Give your patient a fast hug (at least) once a day*

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LEARNING OBJECTIVES

On completion of this article, the reader should be able to:

1. Interpret the mnemonic "Fast Hug."
2. Explain the elements of "Fast Hug."
3. Use this knowledge in a clinical setting.

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Objective: **To introduce the Fast Hug mnemonic (Feeding, Analgesia, Sedation, Thromboembolic prophylaxis, Head-of-bed elevation, stress Ulcer prevention, and Glucose control) as a means of identifying and checking some of the key aspects in the general care of all critically ill patients.**

Design: **Not applicable.**

Setting: **Any intensive care unit at any time.**

Patients: **All intensive care unit patients.**

Interventions: **Dependent on the results of applying the Fast Hug.**

Measurements and Main Results: **Not applicable.**

Conclusions: **Application of this simple strategy encourages teamwork and may help improve the quality of care received by our intensive care unit patients. (Crit Care Med 2005; 33:1225–1229)**

KEY WORDS: feeding; sedation; analgesia; stress ulcer prevention; semirecumbent; glucose control; thromboembolism

Efforts are continually being made to improve the quality of patient care in the intensive care unit (ICU); as elsewhere in the healthcare system, medical errors are common and considerable variation in clinical practice persists even when evidence-based guidelines are available (1). Suggested mechanisms to reduce errors and encourage application of the latest clinical study results include protocols, checklists, and physicians' rounds. Each of these has its place, and indeed, all three are important. Even though an ICU should optimally be staffed by intensivists (2), the present mnemonic could be useful to anybody working in an ICU.

Protocols and Checklists

Protocols have been promoted as enhancing the efficiency, safety, and efficacy of care; enabling more rigorous clinical research; and facilitating education (1). Protocols are increasingly being applied to specific treatment-management problems, e.g., weaning from mechanical ventilation (3–5), tight glucose control (6–8), and adequate sedation (9–11). However, although protocols are easily applied to these relatively simple processes, their usefulness is more debatable when more complex issues are involved, for example, the correction of hypovolemia or the treatment of acute lung injury (12); the treatment of septic shock becomes a real challenge, even with recently published guidelines (13). In addition, although protocols may be particularly valuable in ICUs of small peripheral hospitals, they are less efficient in large tertiary care institutions (14).

An alternative to the protocol is the checklist, widely employed outside medicine. Some have suggested that the ICU be compared with the aviation cockpit, where checklists are routinely used to improve safety. There are indeed some similarities between the airplane cockpit and the sophisticated ICU environment in terms of complex instruments, with many alarm systems and risks of life-threatening complications, but there the comparisons end. Whereas there are relatively few types of planes that any pilot will be expected to fly, and pilots have very little freedom in their choice of route, speed, or timing, intensivists deal with an almost infinite combination of disease states (Fig. 1) and have considerable freedom in the choice and intensity of interventions. In addition, a pilot acts alone (or with just one co-pilot), whereas

*See also p. 1424.

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the intensivist is the coordinator of a team, unable to act effectively alone. Nevertheless, the concept of checklists may indeed be helpful in the ICU, as in the cockpit, and better than the concept of protocols. How often do we realize that a patient has not been fed for 2 or 3 days or another patient has not received heparin prophylaxis? Regular checklists would prevent these oversights.

Rounds

Rounds at the bedside are important and are part of good care. A number of studies have indicated that daily rounds at the bedside by intensivists may result in better outcomes (15, 16). When conducting bedside rounds, it is easy to question the continued need for ventilatory support for a patient undergoing mechanical ventilation or the adequacy of nutrition for a patient with a feeding solution bag hung above the bed; a protocol is not needed to ensure these questions are asked and answered, and all members of the ICU team—not just the physicians—can question these aspects of patient care. Likewise, the adequacy of sedation and analgesia should be systematically questioned (and more than once or twice a day!).

The "Fast Hug"

I would like to suggest the concept of the Fast Hug (Table 1), a simple, short mnemonic to highlight some key aspects in the general care of all critically ill patients, which should be considered at least once a day during rounds and, ideally, every time the patient is seen by any member of the care team. This approach helps involve all members of the critical care team, including nurses, physiotherapists, and respiratory therapists. Although the Fast Hug can be vocalized and each component discussed (for example, during rounds), it does not need to be practiced out loud but can be used as a mental checklist when individual staff members are attending the patient, thus providing all ICU staff with a simple way of ensuring that seven of the essential aspects of patient care are not forgotten. As such, it can become a thought process that is almost automatic when a patient's bed is approached.

