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## Vincent's Vision - The Future of Intensive Care Medicine



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Prof. Jean-Louis Vincent highlights integration and personalisation as key themes in the future of intensive care medicine, writing in [Critical Care Medicine](#), the journal of the Society of Critical Care Medicine. “We must push critical care medicine to its limits by incorporating new technology, collaborating with other hospital departments, limiting protocolised care to units where well-trained intensivists are not available, and adopting more personalised medicine—in so-doing, we will continue to make great progress.”

### Key Points

#### Simple Protocols Do Not Work for Complex Patients

A protocolised, “one-size-fits-all” approach is not the way forward for most patients, argues Vincent. Personalised medicine is the future. Therapeutic decisions will be made on an individual patient basis - for example, steroids will be given in septic shock only when a particular phenotype is present, new interventions will be tested only in patients with specific organ dysfunction criteria, and supplementation will be started only when concentrations of the molecule in question are decreased. Vincent acknowledges that use of protocols may be appropriate in situations when well-trained ICU physicians are not available. He goes on to question the rationale behind randomised controlled trials (RCTs) comparing treatment options for a very heterogeneous group of patients. He argues that large prospective RCTs in critically ill patients “are most useful when they demonstrate strategies that can limit iatrogenicity”. He cites as good examples the avoidance of large tidal volumes, use of prone positioning or early neuromuscular blocking agents in severe acute respiratory distress syndrome (ARDS).

However, adhering to protocols can desensitise physicians, he warns, leading to a vicious circle whereby fewer doctors are attracted to the specialty. Lack of trained ICU staff will increase the need for protocolised care, which in turn will further reduce interest in ICU work, and so the circle continues. One solution is use of telemedicine to avoid the “protocol vicious cycle”, he suggests.

#### ...But Checklists are Helpful

Simple checklists are useful, says Vincent, if they are thought through carefully. The key word is simple! They should not be too long or take too much time to work through.

#### Subspecialised ICUs are Not Needed

As ICU patients have similar conditions, it makes no sense to have separate medical and surgical ICUs, argues Vincent: “All ICU patients can develop the same problems of infection, electrolyte disorders, arrhythmias, or renal dysfunction; all ICU patients need to be fed and have their tissue perfusion optimised.”

### **Timing of Admission to ICU is Important**

In countries with limited numbers of ICU beds, patients are sicker when they are admitted to the ICU, with higher risk of death and longer length of stay. "Hospital and unit administrators and managers must appreciate that earlier ICU admission can result in shorter stays and, therefore, reduced ICU bed occupation and lower costs", writes Vincent. The solution is better collaboration between prehospital care, emergency departments and ICUs.

*See Also:* [ESICM 2015: Intensive Care and Emergency Medicine: A Symbiotic Relationship?](#)

### **Technology**

Leaving technology till last, Vincent observes that there are far too many monitors around the patient's bed that don't talk to each other. The promise is there for IT to enable evaluation of response to therapy and automatic dosage adjustment, for identifying problems early and evaluating trends and for less invasive organ support.

Vincent concludes by saying that mortality rates in ICUs should not decrease: the current 15% average is probably optimal. While the patient population will get older and sicker patients will be in the ICU for less time due to quicker stabilisation, for patients who are not getting better in the ICU, "we will perhaps decide earlier to allow them to die peacefully."

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