

THE AUTHORS REPLY: The comments of von Kriegstein and von Kriegstein remind us of the need to offer our patients a balanced presentation of the possible risks and benefits before initiating treatment with inhaled insulin. We acknowledge that it is premature to be confident that there is no association between inhaled insulin and bronchial cancer. We agree with Guevara that patients with obstructive airway disease or asthma should not be treated with inhaled insulin until its safety has been demonstrated in clinical trials. For these reasons, prescribers will need to carefully examine the suitability of inhaled insulin for each patient.

Further research will be required before the safety of the approach suggested by Gross can be ensured. Basal insulin once daily and inhaled insulin thrice daily may be equally efficacious in reducing glycated hemoglobin concentrations; however, inhaled insulin is associated with a substantially higher risk of hypoglycemia.^{1,2} Current standards of care reserve preprandial insulin for patients with type 2 diabetes who do not reach their glycemic goal while being treated with a basal insulin.³

For a patient who is receiving a basal insulin, a decision to prescribe inhaled insulin rather than a subcutaneous short-acting insulin must be considered in the context of the paucity of long-term safety data and an awareness of the additional

cost. Evidence provides support for the combination of basal insulin with a thiazolidinedione.⁴

We hope that researchers such as Henkin will continue to develop oral, buccal, transcutaneous, and nasal insulin formulations; other inhaled insulin preparations are being evaluated in advanced clinical trials. It is possible that these and other developments will ultimately help improve the management of diabetes for a growing population of patients who deserve the best evidence-based medicine available.

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1. Rosenstock J, Zinman B, Murphy LJ, et al. Inhaled insulin improves glycemic control when substituted for or added to oral combination therapy in type 2 diabetes: a randomized, controlled trial. *Ann Intern Med* 2005;143:549-58.
2. Riddle M, Rosenstock J, Gerich J. The treat-to-target trial: randomized addition of glargine or human NPH insulin to oral therapy of type 2 diabetic patients. *Diabetes Care* 2003;26:3080-6.
3. Nathan DM, Buse JB, Davidson MB, et al. Management of hyperglycemia in type 2 diabetes: a consensus algorithm for the initiation and adjustment of therapy: a consensus statement from the American Diabetes Association and the European Association for the Study of Diabetes. *Diabetes Care* 2006;29:1963-72. [*Diabetes Care* 2006;29:2816-8.]
4. Raskin P, Rendell M, Riddle MC, Dole JF, Freed MI, Rosenstock J. A randomized trial of rosiglitazone therapy in patients with inadequately controlled insulin-treated type 2 diabetes. *Diabetes Care* 2001;24:1226-32.

Assessment in Medical Education

TO THE EDITOR: I am disappointed that Epstein's review of assessment in medical education (Jan. 25 issue)¹ does not include the short case, which is an excellent instrument used in many educational settings.² In the short case, the student is asked to perform a supervised focused physical examination (e.g., of only the abdomen) of a real patient, with little knowledge of the patient's history, and is then assessed on the basis of the technique of the examination and the ability to elicit physical signs and interpret these findings correctly. Several cases are used to improve validity and reliability.

By making physical examination an integral part of trainee evaluation, the short case represents a tool for curtailing the decline in physical-examination skills.³ Furthermore, the short case uniquely prepares a trainee to perform an accurate assessment and place physical findings in context. These skills are especially valuable in the current era of

duty-hour restrictions and increasing shift work,⁴ since a house officer is likely to be called to evaluate a patient he or she hardly knows.

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1. Epstein RM. Assessment in medical education. *N Engl J Med* 2007;356:387-96.
2. Fowell SL, Maudsley G, Maguire P, Leinster SJ, Bligh J. Student assessment in undergraduate medical education in the United Kingdom, 1998. *Med Educ* 2000;34:Suppl 1:1-49.
3. Jauhar S. The demise of the physical exam. *N Engl J Med* 2006;354:548-51.
4. Fletcher KE, Underwood W III, Davis SQ, Mangrulkar RS, McMahon LF Jr, Saint S. Effects of work hour reduction on residents' lives: a systematic review. *JAMA* 2005;294:1088-100.

TO THE EDITOR: In his review of assessment methods, Epstein misses an opportunity to discuss the importance of providing constructive feedback to

the trainee. This failure is painfully illustrated by the video that accompanies the article. The video shows two students separately examining a standardized patient. The students are subsequently confronted with (long lists of) their shortcomings and mistakes. If the assessment does not provide clear, positive feedback and reassurance and does not focus on specific points to improve, students may fail to learn from their mistakes, lose motivation to engage in assessment in the future, and develop a disproportionate fear of failure in their contact with real patients.¹ Moreover, although in subsequent examinations, students may show improvement in areas in which they previously received a negative assessment, they may fail in areas in which they performed well earlier but without positive feedback.

The purpose of assessment is to improve the clinical skills of trainees and produce competent physicians who can provide high-quality care. This requires formative feedback that encourages self-reflection, actively reinforces good medical skills, and provides specific strategies for improving performance.²

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1. Kilminster S, Jolly B, van der Vleuten CPM. A framework for effective training for supervisors. *Med Teach* 2002;24:385-9.
2. Brukner H, Altkorn DL, Cook S, et al. Giving effective feedback to medical students: a workshop for faculty and house staff. *Med Teach* 1999;21:161-5.