F for Feeding. Malnutrition increases complications and worsens outcomes for critically ill patients (17). Many patients are already malnourished at admission to the ICU and need adequate and appropriate nutritional support, with daily review of feeding. Unfortunately, there is no specific "nutrition" marker, and it is not practical to perform indirect calorimetry on all patients, but a clinical assessment including weight loss measurement is probably as reliable as more complex tests (18).

Guidelines on nutritional support for critically ill patients have been published (19–21). In general, 5.6 kJ/kg per day is an acceptable and achievable target intake, but patients with sepsis or trauma may require almost twice as much energy during the acute phase of their illness (22). If oral feeding is not possible, enteral nutrition is preferred to parenteral nutrition (20, 21, 23) and should be started early, preferably within 24–48 hrs of ICU admission. The optimal constituents of feeding solutions remain under debate, but the Canadian guidelines, based on an extensive literature review, recommend that solutions containing fish oils, borage oils, and antioxidants should be considered for patients with acute respiratory distress syndrome and that glutamine-enriched formulas should be considered for patients with severe burns and trauma (21). Further study is needed to define the optimal feeding solutions for different categories of ICU patients.

A for Analgesia. Pain can affect a patient's psychological and physiologic recovery, and adequate pain relief must form an integral part of good intensive care management. Critically ill patients feel pain due not only to their illness but also to routine procedures such as turning, suctioning, and dressing changes (24). However, in one study of 5,957 patients, >63% received no analgesics be-

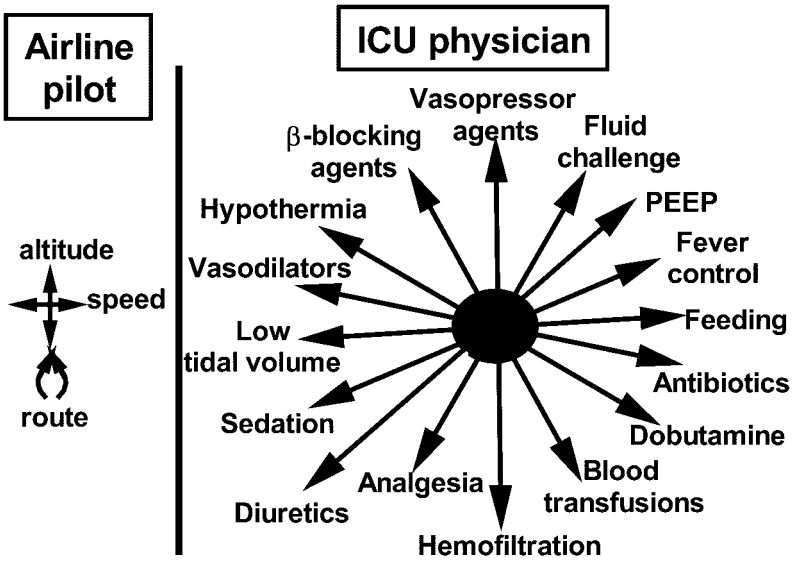

Figure 1. Simplified comparison of the complexities of the intensive care unit (*ICU*) physician's options and those of the airline pilot. *PEEP*, positive end-expiratory pressure.

Table 1. The seven components of the Fast Hug approach

Component	Consideration for Intensive Care Unit (ICU) Team
Feeding	Can the patient be fed orally, if not enterally? If not, should we start parenteral feeding?
Analgesia	The patient should not suffer pain, but excessive analgesia should be avoided
Sedation	The patient should not experience discomfort, but excessive sedation should be avoided; "calm, comfortable, collaborative" is typically the best level
Thromboembolic prevention	Should we give low-molecular-weight heparin or use mechanical adjuncts?
Head of the bed elevated	Optimally, 30° to 45°, unless contraindications (e.g., threatened cerebral perfusion pressure)
Stress Ulcer prophylaxis	Usually H_2 antagonists; sometimes proton pump inhibitors
Glucose control	Within limits defined in each ICU

fore a painful procedure (25). Pain is not always easy to assess in critically ill patients, who may be unable to express themselves; for such patients, subjective measures of pain-related behavior (e.g., facial expression, movement) and physiologic indicators (e.g., heart rate, blood pressure) should also be used (26).

