



David A. Wong, MD, FRSC(C)  
NASS President  
Co-chair, Patient Safety Task Force  
Denver Orthopedic Clinic  
Denver, CO

Stanley A. Herring, MD  
NASS Past President  
Co-chair, Patient Safety Task Force  
Puget Sound Sports & Spine Physicians  
Seattle, WA

As in other industries with established safety systems (most notably aviation), the goal of nonpunitive, confidential reporting is to identify errors, including near misses, for the purpose of correction and prevention—not punishment or liability.

## SPECIAL FEATURE

# Protecting Patients and Preventing Medical Errors

## A Progress Report on NASS' Patient Safety Initiative

**N**ASS has taken an active role in promoting patient safety for the past three years. The following is a synopsis of NASS' involvement and what we continue to do to help members improve patient safety and prevent medical errors.

### Background

In 1998, the Institute of Medicine (IOM) formed the Quality of Healthcare in America Committee to plan improvements in health care quality over the next 10 years. One facet of that improvement effort was reduction of medical errors and increased attention to patient safety.<sup>1</sup> The IOM's first report on patient safety, *To Err Is Human* (2000), cited large numbers of medical errors that allegedly occur each year in the US health system. Although experts disagreed on the number of medical errors that occur each year, everyone agreed that patient safety was an important issue that deserved attention.<sup>2</sup> In response, three years ago NASS created a committee, the Patient Safety Task Force, dedicated to patient safety and made a commitment to quality patient care through the promotion of patient safety and the prevention of medical errors.

### The Team

The Patient Safety Task Force is made up of the following NASS members:

David A. Wong, MD, MSc, FRCS(C),  
Co-chair  
Stanley A. Herring, MD, Co-chair  
Tom G. Mayer, MD  
William C. Watters, III, MD  
William A. Sims, MD  
Jeffrey M. Spivak, MD  
Robert C. Cantu, MD, FACS  
Stuart M. Weinstein, MD  
Robert F. Heary, MD

### Where We've Been and Where We're Headed

**NASS' Position on Medical Error Reporting.** NASS believes that nonpunitive, confidential reporting is an important preventive measure. As in other industries with established safety systems (most notably aviation), the goal of nonpunitive, confidential reporting is to identify errors, including near misses, for the purpose of correction and prevention—not punishment or liability.

**Annual Meeting Education.** NASS kicked off the patient safety campaign at the 2001 Annual Meeting with a symposium, an educational booth and introduction of a new tool. This year in San Diego, our patient safety highlight will be presidential guest speaker, John J. Nance, an internationally recognized air safety analyst and advocate. Nance is best known to North American television audiences as the aviation analyst for the ABC television network and the aviation editor for *Good Morning America*. He is well known for his involvement in Air Force human factors flight safety education and as an advocate for crew resource management and expanded human performance training. A decorated Air Force pilot veteran of Vietnam and Operations Desert Storm/Desert Shield, he is also a Lieutenant Colonel in the USAF Reserve. Nance has piloted many aircraft, including Boeing 727s, 737s, 747s and Air Force C-141s. He is the nationally known author of 15 major books. He is also a founding board member and is on the executive committee of the National Patient Safety Foundation.

Nance will talk about working at "the sharp end" of a complex human system—in professions such as health care and aviation—where the penalty for failure is very great

in both human and monetary terms. He will discuss changing an entire culture: breaking down the barriers that block communication among professionals, getting rid of the culture of blame and instilling true teamwork in every corner of the organization. He will share galvanizing stories set in cockpits. The similarities in human dynamics, however, will provide lessons that can be transferred intact from aviation to health care.

**Wrong-Site Surgery Prevention.** While the incidence of wrong-site surgery is not high, the consequences to the patient and surgeon can be severe and are easily prevented. The most common error in spine surgery occurs when a procedure is done one level above the intended site.<sup>2</sup>

NASS has been actively working to help its members prevent wrong-site spine surgery. The first step was to develop the *Sign, Mark & X-ray (SMaX)* wrong-site surgery prevention program consisting of a checklist for safety and a patient diagnosis diagram. The checklist outlines a series of steps and double-checks to avoid wrong-site spine surgery. The patient diagnosis diagram (useful to surgeons and nonsurgeons alike) provides a diagram for the physician to outline the site(s) of pathology to the patient during office discussions. The diagram also includes space to specify the differential diagnosis and plan of treatment (including the side and levels of any proposed surgery). The patient can share this summary of the office visit with other health care providers such as physical therapists. When taken to surgery, the handout serves as an additional check of side and level to avoid wrong-site surgery.<sup>2</sup> This program was distributed to every NASS member, made available in its entirety on the NASS patient safety Web page and the patient diagnosis diagram is featured on the public side of the Web site for patient use as well.

