Competencies in Pulmonary Procedures

To the Editor:

We read with interest the guidelines from the American College of Chest Physicians on interventional pulmonary procedures (May 2003). The introduction noted that although there were not “data on all procedures,” the writers should “not shy away from competency guidelines altogether.” Indeed, no shyness was employed. Specific numbers of procedures required to establish competency were routinely included in the document, and every invasive procedure required 10 procedures per year to maintain competency. Since no data were available, we assumed that the authors surveyed training program directors, but we could find no reference to this.

The spirit of competencies is commendable and is used for training by other societies. Nonetheless, baseline numbers must be evidence-based or from a broad survey of the society membership to be credible and useful. While we applaud the intent of this report, the process responsible for these recommendations is fatally flawed. (1) Surveys of training directors should have been performed, and a writing committee should have been appointed, with its final product approved by the assembled experts. This more credible and accepted consensus process would involve establishing levels of evidence supporting the guideline. Was this done? If so, why was it not included in the manuscript? (2) In our experience, specific procedural thresholds are more useful to establish “initial” competency rather than “ongoing” skills. A specific example is rigid bronchoscopy. On page 1696, the authors state, “Dedicated operators should perform at least 10 procedures per year to maintain competency.” For those of us who have been performing rigid bronchoscopy for years with no mortality and minimal complications, we find this declaration ill advised. For example, someone with 20 years of experience does not necessarily require the same number of procedures as an inexperienced operator. Complication rates and results are generally thought to comprise a better guideline than an arbitrary number. Specific procedural thresholds may be superior to complication rates when determining ongoing competence. The frequency of performing a procedure is not necessarily a measure of competence among experienced practitioners.

Three concerns have been raised in response to the American College of Chest Physicians (ACCP) guidelines (May 2003):

1. Surveys of training directors and a writing committee of experts would provide better guidelines, including, presumably, more accurate definitions of competence.
2. Specific procedural thresholds may be inferior to complication rates when determining ongoing competence. The frequency of performing a procedure is not necessarily a measure of competence among experienced practitioners.
3. Quality overseers may misinterpret “arbitrary” procedural numbers.

Most clinical recommendations in the literature are expert opinions. Evidence-based recommendations remain the exception. In fact, there is no significant literature in this area that satisfactorily addresses the issue of defining competence. A committee of experts, including interventional pulmonologists, critical care specialists, and thoracic surgeons, wrote the guidelines. The authors include academic physicians, private practice physicians, and interventional pulmonologists, both from the United States and Europe. We thought that this broad specialty and practice representation would be appropriate to assure a balanced document. It is not clear to us why a poll of program directors (who may or may not have direct expertise in these areas) would contribute substantially to the published document.

To maintain the integrity of the medical literature, we must readily distinguish between opinion and guidelines. A detailed discussion of the available medical evidence or disclosure of the lack thereof is mandatory for “society-endorsed” guidelines.

In the absence of evidence, a broad-based survey of training programs and practitioners is necessary as a starting point. The American College of Chest Physicians should begin an immediate process of reviewing the literature and documenting its quality, as well as surveying its membership and conference attendees, so that a new and legitimately documented set of guidelines can be published. The current recommendations appear arbitrary. They should be renamed opinion, and the designation of guidelines withdrawn.

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evidence suggests that repetitive use of abilities and continuous training is desirable. We see this in aviation and the military, for example. In surgical specialties, board certification requires minimum numbers of various procedures, and recertification requires documentation of performance of a satisfactory number of procedures during the previous year. In other words, there are defined numeric requirements for establishing and maintaining competence. In fact, the trend in surgical specialties is toward making these requirements more specific, more frequent, and perhaps including (for the first time) evidence of acceptable complication rates. We agree that complication rates may afford a very useful measure of a practitioner’s competence and would welcome initiatives to reliably record such data. A further step would be to consider skill testing at defined intervals. This likely would be cumbersome and might be subject to misuse. Nevertheless, our assumption remains that frequent procedures correlate with reduced complications.

