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 or 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 guidelines. 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. (3) Misguided, poorly researched, inadequately supported and/or arbitrary numbers provide a breeding ground for misinterpretation by those organizations (e.g., Joint Commission on Accreditation of Healthcare Organizations, American Heart Association, National Quality Forum, and LEAPFROG) that wish to partner with medicine to improve quality.

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 competency. 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 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. Indeed, unintended consequences may result if the guideline encourages the inappropriate overuse of the rigid bronchoscope or other invasive procedure for the “touch up of lesions.” (3) Misguided, poorly researched, inadequately supported and/or arbitrary numbers provide a breeding ground for misinterpretation by those organizations (e.g., Joint Commission on Accreditation of Healthcare Organizations, American Heart Association, National Quality Forum, and LEAPFROG) that wish to partner with medicine to improve quality.

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.

To the Editor:

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 competency. The frequency of performing a procedure is not necessarily a measure of competence among experienced practitioners.
3. Quality overseers may misinterpret “arbitrary” procedure 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 competency. 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.

The authors and the ACCP carefully considered the semantics of the terms guidelines and standards. The conclusion was that standards implies a finality of recommendation that was both inappropriate for this document as well as subject to misuse by outside governing bodies and organizations. In contrast, the term guidelines implies an expression of expert opinion, that is subject to revision and is not binding upon practitioners. We have always intended this as a “work in progress” that would undergo periodic reassessment and revision.

With regard to specific numeric guidelines for establishing and maintaining competency in these procedures, we think there is ample evidence that performing medical procedures more often leads to fewer complications. This is true for central line placement and thoracentesis, and for chest tube placement. Most
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 useful 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 glottis oximetry, 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 swallow 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 salivary secretion with age dependently or independently affect the impaired swallowing function, the perfect swallowing function is rarely found by the VFSS in the old person 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 suprathyroid. 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 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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REFERENCES