

Patient Safety in Office-Based Surgery Facilities: II. Patient Selection

Ronald E. Iverson, M.D., Dennis J. Lynch, M.D., and the ASPS Task Force on Patient Safety in Office-based Surgery Facilities

Arlington Heights, Ill.

TASK FORCE STATEMENT

At the ASPS Annual Meeting in October of 2000, the ASPS Board of Directors convened the Task Force on Patient Safety in Office-based Surgery Facilities. The task force was assembled in the wake of several highly publicized patient deaths, increasing state legislative/regulatory activity, and a moratorium on all level II and level III office-based surgery in the State of Florida. The task force faced a daunting task.

The first area the task force focused on was collecting, evaluating, and reporting the health policies, accreditation standards, state legislation/regulation activities, and publications that influence the delivery of health care in office-based surgery facilities. With the information gathered, the task force produced several documents, starting with an accreditation crosswalk table that contrasted the three nationally recognized accrediting agencies' office-based surgery standards. The task force also built a database to track state office-based surgery regulations, which was used as a resource to draft office-based surgery model legislation/regulation. The accreditation crosswalk and model legislation/regulation were placed on-line for members and have been widely distributed to national, state, and specialty medical organizations and state medical boards.

The second area the task force tackled was the development of office-based surgery guidelines. After an extensive review of the existing guidelines and scientific literature, it was determined that few materials met the scientific rigor necessary to establish clear standards of practice. Therefore, the task force determined it would be

more appropriate to develop office-based surgery practice advisories, which are defined as systematically developed reports intended to assist decision-making in areas of patient care in which scientific evidence is insufficient.¹

The task force included representatives from related plastic surgery organizations and the American Society of Anesthesiologists (ASA) and included Ronald E. Iverson, M.D., chair; Jeffery L. Apfelbaum, M.D., ASA representative; Jack G. Bruner, M.D., ASPS Liposuction Task Force representative; Bruce L. Cunningham, M.D., ASPS/PSEF Joint Outcomes Task Force representative; Richard A. D'Amico, M.D., ASPS representative; Thomas Joas, M.D., ASA representative; Victor L. Lewis, Jr., M.D., ASPS Health Policy Analysis Committee representative; Dennis J. Lynch, M.D., ASPS representative; Noel B. McDevitt, M.D., ASPS Deep Vein Thrombosis Task Force representative; Michael F. McGuire, M.D., ASAPS representative; Calvin R. Peters, M.D., Florida Ad Hoc Commission on Patient Safety representative; Robert Singer, M.D., AAAASF representative; Rebecca S. Twersky, M.D., ASA representative; and James A. Yates, ASAPS representative. I would like to thank the members of the task force for the insights they brought to this process. The final document represents their significant contributions to these efforts. I would also like to recognize DeLaine Schmitz and Pat Farrell of the ASPS staff for their work and support of this project.

Ronald E. Iverson, M.D.

INTRODUCTION

Our current health care delivery system has become increasingly complex, making it possi-

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ble to deliver health care that is technically superior to that previously offered. This is particularly true with regard to surgical services that are delivered in the outpatient setting. In fact, most surgical procedures are performed in one of three outpatient settings: hospital-based, free-standing ambulatory surgery centers, or office-based surgery facilities.² The office-based surgery setting in particular has many advantages for both the plastic surgeon and his or her patients. These benefits include greater control over the schedule, greater privacy for the patient, convenience, and increased efficiency and consistency in nursing staff and support personnel.

Even with the increased demand for ambulatory surgery services, generally there is little scientific evidence available on patient safety issues in the ambulatory surgery setting, and even less that specifically addresses the office-based surgery setting. The majority of clinical research and scientific literature published on ambulatory surgery has been completed in the hospital-based ambulatory surgery setting. Research and published materials from the hospital-based ambulatory setting were used extensively in the development of this practice advisory; although the setting is not identical to that of office-based surgery, it is the most applicable. This advisory is based on the best information available and largely reflects the collective opinion of the members of the task force.

