In early 2017, the European Society of Anaesthesiology (ESA) released their new guideline for the prevention and treatment of postoperative delirium, recommending monitoring of a patient’s depth of anesthesia during surgery to help prevent postop delirium.1

The body of evidence in support of monitoring is growing

The ESA is the latest of seven healthcare organizations that have released guidelines to address the problem of postop delirium. They have added their evidence-based recommendations to the growing consensus of professional associations to help provide a clear solution to this worldwide problem.

Postoperative delirium has serious complications for both patients and hospitals

Postoperative delirium is common.
- Of all general surgery patients, 37% to 46% are affected by postop delirium.2
- Depending upon the patient group being studied, the rates of postop delirium can range from 9% to 87%. 2
- Up to 21% of patients experience emergence delirium after anesthetics and surgery.3

Postoperative delirium is costly.
- In-hospital postop delirium costs the U.S. healthcare system $150 billion per year.4
- Hospital stays for elderly patients with postop delirium have increased by an average of 7 days. 15
- Patients with postop delirium are more than twice as likely to be readmitted to the hospital.7 8

Postop delirium can be deadly.
- Patients with postop delirium are two to four times more likely to die during their hospital stay.4 10

The ESA guideline highlights the need for monitoring

In 2015, an ESA guidelines committee task force reviewed the evidence related to delirium in the postoperative period. Based on their review, the task force concluded:
- Postoperative delirium is a common complication that requires prevention and immediate treatment.
- Prevention is important and possible, and it should be a key priority.
- Providers must focus on the prevention of postop delirium, not just treatment of it after the fact.
- All patients, regardless of age, should be monitored for depth of anesthesia as the standard of care.1

The ESA understands that despite its preventability, postop delirium receives little attention in terms of resource allocation. They state, “Given the enormous burden exerted by postop delirium on patients, their families, health care organizations, and public resources, anaesthesiologists operating in Europe should engage to make efforts in designing integrated actions aimed to reduce incidence and duration of postop delirium.”

In short, the message of the ESA guideline is very clear — as players in the healthcare industry, we all have to work together to reduce the incidence of postop delirium.1
Mounting evidence points to the need for monitoring

Studies show that the Bispectral Index™ (BIS™) brain monitoring system allows anesthesiologists to accurately titrate anesthesia during surgery, which may result in a lower incidence of postop delirium.11-13

- The BIS™ monitor measures the effects of certain anesthetics and sedatives on a patient’s brain via data acquisition and interpretation of EEG signals. This noninvasive measurement provides a continuous reading of the patient’s individual response to the anesthesia, letting the clinician adjust medication and provide the right dose.

- Monitoring with the BIS™ system improves patient outcomes:
  - Up to 50% decrease in anesthetic drug use in the OR21
  - More patients are oriented in the PACU than patients not monitored 12
  - Faster recovery and extubation times13
  - Likelihood of developing postop delirium reduced by up to 36% when BIS™ technology-guided anesthesia is used for elderly and cardiothoracic patients14-17
  - Up to 80% lower incidence of intraoperative awareness with recall in adults18-20
  - Improved patient satisfaction21

- BIS™ system titration reduces emergence and PACU time.24

Each patient is different. That’s why leading organizations support the use of BIS™ brain monitoring to personalize anesthetic dosing during surgery.


To learn more, visit medtronic.com/covidien/products/brain-monitoring.