Pharmacologic therapies to relieve pain include nonsteroidal antiinflammatory drugs, acetaminophen, and opioids. Opioids are the most widely used, although they may be combined with nonsteroidal antiinflammatory drugs or acetaminophen for certain patients (26). The most commonly used opioids are morphine, fentanyl, and remifentanil (27–29). Continuous infusions of analgesic drugs or regularly administered doses (with extra boluses when needed) are more effective than bolus doses given "as needed," which can leave the patient without adequate pain relief for a period of time. Intravenous administration allows closer and more rapid titration to patient needs than intramuscular or subcutaneous administration (26). The side effects of opioid analgesia should also be remembered when optimizing pain management; respiratory depression can be a concern in spontaneously breathing patients, and constipation, hypotension, and hallucinations are not uncommon side effects of opioid therapy. Care should be taken to ensure analgesia is adequate but not excessive.

S for Sedation. As with analgesia, sedation is of fundamental importance for the ICU patient, but there are no rules governing how much to give and how often, and sedative administration must be titrated to the individual. Although it may be easier to increase the dose of sedative to have a calm and quiet patient, oversedation is associated with harmful effects, including an increased risk of venous thrombosis, decreased intestinal motility, hypotension, reduced tissue oxygen extraction capabilities, increased risk of ICU polyneuropathy, prolonged ICU stay, and increased costs (30, 31). Kress et al. (10) have shown that daily transient discontinuation of sedation may reduce the length of ICU stay and the need for imaging procedures, although one may argue that if sedation is titrated continuously, as recommended in current guidelines (26), there should be no need to discontinue it once a day. The use of sedation scales has been advocated, and we, like others, have shown that they may reduce the amounts of sedatives used (9, 32, 33). However, these scales are really so simple that one may wonder whether they are necessary, if everybody is aware of the possible problems and has common goals. In our unit, we like using the "CCC (calm, comfortable, collaborative) rule" to help determine whether patients are appropriately sedated.

T for Thromboembolic Prophylaxis. Thromboembolic prophylaxis is still underused because it is often forgotten, and yet the mortality and morbidity rates associated with venous thromboembolism are considerable and can be reduced by prophylaxis. Among patients who do not receive prophylaxis, objectively confirmed rates of deep-vein thrombosis range between 13% and 31% (34); for trauma patients this figure may be considerably higher (35). It has thus been recommended that all patients receive at least subcutaneous heparin, unless contraindicated (36). Several studies have been conducted comparing various heparins in specific patient groups (37–41), but very few have involved general ICU patients (42), and the most effective method of prophylaxis is still unclear. Clearly, the benefit of prophylaxis must be weighed against the risk of bleeding complications.

H for Head of the Bed Elevated. Several studies have demonstrated that having the head of the bed inclined at 45 degrees can decrease the incidence of gastroesophageal reflux in mechanically ventilated patients (43, 44), and one randomized, controlled study demonstrated reduced rates of nosocomial pneumonia when patients were nursed semirecumbent (45). However, despite the evidence and the recommendations, this simple strategy is still not widely applied (46, 47). Raising the head of the bed alone may not be enough, because patients—especially when sedated—might slide down in the bed. Thus, attempts must be made to keep not only the head of the bed elevated but also the patient's thorax.

U for Stress Ulcer Prevention. Stress ulcer prevention is important, notably for patients with respiratory failure or coagulation abnormalities, undergoing steroid therapy, or with a history of gastroduodenal ulcer, who are at increased risk of developing stress-related gastrointestinal hemorrhage (48). There is probably no need for the routine use of antiulcer agents in all ICU patients, including after trauma or major surgery (49–51). There are several possible treatment options, including antacids, sucralfate, H_2-antagonists, and the more recently proposed proton pump inhibitors; however, despite several randomized, controlled studies and meta-analyses comparing these agents (51–56), the optimal medication is still not clear. In a multicenter study by Cook et al. (55), involving 1,200 critically ill patients undergoing mechanical ventilation, patients treated with ranitidine had significantly lower rates of clinically significant gastrointestinal bleeding than patients treated with sucralfate (relative risk, 0.44; 95% confidence interval, 0.21–0.92; $p = .02$), although there was no difference in the mortality rates between the two groups. There also was no difference in the rates of ventilator-associated pneumonia. As yet, no large randomized, controlled studies evaluating proton-pump inhibitors in mechanically ventilated ICU patients have been published, but early data suggest that they are effective at increasing intragastric pH and preventing bleeding in ICU patients (57–59).