Because many factors affect safe outcomes in the office-based surgery setting, the task force determined that a series of advisories should be developed. The Practice Advisory for Patient Selection in the Office-based Surgery Setting, approved by the ASPS Board of Directors in November of 2001, was the second practice advisory developed by the task force. The first practice advisory, Procedures in the Office-based Surgery Setting, was published in October of 2002. Practice advisories addressing the topics of liposuction, anesthesia services, and pain management in the office-based surgery setting will be developed in the future.

This advisory provides an overview of preoperative steps that should be completed to ensure appropriate patient selection in the office-based surgery setting. A sample preoperative history and physical form, along with examples of the American Society of Anesthesiologists (ASA) Physical Classification Ratings, are included.

Disclaimer

Practice advisories are strategies for patient management, developed to assist physicians in clinical decision-making. This practice advisory, based on a thorough evaluation of the present scientific literature and relevant clinical experience, describes a range of generally acceptable approaches to diagnosis, management, or prevention of specific diseases or conditions. This practice advisory attempts to define principles of practice that should generally meet the needs of most patients in most circumstances. However, this practice advisory should not be construed as a rule, nor should it be deemed inclusive of all proper methods of care or exclusive of other methods of care reasonably directed at obtaining the appropriate results. It is anticipated that it will be necessary to approach some patients' needs in different ways. The ultimate judgment regarding the care of a particular patient must be made by the physician in light of all circumstances presented by the patient, the diagnostic and treatment options at hand, and the available resources.

This practice advisory is not intended to define or serve as the standard of medical care. Standards of medical care are determined on the basis of all facts or circumstances involved in an individual case and are subject to change as scientific knowledge and technology advance, and as practice patterns evolve. This practice advisory reflects the state of knowledge current at the time of publication. Given the inevitable changes in the state of scientific information and technology, periodic review and revision will be completed.

Preoperative History and Physical Examination

A complete preoperative history and physical examination serve two important purposes. First, the findings help to determine the most appropriate time and facility setting for the reconstructive or cosmetic surgery patient. Second, the preoperative history and physical examination provide baseline information to assist the medical staff in interpreting findings while monitoring the patient intraoperatively and postoperatively.

A preoperative patient history should include personal health history, identification of comorbidities, social history, family history, medication regimen (prescription and nonprescription), allergies (drug, latex, tape) and re-

Name: _____ Date: _____

SOCIAL

Age: _____ Sex: M F Married: Y N Occupation: _____
 Responsible Adult Available to Assist During Recovery Period Y N Relationship: _____

HABITS

Smoke: Y N Amount: _____ Coffee/Tea/Cola: Y N Amount: _____
 Alcohol: Y N Amount: _____ Daily Exercise: Y N Amount: _____

MEDICATIONS: List dose or number of pills per day
 Prescription Drugs

Non Prescription (Vitamins; Herbs)

Regular Aspirin Use: Y N Dosage & frequency: _____
 NSA (Advil, Motrin, Ibuprofen): Y N Dosage & frequency: _____
 Cortisone Injections Past Year: Y N Date(s) and injection location: _____

Drug Allergy: Y N List drug(s) and type of reaction: _____

Latex Allergy: Y N Tape Allergy Y N

FAMILY HISTORY: Have any blood relatives ever had the following problems:

Abnormal Bleeding: Y <input type="checkbox"/> N <input type="checkbox"/>	Coronary Surgery: Y <input type="checkbox"/> N <input type="checkbox"/>	Kidney Disease: Y <input type="checkbox"/> N <input type="checkbox"/>
Abnormal Clotting: Y <input type="checkbox"/> N <input type="checkbox"/>	Diabetes: Y <input type="checkbox"/> N <input type="checkbox"/>	Tuberculosis: Y <input type="checkbox"/> N <input type="checkbox"/>
Anesthetic Problems: Y <input type="checkbox"/> N <input type="checkbox"/>	Heart Attack: Y <input type="checkbox"/> N <input type="checkbox"/>	Other Serious Illness: Y <input type="checkbox"/> N <input type="checkbox"/>
Cancer: Y <input type="checkbox"/> N <input type="checkbox"/>	Hypertension: Y <input type="checkbox"/> N <input type="checkbox"/>	

