their pandemic plans.

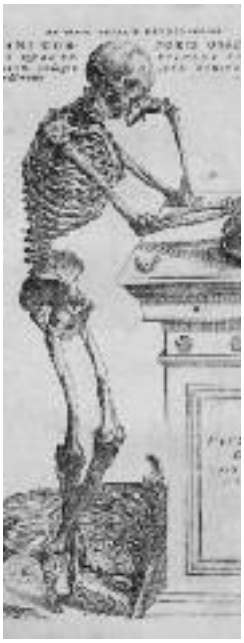
Prepare for surge healthcare demand. Autumn may see far more pandemic H1N1 cases, superimposed on seasonal strains. There will likely be larger than normal impact on clinics and hospitals. Stockpiles are being reloaded. Policies and procedures to manage surge demand (possibly during high staff absenteeism) should be reviewed, practiced and upgraded.

Communication. We will continue to try to "push" urgent updates to the many affected sectors of society. We at the Division of Public Health hope you'll send questions and other information as well to DHSWiPanflu@wisconsin.gov.

My references to recent Academy programs indicate how members had the opportunity of foresight into medical developments shaping the pandemic and response. I hope more physicians will use the Academy in the future to be better prepared to lead in difficult times.

Seth Foldy, MD, MPH, FAAFP is the State Health Officer and Administrator of the Division of Public Health for the State of Wisconsin

Book Reviews



by Nick Owen, M.D.

Masters of Sex: the life and times of William Masters and Virginia Johnson, the couple who taught America how to love, by Maier, Thomas, Basic Books, New York, 2009.

Masters of Sex tells the story of the evolution of the study of sexual physiology and development of a therapeutic program for sexual dysfunction by the principals involved, William Masters, M.D., and Virginia Johnson, at Washington University in the 1950's.

Much of the book is devoted to the lives and personalities of the two investigators, seemingly appropriate given the charged nature of sexuality and how their studies were undertaken and their therapeutic program developed.

Prior to Masters and Johnson's work, treatment of sexual dysfunction fell mostly in the realm of psychotherapy and hormone therapy; the understanding of the physiology involved enabled Masters and Johnson and their associates to evolve a unique, effective, physical, behavioral, and psychotherapeutic approach.

Given the topic, the historic mixed public and professional reactions are not surprising although in retrospect, somewhat inappropriate.

by H.D. Kerr, M.D.

War Surgery in Afghanistan and Iraq: A Series of Cases by Shawn Christian, DE Lounsbury, SP Hetz. Office of the Surgeon General, Walter Reed Army Medical Center, Washington, DC, 2008.

Baghdad Journal: An Artist in Occupied Iraq by Steve Mumford. Drawn & Quarterly Books, Montreal 2005.

Perhaps we have all heard and read too much about the Middle East in the past decade, but these two books are different.

"War Surgery" has been very well reviewed by the medical press and certainly deserves it. Although the problems are surgical, there is plenty of medicine here. Presented are a series of case histories listed under such headings as "Umbrella Effect of a Landmine Blast" and "Manual Craniotomy for Penetrating Head Injury". The technical aspects are described clearly, and the cases are presented in practical fashion devoid of formulaic repetition. Comparisons months later are included for some, here a soldier walking gamely on prostheses or there a head-injured soldier back in uniform having dinner with his wife and smiling. The illustrations are of the highest quality with the sharpest possible color photographic detail, and from the very best views. The treatment is presented in a very orderly fashion, and every one of us can learn a lot from just turning the pages. Much of that presented is implicitly about being a physician, being able to improvise and adapt to circumstances. The book compels the reader to view the war veteran patient in a different light. Look what they have gone through. Look what our colleagues accomplished.

Mumford, a member of the art faculty of Cooper Union in New York City, made four trips to Iraq to document the war and the people caught up in it. In so doing he reminds us that Winslow Homer had sent his Civil War drawings from the front lines to inform eager readers of Harper'sWeekly. Mumford's diary is expanded into text and nearly every page contains drawings with captions. He acknowledges the generosity of ordinary Iraqis and of U.S. Army units who let him draw whatever he wanted. This excellent book is filled with complex personal stories, views of the landscape, and the faces of soldiers and citizens in myriad situations. Mumford's work deserves wide readership.

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The 1,269th Meeting

May 19, 2009

Guest Speaker:
G. Richard Olds, M.D.
Linda and John Mellowes
Professor and Chair
Department of Medicine
Medical College of Wisconsin

Topic: The Changing Face of Rabies: Beware of Cats and Bats

by Nick Owen, M.D.

The 1,269th meeting of the Milwaukee Academy of Medicine was called to order at the University Club on May 19, 2009 by President Seth Foldy.

Drs. Anita Thakur and Tod Poremski were voted into membership; the name of Michael Johnstone was read, nominating him for election at the September meeting.

Dr. G. Richard Olds, The Linda and John Mellowes Professor and Chair, Department of Medicine, Medical College of Wisconsin was introduced as the evening speaker whose topic was The Changing Face of Rabies: Beware of Cats and Bats.

Due to difficulties in confirming the diagnosis clinically, Dr. Olds suggested that the total number of rabies cases exceeded the reported cases by at least a factor of two in answer to a later query. He indicated that unlike some other virus illnesses, this was not due to an excess of subclinical mild cases but to undiagnosed encephalitic illness.

Most cases in the USA today are transmitted by bats and raccoons with cats displacing dogs as the principal domestic vector due to canine immunization and leash laws. Dogs still head the list in the less developed parts of the world.

He reminded us that a touch or a lick were known to transmit the disease, bites not being necessary, and reviewed the appropriate treatment guidelines.

The successful treatment of the pediatric case in 2004 at Children's Hospital of Wisconsin was reviewed and the subsequent failure of that regimen discussed.

A lucid review of one of our, as yet, unconquered virus illnesses.

Email Reminder

If you have not already done so, please email your current email address to the Academy office, amy@milwaukeeacademyofmedicine.org

Visit the Milwaukee Academy of Medicine's NEW WEBSITE at www.milwaukeeacademyofmedicine.org

Included on the website:

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- **Online Reservations**
- **New Member Information**
- **Academy Archives**
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