NASS also joined the American Academy of Orthopaedic Surgeons (AAOS) in discussions with the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) to try to get both societies' prevention programs established as acceptable

**NASS has been actively working to help its members prevent wrong-site spine surgery. The first step was to develop the *Sign, Mark & X-ray (SMaX)* wrong-site surgery prevention program consisting of a checklist for safety and a patient diagnosis diagram.**

systems in the scoring of the JCAHO patient safety goals. In fact, JCAHO liked NASS' checklist for safety so much that the AAOS was encouraged to adopt it for their *Sign Your Site* program as well. Although these efforts failed when JCAHO opted to develop its own universal protocol, both groups were invited to the table to participate in the development of JCAHO's protocol. NASS submitted comments to JCAHO on how spine procedures should be treated relative to its patient safety goals on prevention of wrong-site surgery and commented on the first, restricted draft of the protocol. NASS' comments specific to spine and JCAHO accreditation procedures for wrong-site prevention included the following:

- Marking of anterior procedures is problematic. Many people don't know where to mark (chest versus back) for a midline procedure. JCAHO may want to be clear that in spine cases, anterior surgeries are marked at the site of incision.
- NASS recommends an intraoperative X-ray during surgery after exposure using markers that do not move to confirm the vertebral level to be operated. Whenever possible or practical, a radiologist should confirm the level.
- Marking the skin in spine cases in which an intraoperative X-ray after exposure is used may be redundant. If patient identity is the issue in this case, it needs to be clarified because, to some spine surgeons, it doesn't make sense to do both.

NASS continues to work with JCAHO in developing their universal protocol and will be revising the *SMaX* program in response to any new requirements.

**Patient Education.** NASS has developed two full-color, easy-to-understand bro-

chures specifically geared toward patient safety.

- *Patient Safety: Tips to Help You Safeguard Your Health* provides patients with general information on medical error prevention and what they can do to protect themselves.
- *Nonsteroidal Anti-Inflammatory Drugs (NSAIDs): What Are They? How to Use Them Safely* details common uses and the how-tos of NSAIDs as well as precautions and side effects.

**Research.** Two patient safety topics have been added to NASS' topics for priority research funding:

- determine what types of medical errors are most common to spine care and their origin (system versus human error); and
- study compliance rates and effectiveness of patient safety programs relevant to the care of the spine.

**Patient Safety Web Page.** The NASS Web site patient safety page ([www.spine.org/patientsafety.cfm](http://www.spine.org/patientsafety.cfm)) contains NASS' position on medical error reporting and various NASS patient safety resources including past *SpineLine* articles, the *Sign, Mark & X-ray* program, patient education information and spine safety alerts. Other patient safety links are also available with articles, reports and tools.

**Spine Safety Alerts.** NASS monitors a variety of government and other resources for patient safety related notices that may be useful to spine care practitioners. Information is distributed via e-mail and then posted on the NASS Web site at [www.spine.org/spine\\_safety\\_notices.cfm](http://www.spine.org/spine_safety_notices.cfm). To date, NASS has sent out three alerts on the topics of Human Tissue Processed by Cryolife (8/02), Counterfeit PROCREDIT® (Epoetin alfa) (3/03) and JCAHO Modifies Scoring of Sur-



gical Site Marking (6/03).