Please describe questions with a "Yes" answer: _____

PERSONAL PAST HISTORY: Have you ever had:

Abnormal Bleeding: Y <input type="checkbox"/> N <input type="checkbox"/>	Asthma: Y <input type="checkbox"/> N <input type="checkbox"/>	Hypertension: Y <input type="checkbox"/> N <input type="checkbox"/>
Abnormal Clotting: Y <input type="checkbox"/> N <input type="checkbox"/>	Diabetes: Y <input type="checkbox"/> N <input type="checkbox"/>	Sleep Apnea: Y <input type="checkbox"/> N <input type="checkbox"/>
Acid Regurgitation: Y <input type="checkbox"/> N <input type="checkbox"/>	Fainting Spell: Y <input type="checkbox"/> N <input type="checkbox"/>	Snoring: Y <input type="checkbox"/> N <input type="checkbox"/>
Anemia: Y <input type="checkbox"/> N <input type="checkbox"/>	Heart Attack: Y <input type="checkbox"/> N <input type="checkbox"/>	Weight Change past 12 Mo.: Y <input type="checkbox"/> N <input type="checkbox"/>
Angina: Y <input type="checkbox"/> N <input type="checkbox"/>	Hepatitis: Y <input type="checkbox"/> N <input type="checkbox"/>	Other Serious Illness: Y <input type="checkbox"/> N <input type="checkbox"/>

Please describe questions with a "Yes" answer: _____

Have you ever received a transfusion? Y N If yes, what year? _____

Have you been tested for HIV? Y N If yes, what year _____ Test results: positive negative

Do you wear: Contact lenses: Y N Eye glasses: Y N Hearing aid: Y N Dentures: Y N

Previous Surgery, year and type of procedure: _____

Indicate the type(s) of anesthesia received in the past, list any complications / reactions you experienced:

- Local anesthesia - (complications/reactions): _____
- General anesthesia -(complications/reactions): _____
- Spinal / Epidural - (complications/reactions): _____

Date last seen by Primary Care Physician: _____

Primary Care Physician (name) _____ (telephone) (_____) _____
 (address) _____

WOMEN PATIENTS ONLY:

Number of pregnancies _____ Number of children _____ Last menstrual period _____ Did you breast feed? Yes No

FIG. 1. First page of preoperative history and physical examination form.

Name: _____ MRN: _____ Date: _____

Completed by Physician

REVIEW OF SYSTEMS

Loose Dental Devices:	Y <input type="checkbox"/> N <input type="checkbox"/>	Chest Pain:	Y <input type="checkbox"/> N <input type="checkbox"/>
Neck Mobility Problem:	Y <input type="checkbox"/> N <input type="checkbox"/>	Irregular Heart Beat:	Y <input type="checkbox"/> N <input type="checkbox"/>
Short Neck:	Y <input type="checkbox"/> N <input type="checkbox"/>	Vomiting:	Y <input type="checkbox"/> N <input type="checkbox"/>
Cough:	Y <input type="checkbox"/> N <input type="checkbox"/>	Difficult Voiding:	Y <input type="checkbox"/> N <input type="checkbox"/>
Shortness of Breath:	Y <input type="checkbox"/> N <input type="checkbox"/>	Seizure:	Y <input type="checkbox"/> N <input type="checkbox"/>
Recent Upper Respiratory Infection:	Y <input type="checkbox"/> N <input type="checkbox"/>	Current Pregnancy:	Y <input type="checkbox"/> N <input type="checkbox"/>
Normal Menstrual Period:	Y <input type="checkbox"/> N <input type="checkbox"/>	Black Out:	Y <input type="checkbox"/> N <input type="checkbox"/>
Stroke:	Y <input type="checkbox"/> N <input type="checkbox"/>	Obesity:	Y <input type="checkbox"/> N <input type="checkbox"/>

Comments: _____

PHYSICAL EXAM

Height: _____ Weight: _____ Blood Pressure: _____ Pulse: _____ Temp: _____

GENERAL STATUS COMMENT

HEENT: _____ Vision: _____ Pharynx: _____ Dental Devices: _____
Pulmonary: _____
Heart: _____
Abdomen: _____
Extremity: _____
Neurologic (if applicable): _____

