Timing is Everything

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"The only reason for time is so that everything doesn't happen at once!"

—Albert Einstein

As I prepare to write this column in each issue of the Journal, I cannot avoid noticing that the articles sometimes have a common theme. In this issue, that theme is *Timing*. The articles either directly discuss the importance of being in the right place at the right time (see "Communication"); point out the consequences of being in the wrong place at the wrong time (see "Concussion" and "Traumatic Brain Injury"); explain the way that the nature of a contagious disease influences the timing of preventive measures (see "Influenza Viruses"); discuss changes in the understanding of a disease as time passes (see "Chronic Kidney Disease"); or review the importance of a historical perspective in understanding how treatment methods evolve (see "Cleft Palate").

But beyond this interesting common thread, there is the more notable fact that the timing of publication of some of these articles makes it seem as if they have been (pardon the cliché) "ripped from today's headlines."

The relevance of the article by Dr. Paul Kettl ("Psychiatric Sequelae of Traumatic Brain Injury") is highlighted by the recent tragedy in which a U.S. soldier shot five fellow soldiers at a military stress center in Baghdad where, according to the May 12, 2009 Associated Press report, he was undergoing "mental tests." Even without brain injury, the mental stress of repeated tours of duty in a combat zone like Iraq has been shown to put many soldiers under severe mental strain.[1] That soldier was clearly pushed over the edge without any physical injuries.

The article by Dr. Joseph Kontra on how new influenza A viruses emerge comes at a time when our public health officials are wrestling with the question of whether to ramp up production of a vaccine for a virus that, so far, is proving less virulent and less deadly than our first, worst fears. By the time we are in print, that decision will likely have been made, but we have updated the article at the last possible moment with statistics on the incidence and spread of the Swine-origin flu.

If hundreds of millions of doses of vaccine do indeed become indicated world wide, the need will undoubtedly exceed production capacity, and cause maldistribution of the available doses as rich nations scramble to secure all they want, while poor nations go begging.

The article by Christopher O'Connor, Esq. of our Legal Department, on the rights of a minor to refuse medical treatment, is a fascinating sequel to his article with Dr. Kevin Lorah in the last issue on the rights of parents to refuse treatment for their children.[2] His current article is made especially timely by the May 15 Associated Press report that a 13 year old Minnesota boy and his parents are refusing chemotherapy for his Hodgkin's lymphoma.[3] The presiding judge has ruled the child has been "medically neglected" by his parents and is in need of child protection services. The judge has asked for an oncologist's opinion. If the disease has not advanced too far to benefit from treatment, the court will mandate all indicated therapy.

The child's parents have been supporting what they say is their son's decision to treat the disease with nutritional supplements and other alternative treatments favored by the Nemenhah Band, an obscure religious group that believes in natural healing methods advocated by some Native Americans. His mother testified that he is a medicine man and elder in the Nemenhah Band, but according to court filings, the boy has a learning disability and can't read, which makes his mother's assertion suspiciously disingenuous. Similarly, the family's attorney said Daniel made the decision himself to refuse chemotherapy, but the court ruled that he did not have an understanding of what it meant to be a medicine man or an elder. O'Connor's article was accepted before this news broke, but it explains the law in such cases.

On a brighter note, I am relieved to say that, as of this writing, the article on the importance of communication in a mass casualty has not been highlighted by any recent tragedy. Still, we don't have to look back very far to remember the airplane landing in the Hudson River. All lives were saved because there was an immediate response that evacuated everyone just before the airplane settled beneath the surface. That's what it means when first responders get to the right place at the right time!

One reason they were able to do so is that as a result of the catastrophe of 9/11, the emergency response system in New York was reviewed and the most glaring inadequacies were improved. As NBC News reported (Sep. 7, 2004), a review of the tragic events of 9/11 revealed that "throughout the doomed towers that day, incompatible radios and overcrowded frequencies plagued New York's rescue crews. Firefighters, police, and emergency workers could not talk to each other." The article in this Journal on communications points out how the tragedy on the Norman Wood Bridge over the Susquehanna stimulated a reassessment of the communication system for emergency services in our region.

Finally, Dr. Alan Peterson's article on management of Type II diabetes comes on the heels of a position statement in the January 2009 issue of Diabetes Care published jointly by The American Diabetes Association, The American Heart Association, and The American College of Cardiology. As more and more drugs with more and more complications become available for Type II diabetes, Dr. Peterson's article is an invaluable aid to understanding how to manage it.

Dr. Peterson's article in last December's Journal on the hazards of fructose was also well timed.[4] A recent article in The Journal of Clinical Investigation reported the results of a study in which obese subjects consumed glucose- or fructose-sweetened beverages that provided 25% of their energy requirements for 10 weeks.[5] Although both groups exhibited similar weight gain during the intervention, visceral adipose volume was significantly increased only in subjects consuming fructose. Fasting plasma triglyceride concentrations increased by approximately 10% during 10 weeks of glucose consumption but not after fructose consumption. In contrast, hepatic de novo lipogenesis (DNL) and average 23-hour postprandial triglycerides were increased during fructose consumption. Similarly, markers of altered lipid metabolism and lipoprotein remodeling, including fasting apoB, LDL, small dense LDL, oxidized LDL, and postprandial concentrations of remnant-like particle triglyceride and cholesterol significantly increased during fructose but not glucose consumption. In addition, fasting plasma glucose and insulin levels increased and insulin sensitivity decreased only in subjects consuming fructose. Briefly put, dietary fructose increased DNL, promoted dyslipidemia, decreased insulin sensitivity, and increased visceral adiposity in overweight/obese adults.

Of course, as one of the authors was careful to point out when interviewed, the findings "do not imply that anyone should avoid fruit, which contains only small amounts of fructose and has other important nutritional benefits."

After this introduction, I won't take any more of your *Time*, but leave it to you to find all the other interesting content in this issue of the Journal.

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Reports of research involving human subjects must include a statement that the subjects gave Informed Consent to participate in the study, and that the study has been approved by the institutional review board (IRB). Patient confidentiality must be protected according to the U.S. Health Insurance Portability and Accountability Act (HIPAA).

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