

activity (ages 15-24) is good protection. Public health must advocate for the continued use of pelvic examinations and Pap smears; HPV vaccine promises to reduce disease burden, but is *not* a cure-all for cervical cancer. As for the “type spreading” phenomenon, the quadrivalent HPV vaccine is no different than any other vaccine. Suppressing specific microorganisms creates selective pressure for the emergence of formerly insignificant genetic variants, and “new” genetic variants, as well. Only careful monitoring and cost-benefit analysis can determine if the intervention is worthwhile, despite its unintended but predictable consequences.

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*Anna Wheat, a student in the MPH Program of Brown University, is an intern for the Rhode Island Comprehensive Cancer Control Program, based at the Rhode Island Department of Health.*

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The author has no financial interests to disclose.

# Letters To the Editor

Dear Dr. Friedman,

Thank you for writing about electronic medical records in *Medicine & Health/Rhode Island* [September 2008]. I am writing this letter to inform you of the best-kept secret in electronic medical records (EMR): the VA Medical Center.

I always enjoy your articles, and this one was no exception. In my own internist's office I often feel like my doctor does not even know the color of my eyes. I always feel nervous when my one-word answers lead to a half-minute interlude of typing. Just recently the Rhode Island Free Clinic, where I volunteer, switched over to EMR, and the frustrations from those scroll-down boxes may have led to our losing some of our invaluable volunteer providers.

The advantages of EMR, as you listed, are numerous. At the VA, where I am currently on my medicine clerkship, they have had EMR since 1995. When a patient is admitted to the hospital, I can immediately see everything from a cardiology consult note 10 years ago to his last five EKGs. I can see his most recent CT scan of the head as well as his outpatient neurologist's recommendations based on those findings. With a simple double-click I can see a patient's weight over the last 15 years displayed as a line graph. Labs and pending orders appear on the computer screen. I can start a note in the morning and finish it later in the day. Clinical reminders such as “colonoscopy due” pop up on the screen when the patient meets preventative medicine guidelines for these procedures.

I would argue that EMR not only offer numerous advantages, they are crucial to how medicine should be practiced. Handwriting at Rhode Island Hospital, where I was a student

on the psych consult service, made me feel like an archeologist deciphering hieroglyphics. Medicine teams make recommendations, but the assessment and plan could be impossible to read. Health care workers seem to accept these limitations as “the way things are.” Instead of deciding that electronic medical records are a middle ground, we should figure out how to maximize our abilities with the best technology that is available.

Doctors at the VA have taken advantage of this system. They write notes faster than they would if writing them by hand. They make good eye contact with patients and show them x-rays and lab values as they pop up on the screen. They show the patients trends in their weight, blood pressure, and cholesterol to improve health education. Some primary care physicians do look at the screen more than they talk to the patient, but I believe that it is our medical training that will need to adapt, rather than EMR.

Please visit the VA in Providence and see how wonderful electronic medical records can be.

David Margolius

*David Margolius is a student at the Warren Alpert Medical School of Brown University.*

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The author has no financial interests to disclose.

## Dear Editorial Staff:

I read the July 2008 issue of *Medicine & Health/Rhode Island* about Lyme disease and would like to share a different perspective of this disease and how the medical community could better serve the people of RI.

As a biostatistician, I interpret the results of infectious disease clinical trials and assess the generalizability of the findings. I have followed the literature on Lyme disease for the past 3 years and am aware of the controversy surrounding this illness.

I believe the medical community in RI should acknowledge that an infection with *Borrelia burgdorferi* can be serious and difficult to diagnose and treat, contrary to the opinions presented in the *Medicine & Health/Rhode Island* issue. In searching the literature, I have not been able to find proof that the Lyme bacteria is *always* eradicated following short-term antibiotic therapy.

Unfortunately in the writing of their diagnosis and treatment guidelines, members of the IDSA have ignored and downplayed many studies that provide convincing evidence of chronic and seronegative Lyme disease. A review article by Dr. Stricker provides 13 references describing Lyme serologic tests as too insensitive for diagnosis and 21 references documenting persistent symptoms and/or evidence of continuing infection following antibiotic treatment (Stricker RB, Counterpoint: Long-term antibiotic therapy improves persistent symptoms associated with Lyme disease. *Clin Infect Dis* 2007; 45: 147-57).