Finally, we note that the European Respiratory Society/American Thoracic Society statement published in Europe on these procedures also contained numeric requirements. The ACCP guidelines are therefore not, in this regard, a departure from previous work.

We hope that this addresses the writers’ concerns. The interventional procedures guidelines were written with an expectation of differences of opinion. We welcome this sort of discussion, from that ferment will come a clearer understanding of the utility and limitations of these guidelines.

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A Novel Diagnostic Test for the Risk of Aspiration Pneumonia in the Elderly

To the Editor:

Paul E. Marik and Danielle Kaplan (July 2003) have comprehensively summarized the cause and treatment of aspiration pneumonia and dysphagia in the elderly. Owing to the increasing number of the aged population, many pulmonologists and geriatricians recognize that silent aspiration might be very important for the pathogenesis of aspiration pneumonia and nosocomial pneumonia in older patients. Thus, the current review article is very important and useful to understand the diagnosis, assessment, and management of aspiration pneumonia in the elderly. Marik and Kaplan suggest that elderly patients with clinical signs suggestive of dysphagia and/or who have community-acquired pneumonia should be referred for a swallow evaluation. This is very true for assessment of factors that increase the risk of pneumonia in patients who aspirate. However, the conventional clinical assessment of swallowing function is not efficient to detect the risk of aspiration pneumonia.

Because aspiration is a fairly common event for critically ill patients receiving enteral tube feeding, progression to aspiration pneumonia is difficult to predict due to variation in host factors and characteristics of the aspirate material. Aspiration of oropharyngeal secretions is of equal if not greater importance than aspiration of gastric contents. Monitors for aspiration such as glucose oxidase, blue food coloring, and gastric residual volumes are insensitive and unreliable. A number of clinical risk factors cannot be fully identified at the bedside. Although the videofluoroscopic swallowing assessment (VFSS) is the most commonly utilized instrumental assessment tool in the clinical setting to determine the nature and extent of the swallow disorder, this method may be too sensitive for detection of swallowing disorders in the elderly. Because the age-dependent retraction of the larynx, age-dependent muscle weakness, and decreased volume of saliva secretion with age dependently or independently affect the impaired swallowing function, the perfect swallowing function is rarely found by the VFSS in the old persons aged ≥80 years old.

We have reported however, clinically applicable methods for the assessment of the risk of aspiration pneumonia in the elderly: the swallowing provocation test (SPT) and the simple SPT (S-SPT). These methods are very useful to differentiate the patients with or without stroke who are predisposed to aspiration. Twenty-six stroke patients with aspiration pneumonia (mean age, 72.1 ± 4.1 years [± SD]) and 26 age-matched stroke patients without aspiration pneumonia (mean age, 69.4 ± 3.9 years) were tested. The normal response to SPT was determined by inducing swallowing reflex within 3 s after 0.4 mL or 2 mL of distilled water injection into the suprapharynx. In the water swallowing test (WST), subjects drank quantities of 10 mL and 30 mL of water from a cup within 10 s. The subject who drank water without interruption—without evidence of aspiration—was determined to be normal. The sensitivity and specificity of first-step SPT using 0.4 mL of water for the detection of aspiration pneumonia were 100% and 83.5%, respectively. Those of the second-step SPT using 2 mL of water were 76.4% and 100%, respectively. The sensitivity and specificity of first-step WST using 10 mL of water for the detection of aspiration pneumonia were 71.4% and 70.8%, respectively. Those of the second-step WST using 30 mL of water were 72% and 70.3%, respectively.

The S-SPT is more useful than the WST in differentiating patients predisposed to aspiration pneumonia, with high sensitivity and specificity. While the cooperation of the patient is needed for the WST and VFSS, the S-SPT does not necessarily require the patient’s cooperation. Furthermore, the test was reproducible by other investigators.

Clinically detectable aspiration is associated with increased morbidity. Since silent aspiration remains a major difficulty, and patients with swallowing disorders are at a risk of aspiration, the SPT and S-SPT are useful and widely applicable methods for the assessment of aspiration pneumonia in the frail elderly.

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