Presidential Address
Are We There Yet?

Dean S. Louis, MD, Ann Arbor, MI

"Are we there yet? is, in fact, a question that has in many ways plagued me over the past 3 years. It is a question that implies that the American Society for Surgery of the Hand (ASSH) has a goal or goals and begs a response as to whether these goals have been reached. I will attempt to answer the question as I understand it from a historic perspective.

Regarding goals, Section 2 of the bylaws of the ASSH contains 5 parts related to our goals or purpose. They can best be summarized as knowledge, leadership, research, excellence, and education. The last of these is why we are here—to exchange information—that is, to educate ourselves for the benefit of the patients we serve.

Education has been the major internal continuing thrust of the ASSH. The trends in specific areas can be traced by reviewing past programs and the history of this society, as compiled by Bill Newmeyer.[1] David Green's contribution to that excellent work details peaks of interest in many areas at these annual meetings—for example, flexor tendon injuries during the 1970s, nerve injuries and microsurgery during the late 1980s, and nerve-compression problems during the 1990s. Most of these presentations at the annual meeting related to progress in technical matters and treatments directed at very specific diagnoses.

While we were tending to these technical aspects of our specialty, another phenomenon was occurring that has profoundly influenced us. More than that, it has influenced the government, patients, and both labor and management—in fact, our larger society as a whole. The phenomenon was, of course, the proliferation of ergonomic experts in response to government initiatives. With the establishment of the Occupational Safety and Health Administration (OSHA) in 1970, however, the way was prepared for the promulgation of regulations that were to protect workers from workplace hazards. Through the use of OSHA 200 logs, statistics have been generated that have served to categorize recordable injuries and illnesses. Such classification includes specific trauma, such as a cut, a sprain, or a fingertip amputation. Other categories include skin diseases, respiratory diseases caused by exposures in the workplace, and a host of other conditions that we can all imagine and reasonably conclude have a cause-and-effect relationship. The contentious part of this OSHA 200 form is column 7, line F, headed "Disorders Associated With Repeated Trauma." This has been literally translated to encompass a manifestly false and unproven concept—that trauma (activity) is cumulative and that there is a point at which it leads to a disease.

The proposition that high force and high repetition can predispose a worker to develop a disease state seems plausible.[2] Sure propositions are known as *factoids*—statements that sound so reasonable that they must be true. Maybe there is something to this particular proposition, but it has not been quantified in a way that the hypothesis can be tested. There is no established dose–response curve.

We have all been there, have we not? Take up a new sport or engage in an unaccustomed activity, and symptoms will develop. Fortunately, this is self-generated, self-paced noncompensable activity, constituting the well-known phenomenon of delayed-onset muscle soreness, or DOMS.[3] Is this a disease?

From the Taubman Health Care Center, Ann Arbor, MI.

Presented at the 52nd annual meeting of the American Society for Surgery of the Hand, Denver, CO.

Received for publication December 10, 1997; accepted in revised form December 16, 1997.

Reprint requests: Dean S. Louis, MD, 2912 Taubman Health Care Center, 1500 East Medical Center Dr, Ann Arbor, MI 48109.

0363-5023/98/23A02-0001$3.00/0

No. It is a physiologic response to unaccustomed activity; with time and conditioning, it goes away. There is abundant evidence in the physiology literature[4,5] indicating that with increased exposure to a task that causes symptoms, the time of onset of symptoms may be prolonged, to the point where the symptoms do not occur at all. This is conditioning. As we grow older, our tolerance for a variety of activities diminishes. This may be the result of a variety of degenerative processes, such as vascular disease with resulting diminished blood flow.[6,7]

There is only so much that one can do in a lifetime, and most of the hours available to each of us are spent away from work. If we look at work alone as the causative factor in the production of symptoms, we will inevitably impugn work. What sort of reasonable thought process allows anyone to deny attribution to nonoccupational activities? Yet it is done. It does not make sense, unless one is trying to implicate the workplace. If you are going to sell accumulation as a concept, variations in anatomy, lifestyle, alcohol, tobacco, obesity, and fitness are factors that affect our responses to physical challenges, occupational or otherwise, and those variations must also be considered.