Comments _____

LABORATORY (if applicable)

H/H: _____	WBC: _____
PT: _____	Chest X-Ray: _____
Mammogram: _____	EKG (Pt over 40): _____
Pregnancy Test: _____	Sodium Chloride: _____
Potassium: _____	CO ₂ : _____
BUN: _____	Creatinine: _____

Comments _____

DIAGNOSES

1. _____
2. _____
3. _____

ASA CLASSIFICATION

- P1 A normal healthy patient
- P2 A patient with mild systemic disease
- P3 A patient with severe systemic disease
- P4 A patient with severe systemic disease that is a constant threat to life

FACILITY SELECTED

- Office-based Surgical Facility
- Ambulatory Surgery Center
- Hospital
-

FIG. 2. Second page of preoperative history and physical examination form.

P1 - normal healthy patient
P2 - patient with mild systemic disease
P3 - patient with severe systemic disease
P4 - patient with severe systemic disease that is a constant threat to life

FIG. 3. ASA physical classification status.

action, review of the body systems, and availability of a responsible adult to assist with postoperative instructions and care. The physical examination is essential for assessing the patient's clinical status preoperatively and should include an estimate of general health and appearance; measurement of height and weight; assessment of vital signs, including the heart and lung; and an examination of the anatomical area of the surgery. A sample preoperative history and physical form is shown in Figures 1 and 2.

An integral part of the patient selection process is identifying comorbidities that are relevant to the procedure or that may predispose the patient to intraoperative or postoperative complications. When evaluating the patient,

particular attention should be given to factors such as age, weight, and history of other illnesses, including diabetes mellitus, cardiac diseases, and respiratory conditions. The physician should evaluate the patient for a history of (or potential for) venous thromboembolism, and when indicated, should consult the appropriate ASPS Practice Advisory and/or Clinical Practice Guideline for thrombosis risk ratings and thromboprophylaxis measures.^{3,4} The surgeon should refer patients with significant comorbidities to medical specialists when indicated.

Preoperative Tests

On the basis of the patient's preoperative history and physical examination results, pertinent tests should be ordered, including:

- electrocardiogram in patients over 45 years of age
- electrocardiogram at any age when known cardiac conditions are present
- complete blood count/blood chemistries, as

ASA 1: A fit patient with no underlying systemic disease and taking no medications, e.g.:

- A 43-yr-old woman for bilateral breast enhancement
- A 32-yr-old man for cosmetic rhinoplasty
- A 16-yr-old girl for earlobe reconstruction from congenital anomaly
- A 26-yr-old man for back lipoma excision

ASA 2: A patient with mild systemic disease, i.e., slightly limiting organic heart disease, mild diabetes, essential hypertension or anemia, obesity (by itself), chronic bronchitis, or any healthy individual under 1 year or over 70 years old, e.g.:

- Patients who smoke, drink alcohol frequently or excessively, or use street drugs
- Patients who are obese
- Patients who have any of the following, but under control without systemic compromise: diabetes, hypertension, asthma, gastroesophageal reflux disease, peptic ulcer disease, hematologic disorders, arthritis, neuropathy
- Patients with anatomical abnormalities of significance to health, such as hiatal hernia, difficult airways, nondebilitating heart anomaly, Down syndrome
- Patients with mild psychiatric illness that is under control, such as depression, anxiety disorder, and bipolar disorder
- Patients with a remote history of coronary artery disease and no other systemic illnesses whose progress afterward showed no further chest pain and documented good exercise tolerance
- A 4-month-old infant for cleft palate repair
- A 73-yr-old woman for bilateral breast enhancement
- A 21-yr-old woman for breast augmentation with truncal obesity
- A 43-yr-old woman for bilateral breast enhancement who smokes and has chronic obstructive pulmonary disease
- A 32-yr-old asthmatic man for cosmetic rhinoplasty

ASA 3: A patient with a systemic disease or multiple significant mild systemic diseases, organic heart diseases, severe diabetes with vascular complications, moderate-to-severe degrees of pulmonary insufficiency, angina pectoris, or healed myocardial infarction, e.g.:

- Any third-degree or fourth-degree burn patient who is hemodynamically stable and undergoing graft surgery
- A 16-yr-old woman for earlobe reconstruction after congenital anomaly, with a symptomatic ventricular septal defect
- A 26-yr-old man for back lipoma excision, with controlled end-stage renal disease
- A 53-yr-old man for liposuction, who is hypertensive and has occasional chest pain
- A 32-yr-old man for cosmetic rhinoplasty, who frequently has sickle cell crisis, with hematocrit of 16.