In addition, the Stricker article provides evidence of the complexity of *B. burgdorferi*, explaining that it has 132 functioning genes compared to the 22 found in syphilis and 3 times more plasmids than any other known bacteria. The article pro-

vides biological explanations (with citations) of how *B. burgdorferi* can evade antibiotic therapy and why longer courses of treatment can be helpful.

In this letter, I cannot provide a detailed critique of the three NIH-funded randomized clinical trials studying re-treatment of chronic Lyme disease. In summary, two of these studies demonstrate that symptoms can be measurably lessened by treatment but that a cure for the chronic stage of Lyme disease has not been found. Improvement of symptoms in the antibiotic treatment groups compared to placebo, but relapse upon discontinuation of antibiotic treatment, can indicate that the treatment studied, although helpful, was not curative and the infection remained (Fallon BA, et al. *Neurol* 2008; 70:992-1003).

I believe it is the moral and ethical duty of the medical community to acknowledge the uncertainty and charged political atmosphere surrounding this disease. Physicians should provide patients with information on all viable treatment options so they can make their own informed choices.

Availability of longer-term antibiotic therapies could make the difference between a life of disability and a full and productive life for those not cured by an initial course of antibiotics or diagnosed months or years after the tick bite occurred.

Sincerely yours,  
Allison DeLong, MS  
e-mail: [adelong@stat.brown.edu](mailto:adelong@stat.brown.edu)

*The author is a statistician in the Center for Statistical Sciences, Department of Community Health, Brown University.*

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## Response from Drs. Jerome Larkin and Jennifer Mitty:

Ms. DeLong raises a number of issues warranting reply. We agree that characterizing *B. burgdorferi* as the “the less devastating relative of syphilis” is an oversimplification. Degrees of genetic relatedness, while fascinating, only rarely imply similarities in virulence or pathogenicity. The most that science can say about *T. pallidum* and *B. burgdorferi* is that they are both spirochetes, of which there are literally hundreds of varieties, including many which are part of the normal flora of the human mouth.

It is not surprising that she is unable to find evidence in the literature for the eradication of infection with *B. burgdorferi*: it doesn't exist. There is no technology, assay or culture method to demonstrate such eradication. Most testing in the realm of infectious diseases is specific; it is rarely sensitive. It is indeed a tricky business to disprove (as opposed to convincingly demonstrate the presence of) infection and is not the standard we apply to the vast majority of infections in clinical medicine. A common error in practice is to follow “titers,” meaning the ELISA or Western Blot, in a given patient with Lyme Disease, presuming persistence of antibody levels or bands on the Western Blot to indicate persistent, active infection. No data support such a presumption. While antibody levels may decline over the course of years to decades, positive tests should be

expected in the short-term (< 5 years) at a minimum, including in the face of adequate treatment.

Stricker's opinion piece from *Clinical Infectious Disease* is primarily just that: opinion. This is true also of the rejoinder by Auerwater in the same issue (*Clin Infect Dis* 2007; 45: 143-8). Stricker's references consist primarily of animal studies, case reports and molecular biology. While the last may be the basis for furthering our understanding of Lyme Disease, none of the studies cited constitute a sound basis for the leaps he makes. First, do no harm. In the absence of a randomized controlled study demonstrating a benefit and given the trials of prolonged antibiotic therapy which show no difference compared to placebo, we cannot in good conscience recommend prolonged antibiotic therapy for an unproven entity. Our moral and ethical duty is not only to “acknowledge uncertainty,” but also to practice based on the best available medical evidence.

Ultimately, all patients make their own decisions. Physicians can only help guide them. If someone wants an antibiotic, they can probably find a medical professional willing to prescribe it. This is as true of Lyme Disease as it is of the common cold, but we all know that chicken soup would do just as well and in all likelihood is in fact better.