**SpineLine Patient Safety Column.** Watch *SpineLine* for a dedicated patient safety column in each issue. Titles to date have included:

- *It's More Than Human Error—A Systems Approach to Patient Safety* (May/June 2002, pp 20-21)
- *Everyone Has A Responsibility for Patient Safety: The Patient's Role, The Provider's Role, The Institution's Role* (a three-part series: July/August, September/October & November/December 2002)
- *Natural Does Not Equal Safe: Spine Care Provider's Guide to Herbal Supplements* (January/February 2003, pp 16-20)
- *Specialty Coalitions: Another Route to Patient Safety* (March/April 2003, p 20)
- *SMAx: Early Data and Practical Applications* (March/April 2003, pp 18-20)
- *The Role of Human Error in Medical Errors* (July/August 2003, pp 27-29)

**Herbal Supplements: "Natural" Doesn't Always Mean Safe.** This three-part series provides guidelines for patients and providers on the safer use of herbal supplements. *Natural Does Not Equal Safe: Spine Care Provider's Guide to Herbal Supplements* provides health care professionals with information on herbal usage, regulation and ways to help patients avoid adverse events. Tables provide various herbs with their uses/effects, potential side effects and potential interactions with references. *Herbal Supplements: "Natural" Doesn't Always Mean Safe* provides patients with background on herbs, tips for safe use and potential adverse effects, how to report adverse events and how to search the Internet for credible information. *The Herbal Supplement Patient History Checklist* can be given to patients to complete as part of their standard medical history and added to the medical record. NASS is currently in the process of developing a companion document on nonherbal supplements such as vitamins, minerals, athletic supplements, amino acids and other substances.

**NASS monitors a variety of government and other resources for patient safety related notices that may be useful to spine care practitioners. Information is distributed via e-mail and then posted on the NASS Web site at [www.spine.org/spine\\_safety\\_notices.cfm](http://www.spine.org/spine_safety_notices.cfm)**

**Government.** NASS is a member of the Alliance of Specialty Medicine, a coalition of 12 medical specialty societies, representing 160,000 physicians' interests in the legislative arena. One of the Alliance's legislative priorities is promoting patient safety. Through the Alliance, NASS members have a seat at the table on the debate over patient safety measures and programs.

NASS has provided the Alliance with opinions on patient safety related items, commented to the National Quality Forum and submitted comments to the FDA. NASS will remain active in the government process relative to patient safety as much as possible as issues arise.

**Outreach and Collaboration.** A major focus for 2003 is building relationships with other societies interested in spine. Plans include building an advisory panel to the Patient Safety Task Force to include representation from various specialties and allied health professions. This panel will provide an advisory pool for input, dialogue and networking opportunities. NASS' participation in the American Academy of Orthopaedic Surgeons' Patient Safety Coalition will continue with meetings, shared materials and continuing JCAHO discussions regarding wrong-site surgery prevention programs.

Unlike NASS, many organizations are just now gearing up for patient safety programs. As part of our outreach program, we have developed a presentation with accompanying educational materials to share with other societies. The program consists of a *Patient Safety 101* CD-Rom and educational kits. *Patient Safety 101* is a PowerPoint presentation, accompanied by speaker's notes, references and handouts, for societies and others to use to teach the basic tenets of patient safety. *Patient Safety 101* Educational Kits contain handouts and references

from the CD-Rom, patient safety resources including a recommended reading list and Web site resource list, sample patient safety materials by NASS including patient education brochures, copies of all the *SpineLine* patient safety columns, the herbal supplement and wrong-site surgery prevention programs and copies of order forms for NASS patient safety materials. In addition, we will be promoting the outreach program and offering the following services directly to solicited societies:

- links on the NASS web site to other associations' patient safety resources from the NASS patient safety page
- quantity discounts on NASS patient safety materials
- assistance and collaboration on any patient safety project relevant to our members

We look forward to continuing to provide information to help you and your patients attain the safest possible care. If you have questions about patient safety, NASS' programs or suggestions about what NASS can do for the membership in the patient safety arena, please contact Pam Hayden, Director of Research at (815) 675-0021 or [hayden@spine.org](mailto:hayden@spine.org).

### Acknowledgment

Pamela M. Hayden also contributed to this article. Pamela is the Director of Research at the North American Spine Society.

### References

1. Kohn LT, Corrigan JM, Donaldson MS, eds. *To Err is Human: Building a Safer Health System*. Institute of Medicine, Washington, DC: National Academy Press; 1999:5.
2. North American Spine Society. *Prevention of Wrong-Site Surgery: Sign, Mark & X-ray (SMAx)*. LaGrange, IL; North American Spine Society; 2001.