To Keep the Well, Well

Arthur T. Johnson

Published in the BMES Bulletin vol 32(3) 2008

It was my opportunity and privilege to spend the year on sabbatical leave at the Shock-Trauma Center in Baltimore. I was able to witness first-hand the cases of severe injury that came in each day, the intensity of activity, and the tragedy of lives forever changed by events that may have taken milliseconds to unfold.

I attended morning rounds and listened as arguments ensued about the best ways to treat each patient. The surgeon would say that he thought a certain activity was best for the patient; the radiologist would point to his x-ray photos and point out why something different needed to be done; the chief nurse would offer something completely different from what the other two had said. Indeed, there may have been twenty people in that room, and at least half of them had their own opinion for treatments that they advocated.

In those days, trauma medicine was still young, and many of the injuries that came to the center had not been seen before. So, it was natural that there should have been so many different ideas for treatment. Yet, what I found most interesting was the egalitarian nature of the discussions. There seemed to be no rank in the room, no social hierarchy. All who had opinions could express them freely, and the final course of treatment was worked out among those with interest in the case. I was never fully aware of the social mechanics of the way treatment decisions came about, but there was closure every day, and each case would be discussed anew on the next day, then with newer information available.

I learned a few good lessons during that year. Above all, I learned that my interest was not to spend my effort among the infirm. I knew then that I did not want to patch up the injured or restore the sick. Instead, I wanted to concentrate on maintaining the health of the healthy, to keep people safe and out of hospitals. I had much more interest in the marvelous physiology of the healthy human body than in the workings of the injured, the sick, or the impaired. And, so, I rededicated myself to my work with protective clothing (and respiratory protective masks in particular) and to the development of the Airflow Perturbation Device to measure respiratory resistance noninvasively. Both have gone well since, and I am proud of any small contribution I have made to keeping people safe and healthy in their daily lives.

Since then I have talked to a number of other people who have the same feeling. Yes, many budding biomedical engineers want to work with the ill, either directly or indirectly, but there are those who would rather prevent injury and forestall illness. I applaud these men and women, because they seem to realize that protecting the many, normal people out there is just as important, nay more important, than healing the sick. The glory may accrue to the one who develops the perfect prosthesis, or who can tissue-engineer a new heart, or who can find a cure for AIDS, but the really noble activity is associated with those who can keep those conditions from happening in the first place. A respirator mask may seem mundane, and may not be very glamorous, but it has prevented debilitating disease that accumulates with time working in dangerous conditions. My hat is off to all who have made life safer for the vast majority of us, most who will never have to find themselves as patients in a shock-trauma center like the one in Baltimore, most who can look forward to safe, productive, and fulfilling lives.