OSHA is now embarking on a campaign to introduce additional regulations, newer reporting forms (the OSHA 300 series of logs) with more stringent requirements and penalties. Unfortunately, a bill introduced to Congress by Representative Henry Bonilla of Texas, which suggested a review as to the scientific merit of existing literature by the National Academy of Science, has been altered concerning that proposition. The proposed 1-year moratorium on new OSHA regulations may be voted on in the House of Representatives, during the current session. Coincidentally, on August 12, 1997, OSHA announced the first of 10 workshops to be given around the United States on—you guessed it—repetitive stress injury. OSHA is not alone in its proliferation of misinformation about this unproved concept. Multiple conferences are offered annually promoting ergonomic agendas. OSHA has totally ignored the earlier experience in Great Britain and Australia.[8]

In January 1996, Richard Blum and Howard Sandler, 2 experienced and respected occupational physicians, prepared a report that evaluated the OSHA literature review supporting a proposed ergonomic rule. They faulted OSHA's approach as being highly selective, quoting only studies that supported OSHA's view of a causal relationship. "OSHA's approach to causal association in the draft document does not present the scientific certainty engendered by critical analysis of the medical literature."[9]

How does this affect us? If your practice is new, you may not be aware of the changes that have occurred and why some of us who are older have inevitably and unfortunately become disheartened. Taking care of patients is enjoyable. The absolute satisfaction that results from the proper application of our knowledge and skills to a particular patient's problem is a unique experience. For the surgeon, after the gloves and gown are taken off and you know that you have positively influenced another person's life—there is no feeling like that. That is our theater, a place where we are all comfortable and a place where we have chosen to invest our humanity. Unfortunately, our interactions with patients have changed. In my own professional life these changes have been dramatic.

A Digression

A period of 30 years separates me from my internship at the Maine Medical Center. Upon reflection, what impressed me most about that experience was that the patients were sick—I mean, "knee-walking sick." They did not want to see a doctor, but they had to because they were truly ill. There were no hidden agendas. There was an unspoken contract. If the doctor could make the diagnosis and render effective treatment, the contract was fulfilled and all parties were satisfied. That most basic relationship—one of trust—has been largely altered. Unfortunately, these changes have been the result of the actions of individuals who lack not only a background in clinical medicine but also an appreciation of the effect of their actions.

Some ergonomists and epidemiologists have produced a spurious literature that does not survive medical scrutiny. The gulf between their loose surveillance criteria and what we would accept for medical diagnosis is wide. In many public forums over the past several years, where these differences have been pointed out by members of the ASSH, as well as by members of the American Association for Hand Surgery (AAHS), the responses have been heated, personal, and defensive. Some employees of OSHA and the National Institute for Occupational Safety and Health (NIOSH) have been involved in these forums and have likewise been offensively defensive. This is sad. There is a new reality. Instead of a search for truth(s) about the relationship of personal activity to a worker's symptoms, there is

rigorous defense of previously unchallenged positions. In this regard, Dr. Morton Kasdan and Dr. Michael Vender should receive the thanks of this society for their persistence, as chairs of the Industrial Injuries and Prevention Committee. They have become quite unpopular in certain circles for their steadfast skepticism in the search for truth. That committee was responsible for 2 editorials published in *The Journal of Hand Surgery* in 1995[10] and 1996[11] that summarized the committee's and the council's posture regarding these matters. The thrust of these editorials was that further regulations should not be forthcoming until the literature is scrutinized for scientific merit. This antedated the Bonilla bill. Furthermore, there was a plea to use appropriate and specific language. Such terms as *cumulative trauma disorder* and *repetitive strain injury* are meaningless, as they imply conditions of trauma that are unproven and they infer causality. The diagnoses of tendinitis and epicondylitis in fact require tissue before these terms can be properly applied. Unfortunately, some of us have used these pejorative terms or continue to use them loosely.

The language we use has great specificity. It is with caution and restraint that these words should be used, as they may have an unintended impact. To tell a patient that he or she has a cumulative trauma disorder is a giant disservice. Put yourself in the place of an assembly-line worker with some aches and pains. After seeing the hand surgeon, you are now afflicted with a cumulative trauma disorder. Your first question might be "How long do I have to live?" or "Will I be crippled?" What the patient wanted to know was whether his or her problem was serious. Now the patient believes it is. He or she had not heard the term *cumulative trauma disorder* before but now has been so labeled. Remember, these labels have sticky backs. They are easy to apply and hard to remove. I believe that we must use language appropriately, for it is the people we are supposed to be helping who are hurt by inappropriate labels. Unfortunately, it is unpopular *not* to render a specific diagnosis,[12] so we have seen the proliferation of further scary terms applied to a variety of vague musculoskeletal symptoms, including multiple chemical sensitivity, fibromyalgia,[13] and chronic fatigue syndromes[14]—terms applied by the nondiscriminating to the dysfunctional. It is great for business. It never goes away and you can always treat it!

"Are we there yet?" No.

The train of doctor–patient interaction is running in reverse. Thanks to massive coverage in the lay press, patients come in with a self-diagnosis and want the operation *du jour*. Fix me so I can go back and abuse myself. Forget the objective findings. Forget nonsurgical management. Just do it.

