Summary and conclusions

Many patients can avert the trauma and hazards of intubation and mechanical ventilation by using noninvasive ventilation. Recent studies show that noninvasive positive-pressure ventilation is an effective treatment for selected patients with acute respiratory failure, with lower rates of endotracheal intubation, fewer complications, and improved survival. Noninvasive ventilation can improve dyspnea, sleep, partial pressure of arterial oxygen, partial pressure of arterial carbon dioxide, and the quality of life in selected patients with chronic respiratory conditions. Where as CPAP therapy appears to benefit patients with acute cardiogenic pulmonary edema and those with congestive heart failure and sleep related breathing disorders. An expanded awareness of noninvasive ventilation devices and techniques promises to increase the therapeutic options for patients with severe respiratory insufficiency its use will probably continue to grow as improved technology and creative clinicians attempt to treat more complicated conditions.

The innate comfort benefit from avoiding intubation by using NIV is obvious, but a very attractive discovery was the accompanying reduction in nosocomial pneumonia. There is a believable case that NIV reduces the incidence of infectious complications, although not all studies support this view. It is appropriate to ask, where are we with NIV in the acute-care setting? NIV complications range from minor to severe, and there is now evidence that if NIV is applied inappropriately (e.g. for too long), you may face a situation where you have “gone too far.” There is a paucity of data on

when and how much sedation is advisable during NIV. NIV for do-not-intubate patients creates unique ethical dilemmas because NIV may prolong life in otherwise terminal conditions. Nearly every effective therapy has risks and complications, and, usually, the more effective the treatment, the more the potential adverse effects. As with any other treatment, the clinician must exercise judgment to balance the risks and benefits of NIV to deliver the best service to the patient.