the ordinary, timorous conscious personality.”6(p120)

When things go poorly, physicians have the opportunity to learn from their mistakes so that future patients will benefit. Knowing when to take risks and when to avoid them distinguishes the wise, competent physician.

Good doctoring also requires teamwork. The support of the midwives—and the doctor’s willingness to accept it—was critical to his eventual success. So was a bit of luck.

Bulgakov’s honest portrayal of a young physician making tough decisions certainly helps us to empathize with inexperienced learners, especially medical students drawing blood for the first time, medical residents doing their first thoracentesis, or pulmonary fellows doing their first intubations. However, even experienced physicians bump up against novel situations that test their competence. Like young learners, these physicians must courageously rise to the occasion, overcome their fears, and handle unexpected complications, mistakes, and problems.

In summary, Mikhail Bulgakov’s “The Steel Windpipe” is the story of a young Russian doctor who finds himself in a dire situation. A little girl with diphtheria needs a tracheotomy. The doctor has never done the operation before. There is no consultant available. He is the only doctor in the village. What to do? With the help of midwifes and his own moral fortitude, he overcomes his trepidations to perform the operation. This one was a success. However, we can be certain there were others that did not go as well. Bulgakov’s story reminds us that physicians will not always possess the knowledge and skills necessary to handle every situation they encounter in their careers. At times, they will feel anxious and fearful in difficult situations. Meeting these situations with moral courage will help physicians maintain competence throughout their careers.

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The Saga of Obstructive Sleep Apnea Syndrome and Daytime Hypercapnia
Work in Progress

The current body of clinical evidence suggests that the majority of patients with obstructive sleep apnea syndrome (OSAS) are eucapnic during wakefulness, and that detection of daytime hypercapnia attests to mechanical impairment of the respiratory system due to obesity (ie, obesity hypoventilation syndrome) and/or COPD.1–3 While OSAS may contribute to CO2 retention in these patients, no correlation exists between the severity of OSAS and presence of daytime hypercapnia. Conceivably, OSAS could predispose to daytime hypercapnia by causing nocturnal hypoxemia and sleep fragmentation that, in turn, impair mass load compensation, thereby predisposing obese patients to hypercapnia.

In this issue of CHEST (see page 710), Dr. Laaban and colleagues report that daytime hypercapnia is present in patients with OSAS even in the absence of COPD.5 The most striking finding is the presence of hypercapnia in nonobese patients, suggesting that OSAS itself could lead to daytime hypercapnia. While the possibility of OSAS alone evokes daytime hypercapnia in the absence of significant obesity or COPD has been reported before,6 this is first large-scale study that evaluated the incidence of daytime hypercapnia in patients with OSAS in the absence of COPD.

There are several limitations to this study. Firstly, pH data were not reported, which forestalls proper data analysis and interpretation because the observed rise in CO2 could also be attributed to a compensatory response to underlying metabolic alkalosis rather than to alveolar hypoventilation. This notion is supported by the relatively mild degree of hypercapnia observed in these patients. Secondly, no information is provided on alveolo-arterial oxygen gradient so the mechanism(s) underlying hypoxemia (ie, hypoventilation vs ventilation-perfusion mismatching) in nonobese individuals cannot be delineated. Lastly, a selection bias may exist because only 2,217 of approximately 30,000 patients with OSAS who were prescribed nasal continuous positive air-
way pressure underwent pulmonary function testing and arterial blood gas analysis. The presence of hypoxemia at rest may have triggered these procedures. Irrespective, these data suggest that patients with OSAS who present with daytime hypoxemia are more likely to have daytime hypercapnia as well, so the latter should be sought by arterial blood gas analysis.2

The mechanism(s) underlying alveolar hypoventilation in patients with OSAS in the absence of mechanical impairment of the respiratory system due to obesity and/or COPD is uncertain. Leptin-related abnormalities in ventilatory control and respiratory muscle “fatigue” are intriguing possibilities but fail to explain the presence of hypercapnia in nonobese patients with OSAS.7 Loss of the so-called normal CO2 response to apnea that protects against the development of hypercapnia by stimulating respiratory compensation for each apnea during the interapnea period is thought to predispose to daytime hypercapnia in patients with OSAS.8 Whether genetic aberration(s) underlies alveolar hypoventilation in these patients or whether it is an acquired, maladaptive response to longstanding OSAS resetting of ventilatory regulation is uncertain because this phenomenon is observed only in a minority of patients. Given this ongoing controversy and its implications for patient care, further large-scale, community-based controlled studies are warranted to elucidate the incidence of daytime hypercapnia in patients with OSAS in the absence of mechanical impairment due to obesity and/or COPD.

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Life in the Real World

In the past 15 years, there have been numerous publications of clinical trials demonstrating that chemotheraphy has a palliative benefit for patients with advanced non-small cell lung cancer (NSCLC).1 These studies have indicated a prolongation of survival (1-year survival of 30 to 40% vs 10%), amelioration of symptoms, and better or at least stable quality of life (QOL), all at the price of either a small cost or in some cases even a cost savings.2 Nevertheless, skeptics argue that the benefits are modest and apply only to very selected patients enrolled in clinical trials.3,4 This argument suggests that little progress has been made for the majority of patients with advanced NSCLC who are treated outside of the context of a clinical trial. The skeptics assert that the apparent progress is really due merely to better staging (stage migration) and patient selection (the diminishing denominator).

The article by Waechter and colleagues in this issue of CHEST (see page 738) is an important study because it indicates that the gains noted in the randomized trial setting are in fact applicable to patients in general. They studied all consecutive patients presenting to the hospital clinics of University of Basel, Switzerland, for palliative treatment of NSCLC from 1990 to 2002. We are not informed of how many patients were treated in the context of a clinical trial, but only a small minority were treated with an experimental agent that was not part of mainstream therapy for these patients. All patients were included in the study whether they received active treatment or only supportive care. Their results clearly indicate an improvement in duration of survival during the course of the study. In addition, the outcomes of all patients treated with chemotherapy in the later years of the study (after 1997) parallel those of more strictly selected patients treated in the context of a clinical trial, as reported by others.1 Furthermore, better outcomes were also noted for patients treated in the later years only with best supportive care (BSC).