TO THE EDITOR: As Klass notes in the editorial¹ accompanying the review by Epstein, current assessment systems do not perform acceptably for evaluating physicians in practice. We need to move away from hours of continuing medical education or attendance at meetings or symposia and allow practice members to design their own continuing education on the basis of specific practice characteristics. All members of a practice, rather than individual physicians, should be held accountable for the progress of the practice's population. When electronic medical records are widely available, practice assessments could be developed, evaluated, and adjusted annually on the basis of the practice demographics (e.g., the numbers of patients in the practice according to diagnosis and health status).² We also need to move away from measures focused strictly on process to an emphasis on pa-

tient outcomes. For example, the Health Plan Employer Data and Information Set (HEDIS) looks at data for the proportion of eligible patients who have been immunized, but the system currently includes information only about shots given, not about immunization schedules completed. Similarly, the proportion of visits for hypertension can be analyzed, but individual outcomes (e.g., control of blood pressure) cannot. This assessment system would be greatly enhanced by better training in epidemiology for all physicians.

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1. Klass D. Assessing doctors at work — progress and challenges. *N Engl J Med* 2007;356:414-5.
2. Buttery CMG. Clinical investigation in general practice: the use of a simplified data-recording system. *South Med J* 1963;56:650-3.

TO THE EDITOR: Though Klass states that “little attention has been paid to the assessment of doctors who are already in practice,” 24 member boards of the American Board of Medical Specialties, including the American Board of Internal Medicine (ABIM), offer maintenance of certification — a process for assessing physician competence that promotes lifelong learning and high-quality care. Recent articles in the *Journal*¹⁻³ describe the program's importance and value.

Through certification and maintenance of certification, ABIM assesses physician competence throughout a lifetime of practice. ABIM's secure examination tests medical knowledge and assesses the clinical reasoning and judgment required of an excellent internist. Our self-evaluation modules allow physicians to examine their clinical knowledge and performance in practice and to use these data to direct improvements in patient care.

Maintenance of certification is a rigorous mechanism for assessing physicians in practice. It addresses the important need that Klass identifies. Unfortunately, participation is not universal. Perhaps that is the issue to which too “little attention has been paid.”

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1. Baron RJ. Personal metrics for practice — how'm I doing? *N Engl J Med* 2005;353:1992-3.
2. Brennan TA. Recertification for internists — one “grandfather's” experience. *N Engl J Med* 2005;353:1989-92.
3. Steinbrook R. Renewing board certification. *N Engl J Med* 2005;353:1994-7.

THE AUTHOR REPLIES: The short case may hold promise as a method for assessment of clinical skills and may prove to be a robust and economical alternative or adjunct to long cases and standardized patient examinations. However, a Medline search with the search terms “short case” and “education” or “assessment” yielded no articles describing and validating its use in English-speaking or Western European countries. Three articles mentioned its use.¹⁻³ An article from Kuwait indicated that the performance of the short case compared favorably with that of the long case.⁴ A word search of the study by Fowell and colleagues⁵ cited by Parakh showed that the short case was simply included in a list of assessment methods commonly used in the United Kingdom; there was no further description. I am certain that there are many other assessment methods that will ultimately prove to have merit, but just as with diagnostic tests in clinical medicine, we must await empirical validation before promoting their use.

I agree with de Galan and colleagues that feedback must be balanced, timely, and accurate. The purpose of feedback is to promote an organized approach to reflection and remediation of clinical skills. Feedback should lead to greater mindfulness, attentive self-observation, and critical curiosity during actual clinical practice and should enhance the motivation for change. The list of deficiencies in the video that accompanies the article was intended to emphasize the kinds of skills that can be observed in simulated settings; it was not intended to suggest that all those items should be presented to the student. In real-life settings, feedback should be based on respect and trust, should build on strengths, should be given in bite-size pieces that can be assimilated, and should be framed to increase self-confidence, skills, and autonomy. Feedback should be embedded in longitudinal mentoring relationships, which are all too rare in clinical teaching and in medical education in general. Otherwise, the feedback runs

the risk of being haphazard and will be less likely to build incrementally on the trainees’ emerging skills and competence.

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1. Wass V, Van der Vleuten C, Shatzer J, Jones R. Assessment of clinical competence. *Lancet* 2001;357:945-9.
2. Singh R, Gupta P, Singh K, Koirala S. Undergraduate pediatric education at BPKIHS integrated with an innovative curriculum. *Indian Pediatr* 1999;36:43-50.
3. Mekasha A. Assessment methods in medical education. *Ethiop Med J* 2004;42:63-71.
4. Hijazi Z, Premadasa IG, Moussa MA. Performance of students in the final examination in paediatrics: importance of the “short cases.” *Arch Dis Child* 2002;86:57-8.
5. Fowell SL, Maudsley G, Maguire P, Leinster SJ, Bligh J. Student assessment in undergraduate medical education in the United Kingdom, 1998. *Med Educ* 2000;34:Suppl 1:1-49.

THE EDITORIALIST REPLIES: I agree with the comments of both Buttery and Cassel. I would add to what Buttery says that although the task of making valid judgments about practices on the basis of outcomes is an important objective, it must be undertaken carefully because of the tortuous and poorly understood relationships between process and outcome in most medical situations. And I should apologize to Cassel if my suggestion of a relative lack of attention to assessments in practice over time disparaged the efforts of many organizations to address this discrepancy. In particular, the leadership of John J. Norcini and F. Daniel Duffy (former and current staff members, respectively, at ABIM) in this area is notable. Editorial constraints limited my ability to be more complete in attribution, so I thank Cassel for using this venue to draw attention to the important work in this area by ABIM and also by the American Board of Medical Specialties.

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Pulmonary-Artery Dissection in Patients with Eisenmenger’s Syndrome

TO THE EDITOR: Adults with congenital heart disease who have pulmonary hypertension may have dissection of the pulmonary artery. Increasingly recognized as a lethal complication, pulmonary-

artery dissection has usually been recorded at autopsy.¹ Survivors often receive conservative care, because Eisenmenger’s syndrome is deemed inoperable. Heart-lung transplantation has been per-