Practicing medicine and surgery today, therefore, is a great moral challenge. Doing what you consider to be right for the patient may not be fiscally prudent. If you are part of a health maintenance organization (HMO), you may be pressured to say that a patient's problem is work related, thereby shifting the cost to a workers' compensation carrier. If you protest and continue to state that the patient's symptoms are not work related, you will see fewer patients, and the HMO may drop you. You shift from being a noncompliant provider to being a noncompliant nonprovider—an odious double negative. Richard Butler at the University of Minnesota[15] has documented this cost shifting with the advent of managed care. We are being asked to determine the cause of a patient's symptoms. This is a problem. Some patients may deny nonoccupational activities because they want you to say it is work related. Some patients may have an agenda aside from wellness. It may be necessary for the physician to be suspicious, from the outset, a sad modern departure for the healing profession, where trust is on alert, rather than unconditional. Those of you who have reviewed surveillance videotapes know what I mean.

Twelve years ago, when Norton Hadler gave the Founder's Lecture, he suggested that these problems in the workplace would not go away. How right he was.

We are flooded by literature regarding ergonomics, epidemiology, human factors, and occupational medicine. It is difficult to keep up with all of it and to continue in the active practice of hand surgery. It is important to note that there is no great volume of literature detailing the worker's responsibility to the employer.

Those who are writing to promote the concept of work-relatedness have become very creative, misquoting previous publications and even misquoting obscure references that most readers could not hope to check. The corollary to this misdeed is leaving out pertinent references with which the author disagrees.

Another new development—the growth of an aggressive surgical mentality—is extremely disheartening. I am not sure of where this mentality comes from. I suspect that it is partly a consequence of observed behavior in our training programs. I have seen it most prominently in the area of compressive neuropathies, where several levels of nerve decom-

pression will occur at the same surgery. Rarely are such procedures indicated. When one sees several patients scheduled for these operations on the same day, it is time to call an epidemiologist. It must be in the water. Despite the publication of the Global Fee Schedule for Hand Surgery, this activity continues to exist, as does unbundling. Jim Strickland[16] and Julio Taleisnik[17] talked extensively about this during their presidential addresses. I am absolutely amazed that insurance companies have not policed this matter. In time they will, and I think probably with a vengeance, denying abusers access to patients. The federal government has already moved forward in this regard, with a retroactive zeal.

In an attempt to promote understanding, the American Academy of Orthopaedic Surgeons (AAOS) convened a task force for a day and a half in Ann Arbor, Michigan, on May 30–31, 1997.[18] Representatives of various interested groups were present, including labor, management, hand surgeons (6 members of the ASSH), neurologists (1 member of the ASSH), occupational medicine physicians, attorneys, representatives of several industries, 1 representative of NIOSH, and my presidential speaker, Dr. Arthur Barsky, a psychiatrist. Interestingly, several major players in this area agreed to participate but then backed out. They did not like either the agenda or the other participants. The reason quoted by 1 of them was representative: "A substantial fraction of the conference participants listed would appear to have no scientific credentials and an even smaller fraction, in my opinion, have not engaged in any pertinent useful research." So much for science, open discussion, and the inquiring mind. The conference was a unique experience and an effective first step. In a very exciting way, people with different agendas put them aside and began to understand how and why others present were affected by the complexity of each other's area of endeavor.

What the prime movers of ergonomic agendas do not understand is that they are creating attitudes in patients that are making it very difficult for us to resolve patients' complaints and conflicts successfully. They have created a condition that I call "ergonitis," which by definition is a non–work-related condition that will not go away and has no basis in science, and yet affects patients' belief and behavior. Reading a headline is a far cry from understanding the basis for it. A spate of lay publications continue to promote the concepts of work-relatedness. There is some noxious newsprint out there.

Now, the most positive remark that I have made so far is: Good morning. To stop here without suggestions for improvement would be cowardly. We need to find solutions to this major problem. We need the cooperation of all the groups that have been mentioned: the government, labor, management, ergonomists, and epidemiologists.

1. The information gathered by the Bureau of Labor Statistics is highly suspect. It probably overreports, and inaccurately reports, many conditions. Remember, those OSHA 200 logs are not necessarily filled out by a truly knowledgeable person. Symptoms alone may put you in column 7, line F. Yet, the government is basing policy on this misinformation, which may be nothing more than nondiagnosed, misclassified self-reported symptoms—not an actual disease. Until the government clarifies its reporting, we will be forced to deal with this state of ignorance by exposing it for what it is—a compilation of meaningless numbers. Accurate reporting is a first and fundamental step toward resolving some of these issues.
2. The ASSH, the AAHS, the AAOS, and others need to continue to promote a dialogue with all parties concerned. I believe that is our responsibility to our patients. More consensus task forces hold promise. It is hoped that this approach will lead to mutually agreed-on protocols that will result in prospective cooperative studies of which we will all be proud. The ASSH needs to continue its leadership role in this arena.
3. As surgeons, we need to promote more conservative management programs. In truth, we do not have any absolute guidelines for nonsurgical management. All too often, surgery is the first suggestion offered after a nerve-conduction study has produced abnormal results. There is something intrinsically wrong with this progression. Sadly, we have seen patients who have undergone surgery without appropriate testing, as well as some who have endured multiple operations for the same condition, without improvement. There are few conditions that surgery cannot make worse. Many symptoms will abate with time and rest, without having been specifically diagnosed.
4. We should counsel patients who have been misinformed about the relationship of their work to symptoms. This is the proper duty for the physician/surgeon.
5. The idea of 24-hour insurance coverage has some merit. In such a system, any condition is covered without question, work related or not. This approach would effectively diminish the negative effect of the legal profession on patients' attitudes. This needs to be pursued further.
6. There are many other possibilities. Make your own list and add them to this list.