G for Glucose Control. Close glucose control has been driven primarily by the study of Van den Berghe et al. (6). This randomized, controlled study included primarily surgical patients, many after cardiac surgery, with relatively low severity indexes and mortality rates; nevertheless, the results have led most physicians to alter their practices. The strict blood sugar levels of 80–110 mg/dL in the study by Van den Berghe et al. may be difficult to adhere to in routine patient care, but many units now aim to keep blood sugar levels below about 150 mg/dL, as recommended in recently published guidelines for the management of severe sepsis and septic shock (13). In a before-and-after study, Krinsley (7) recently reported that the institution of a protocol aimed at keeping blood glucose levels at <140 mg/dL resulted in a 29.3% decrease in hospital mortality rates ($p = .002$) and a 10.8% reduction in length of ICU stay ($p = .01$).

Applying the Fast Hug

Obviously, not all parts of the Fast Hug mnemonic will apply to all patients at all times. For example, one might not need to feed a patient in the very first days after a laparotomy, and one might not give heparin to a bleeding patient to prevent the development of deep-vein thrombosis. In addition, the Fast Hug does not, of course, cover all aspects of each patient's care; different patients will

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have specific facets related to their particular disease process and status. The Fast Hug does, however, highlight seven of the key areas that must be considered regularly by the entire team for each ICU patient during the ICU stay.

The Fast Hug approach has several important characteristics. First, it can be applied to every ICU patient, as it is not restricted to any specific group (for example, low tidal volume is relevant only to patients with acute lung injury, and diphantoin is relevant only to neurosurgical patients). Second, the mnemonic is long enough to include fundamental aspects of care that involve all members of the care team but short enough to be easily remembered. Third, it has a personal touch: we all like a hug, and our patients are no exception!

This little mnemonic is also a symbol of our collaboration at the bedside. Optimization of feeding, analgesia, and sedation and reminders of certain prophylactic and therapeutic interventions are no longer the responsibility of the physician alone but are very much a team effort. Nurses, physiotherapists, and respiratory therapists can all apply a Fast Hug as they treat each patient and may question why a patient is not being fed, for instance, or is not receiving thromboembolic prophylaxis. Indeed, the essentials of patient care are less likely to be forgotten or overlooked when there are more people paying attention, and increasingly high-quality patient care requires good teamwork. The nurses on our unit have accepted this simple mnemonic wholeheartedly, and although it would be difficult to design a study to prove its effectiveness, I believe it can be used by all members of the ICU team to improve the quality of care received by our ICU patients.

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Questions 1, 2, and 3 refer to the article, "Glucocorticoid therapy in neurologic critical care" by Gomes et al.

1. The efficacy of glucocorticoids is well established in the amelioration of edema in patients with:
   A. Traumatic brain injury.
   B. Ischemic stroke.
   C. Aneurysmal subarachnoid hemorrhage.
   D. Brain tumors.
   E. Intracranial hemorrhage.

2. The ability of glucocorticoids to reduce cerebral edema has been linked to:
   A. Protective effects of glucocorticoids on the blood-brain barrier.
   B. Reduction in sodium reabsorption.
   C. Delayed apoptosis of neuronal cells.
   D. Increased cerebrospinal fluid production.
   E. Increased anaerobic metabolism.

3. Which of the following statements is true regarding the use of glucocorticoids in critically ill patients?
   A. Initiation of glucocorticoids in patients with myasthenia gravis has led to a transient worsening in 10% of patients.
   B. It has been estimated that worldwide 2,500 deaths per year can be attributed to glucocorticoid use in head injury patients.
   C. Dexamethasone is contraindicated in patients with metastatic brain tumors.
   D. Steroids have led to increased deafness when used in children with meningitis.
   E. The use of steroids leads to an increased mortality in patients with polyarteritis.

Questions 4 and 5 refer to the article, "Give your patient a fast hug (at least) once a day" by JL Vincent.

4. The "fast hug" mnemonic includes:
   A. Glutamine.
   B. Total parenteral nutrition.
   C. Suctioning.
   D. Glucose control.
   E. Haloperidol (Haldol).

5. Stress ulcer prophylaxis is indicated for intensive care unit (ICU) patients with all of the following except:
   A. Coagulation abnormalities.
   B. Ventilator therapy $\geq$48 hours.
   C. History of gastroduodenal ulcer.
   D. ICU stay $\geq$72 hours.
   E. Steroid therapy.