Editorial

Patient Safety: Fulfilling Our Commitment

The need to focus on increasing patient safety is an issue of which we are all aware. The two major plastic surgery organizations, the American Society for Aesthetic Plastic Surgery (ASAPS) and the American Society of Plastic Surgeons (ASPS), have actively promoted patient safety in their respective publications, meetings, and public education. In fact, they have urged patients to seek out board-certified surgeons with appropriate residency training as a means of ensuring that they are in “safe hands.” However, in thinking about the topic of “patient safety,” I realized that I’m not entirely certain of what the term means. As trained aesthetic surgeons, we are aware of the need to always keep a sterile field, maintain hemostasis, and count instruments at the end of a procedure. We know how to manage fluid infusion so as not to overload our lipoplasty patients to the point of pulmonary edema or congestive heart failure. Moreover, as a group, we have steady hands and highly developed technical skills. All of these factors contribute to keeping our patients safe during surgery.

Yet is that all we mean by “patient safety?” It seems to me that patient safety has become more complex than this, largely as a result of better data that clearly point the way to enhancing patient care at every stage, from our initial screening of patients through the perioperative and postoperative periods.

For instance, in my own practice, all moderate- to high-risk patients now receive some form of deep-vein thrombosis prophylaxis, which may include anticoagulation therapy. In the past, I paid little conscious attention to the major risk factors for venous thromboembolism (VTE). When I looked into the issue more deeply, I was shocked to discover how many of my patients had risk factors—such as being over 40 years of age, using estrogen therapy (either birth control or hormone replacement), being obese, undergoing surgery lasting more than 1 hour, or being under general anesthesia. Any of these factors can make patients potential candidates for VTE and, I believe, candidates for prophylaxis.

My awareness of patient safety issues became increasingly acute during recent years, as my partners and I began doing more body-contouring procedures in patients with massive weight loss. The history and health status of these patients place them at higher risk for complications and pose a major challenge to the surgeon. When one factors in the duration of some body-contouring procedures, especially those performed in combination and in different body areas, the risks are even higher. Our response was the initiation of important changes in our surgical protocols for all our patients, not just those with massive weight loss.

I have discovered many valuable resources in the course of my research into patient safety. In 1999, the Institute of Medicine released its report, To Err Is Human: Building a Safer Health System,1 which laid bare the number and kinds of errors we all potentially face when undergoing medical care. This document led universities to begin developing degree curricula related to patient safety practices.

In response to this report, the Agency for Healthcare Research and Quality (AHRQ), a branch of the Department of Health and Human Services, issued a 650+ page document in 2001 entitled Making Health Care Safer: A Critical Analysis of Patient Safety Practices,2 which focused on medical practices that were found to reduce errors and adverse events. Surgical practices received major attention, and those most relevant to aesthetic surgeons are listed in the Table. This was followed in 2005 by a similarly hefty report entitled Advances in Patient Safety: From Research to Implementation,3 which described progress made in implementing programs to improve patient safety since 1999.

V. Leroy Young, MD, is Associate Editor of Aesthetic Surgery Journal.
Based on these findings, my partners and I have aggressively adopted protocols for using VTE prophylaxis, more appropriate antibiotic prophylaxis (taking into account the growing problem of antibiotic resistance), supplemental perioperative oxygen, and maintenance of perioperative normothermia. (The evidence supporting these practices will be described in an upcoming article in *Aesthetic Surgery Journal*.)

We perform most of our surgeries—and all major ones—in a hospital, usually on an outpatient basis. Unfortunately, some personnel involved in the perioperative process grouse about the extra work or number of orders that require attention. Not all of the anesthesiologists with whom we work are enthusiastic about using a FiO₂ of 80%, even though we have explained that evidence of the past few years indicates that higher levels of oxygen significantly reduce the incidence of surgical site infections and postoperative nausea.

Convincing surgical colleagues and other health care personnel to adopt the current state-of-the-art patient safety practices can be difficult. Where do we begin? According to the AHRQ study, the first step is to identify individuals who will champion the change. This is followed by frequent in-service training, reminder systems, and prominent well-designed checklists. Physician “benchmarking” is also crucial for letting people know how they are doing in comparison to others with respect to adopting safety practices. Clearly, this must be done in a private and nonthreatening way.

Behavior change can be greatly influenced by proven models used by large and small businesses and organizations, including hospitals. One example is the transtheoretical model, which identifies 5 stages of change⁴:

- **Precontemplation**: The individual does not believe there is any need for change and is resistant.
- **Contemplation**: The individual begins to increase his or her awareness and knowledge about the behavior and eventually recognizes a need for change.
- **Preparation**: The individual develops a commitment to change and starts to realize there are greater benefits than barriers to change.

---

### Table. Adapted AHRQ team ratings of patient safety practices most relevant to plastic surgery according to strength of scientific evidence and magnitude of potential benefit

<table>
<thead>
<tr>
<th>Greatest</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Lowest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate venous thromboembolism prophylaxis</td>
<td>Use of supplemental perioperative oxygen to decrease infections</td>
<td>Maintenance of perioperative normothermia</td>
<td>Intraoperative monitoring of vital signs/oxygenation</td>
<td>Use of pre-anesthesia checklists</td>
</tr>
<tr>
<td>Use of perioperative β-blockers in patients at risk for cardiac events</td>
<td>Use of silver alloy-coated urinary catheters to prevent UTI</td>
<td>Protocols for heparin titration</td>
<td>Barrier precautions (via gowns and gloves; dedicated equipment and personnel)</td>
<td>Counting sharps, instruments, and sponges</td>
</tr>
<tr>
<td>Asking that patients recall and restate what they have been told during the informed consent process</td>
<td></td>
<td>Perioperative glucose control</td>
<td></td>
<td>“Sign your site” protocols</td>
</tr>
<tr>
<td>Appropriate use of antibiotic wound prophylaxis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient self-management of warfarin to achieve appropriate outpatient anticoagulation and prevent complications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

4. transtheoretical model
Action: Behavior change begins, and others are likely to recognize the individual’s progress toward change.

Confirmation: Change is maintained more easily now, but setbacks may still occur until eventually, the changed behavior is automatic. The goal (new behavior) is reached.

Models like this one have been effectively applied within hospitals to change patient safety behaviors among staff. However, according to ASAPS, only 24% of aesthetic procedures were performed in-hospital in 2004. The rest were performed in office-based surgery facilities (46%) and free-standing surgicenters (29%). Enhanced patient safety practices should be easier to implement in smaller organizations than large ones. In either case, only one physician is needed to be the catalyst for change. If even a single surgeon seriously commits to the need for change in patient safety practices, others will follow if they are properly educated about the evidence behind the change, regularly reminded about the new practices, and recognized for progress made.

We are fortunate to have a wealth of information technology at our disposal that can help identify problems and suggest solutions. However, even more important than technological tools are our own observations of what needs to be improved and, ultimately, our own willingness to implement change.

References