ASA 4: Organic heart disease showing marked signs of cardiac insufficiency, persistent anginal syndrome, active myocarditis, advanced degrees of pulmonary, hepatic, renal or endocrine insufficiency, e.g.:

- A 71-yr-old woman for bilateral breast enhancement under general anesthesia who is asthmatic, smokes, and has chronic obstructive pulmonary disease
 - A 16-yr-old girl for earlobe reconstruction from congenital anomaly, with a cyanotic heart anomaly
 - A 53-yr-old man for liposuction, who is hypertensive and has had congestive heart failure within the past 6 months
-

FIG. 4. Examples of ASA classifications created by Rebecca S. Twersky, M.D., member of the ASPS Task Force on Patient Safety in Office-based Surgery Facilities and Chair of the ASA Committee on Ambulatory Surgical Care. Dr. Twersky is Associate Professor of Anesthesiology and Vice-Chair for Research, State University of New York Health Science Center at Brooklyn, and Medical Director, Long Island College Hospital, Brooklyn.

needed, for detailed evaluation of specific diagnosis, such as anemia, diabetes mellitus, hypertension, diuretic therapy

additional tests as appropriate, depending on the patient's status as determined through the medical history and physical examination or because of the specific procedure being performed (see ASPS Clinical Practice Guideline for specific procedures; www.plasticsurgery.org/psf/psfhome/clinprac/index.htm).

ASA Physical Classification Rating

The surgeon is responsible for selecting the appropriate facility for each patient and therefore should assign the (ASA) physical classification rating.¹ This rating should be based on a combination of the preoperative history and physical examination, comorbidities, laboratory results, and the medical specialist's evaluation. Figure 3 outlines the ASA physical classifications, and Figure 4 gives specific patient examples of the ASA classifications.

Appropriate Facility Selection

ASA class P1 and P2 patients are generally considered the best candidates for ambulatory surgery and reasonable candidates for the office-based surgery setting.

ASA P3 patients may also be reasonable candidates for office-based surgery facilities when local anesthesia, with or without sedation, is planned and the facility is accredited.

ASA P4 patients are appropriate candidates for the office-based surgery setting only when local anesthesia without sedation is planned.

Provider Qualifications

The physician performing a given procedure, regardless of the location of the surgical facility, should have approved hospital privileges for the procedure and should be qualified for examination or be certified by a surgical Board recognized by the American Board of Medical Specialties, such as the American Board of Plastic Surgery.

Surgical Facility Standards

Plastic surgery performed under anesthesia, other than minor local anesthesia and/or minimal oral tranquilization, should be performed in a surgical facility that meets at least one of the following criteria:

accredited by a national or state-recognized accrediting agency/organization, such as American Association for Accreditation of Ambulatory Surgery Facilities (AAAASF), Accreditation Association for Ambulatory Health Care (AAAHC), or the Joint Commission on Accreditation of Healthcare Organizations (JCAHO)

certified to participate in the Medicare program under Title XVIII

licensed by the state in which the facility is located.

CONCLUSIONS

Little available scientific evidence specifically addresses which patients are appropriate for the office-based surgery setting. Nevertheless, as more complex surgical procedures are performed in the office-based surgery setting, the surgeon must take measures to ensure appropriate patient selection. Completing a thorough preoperative history and physical examination to accurately rate the patient's ASA classification, and following the facility selection recommendations, will contribute to a safe and positive experience for both the patient and the physician.

Ronald E. Iverson, M.D.
American Society of Plastic Surgeons
444 East Algonquin Road
Arlington Heights, Ill. 60005
reiversonmd@earthlink.net

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