In closing, when I was elected to membership in the ASSH in 1975, there were 346 members. We now number 1,551. During those 22 years, membership has increased almost 5 times, yet the membership requirements are stricter than those of any organization of which I am aware. Membership in the ASSH is truly a prize. Approximately 50% of the membership, however, have been members for less than 8 years. The blending of the generations offers a unique opportunity for us to continue our education about one another, and about hand surgery. This annual meeting has been made less formal in order to encourage more social interactions in a less intimidating fashion. We have similar interests and commitments. By sharing, we learn and make life better for our patients.

It has been my good fortune to have selected medicine and hand surgery as a career. The stimulus of Dr. William S. Smith at the University of Michigan, and the patience of Dr. Robert E. Carroll in New York, helped nurture my career in academic medicine.

For the entirety of my professional life, I have been surrounded by some of the finest and smartest women and men that one could hope for—the orthopedic residents at the University of Michigan. We have learned many lessons together. Those residents will all tell you that my wife, Gwen, who has been my secretary and support for many years, deserves the credit for my success. They are right. This has been a critical year for the ASSH. To serve as your president during this time of uneven transition has been the greatest honor of my professional life. Thank you. The friendships and communion have been far more important to me than the title.

References

1. Newmeyer WL. The American Society for Surgery of the Hand. The first fifty years. New York: Churchill Livingstone, 1995:67–74.
2. Armstrong RB. Mechanisms of exercise induced delayed onset muscular soreness: a brief review. Med Sci Sports Exerc 1984;16:529–538.
3. Silverstein BA. The prevalence of upper extremity cumulative trauma disorders in industry. Doctoral thesis. University of Michigan, 1985:ii–198.
4. Sinoway LI, Shenberger J, Wilson J, McLoughlin D, Musch T, Zelis R. A 30-day forearm work protocol increases maximal forearm blood flow. J Appl Physiol 1987; 62:1063–1067.
5. Somers VK, Leo KC, Shields R, Clay M, Mark AL. Forearm endurance training attenuates sympathetic nerve response to isometric handgrip in normal humans. J Appl Physiol 1992;72:1039–1043.
6. Sax FL, Cannon RO III, Hanson C, Epstein SF. Impaired forearm vasodilator reserve in patients with microvascular angina: evidence of a generalized disorder of vascular function? N Engl J Med 1987;317:1366–1370.
7. Longhurst J, Gifford W, Zelis R. Impaired forearm oxygen consumption during static exercise in patients with congestive heart failure. Circulation 1976;54:477–480.
8. Ireland DCR. The Australian experience with cumulative trauma disorders. In: Millender LH, Louis DS, Simmons BP (eds.). Occupational disorders of the upper extremity. New York: Churchill Livingstone, 1992:79–88.
9. Blume RS, Sandler HM. Final report: evaluation of the OSHA approach and cited literature critique draft proposed ergonomics protection standard. Health Effects Document, Causal Association Section. Sandler Occupational Medicine Associates, January 1996.
10. Lister GD. Editorial: ergonomic disorders. J Hand Surg 1995;20A:353.
11. Weiland AJ. Repetitive strain injuries and cumulative trauma disorders (editorial). J Hand Surg 1996;21A:337.
12. Barsky AJ, Borus JF. Somatization and medicalization in the era of managed care. JAMA 1995;274:1931–1934.
13. Winfield JB. Fibromyalgia: what's next? Arthritis Care Res 1997;10:219–221.
14. O'Connor RP, Dorsch JL. Chronic fatigue syndrome. JAMA 1997;278:522–523.
15. Butler RJ, Hartwig RP, Gardner H. HMOs, moral hazard and cost shifting in workers' compensation. J Health Econ 1997;16:191–206.
16. Strickland JW. To my fellows. J Hand Surg 1992;17A:1–7.
17. Taleisnik J. Sleeping with the enemy. J Hand Surg 1995; 20A:527–533.
18. Report on the Workshop on Musculoskeletal Symptoms in the Workplace, May 1997. American Academy of Orthopaedic Surgeons: Rosemont, IL: AAOS, October 1997.