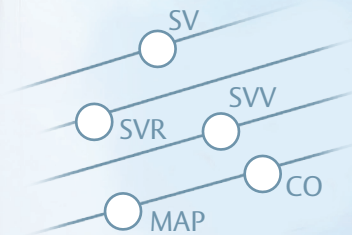


First-of-its-kind intelligent decision support

Smart. Innovation.



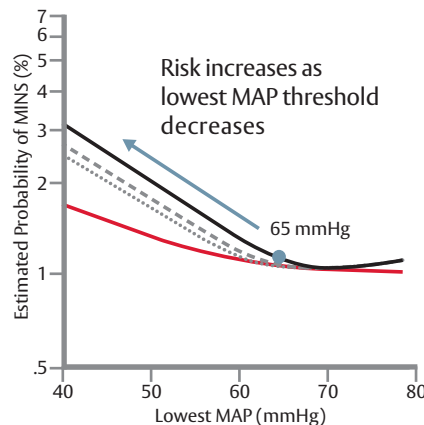
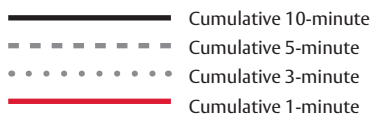
Acumen intelligent decision support suite

The risk of hypotensive events

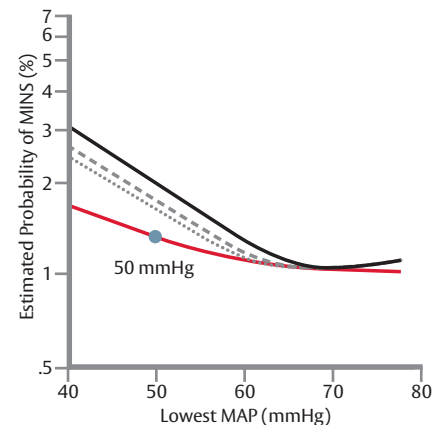
Intraoperative hypotension is common.

In noncardiac surgery patients, research findings have revealed strong associations between intraoperative hypotension and elevated risk of both acute kidney injury (AKI) and myocardial injury after noncardiac surgery (MINS).¹⁻³

- MINS – the most common cardiovascular complication that occurs after noncardiac surgery – is the leading cause of mortality within one month following surgery. It is a substantial public health issue.^{1,4}
- More than 1 in 12 patients (8 million people globally) over 45 years old experience MINS each year after non-cardiac surgery.⁴⁻⁶



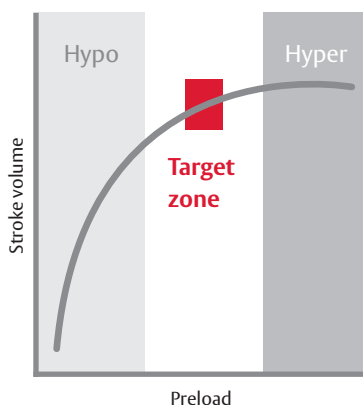
Once a patient's mean arterial pressure (MAP) drops below 65 mmHg, it takes just 10 minutes of exposure to see higher associations between intraoperative hypotension and MINS.¹



Once a patient's MAP drops below 50 mmHg, it takes only one minute for the risk of MINS to increase significantly, making early identification of a hypotensive event critical.¹

Manage the flow component of perfusion to guide individualized fluid management

Frank-Starling relationship between preload and stroke volume (SV)



When managing perfusion, stroke volume can be optimized using the patient's own Frank-Starling curve.

The patient's location on the curve can be determined by measuring changes in SV in response to change in preload using a bolus fluid challenge or passive leg raise (PLR). Dynamic and flow-based parameters are more informative than conventional parameters in determining fluid responsiveness and may help guide individualized volume administration in patients and avoid excessive and insufficient administration.

Manage variability in volume administration.

Advanced hemodynamic parameters provided by the Acumen IQ sensor and HemoSphere advanced monitoring platform may be used in perioperative goal-directed therapy (PGDT) protocols. PGDT is a treatment protocol using dynamic and flow-based parameters with the objective of making the appropriate volume management decisions. PGDT can be implemented in a single procedure or as part of a larger initiative such as Enhanced Recovery After Surgery pathway.

The Acumen intelligent decision support suite offers both predictive and retrospective decision support for the management of hypotension events.

Acumen intelligent decision support suite

Acumen IQ sensor

The Acumen IQ sensor – part of the minimally invasive family of hemodynamic sensors – unlocks the Hypotension Prediction Index software.



Acumen Hypotension Prediction Index (HPI) software

This first-of-its-kind predictive decision support software detects the likelihood of a patient trending towards a hypotensive event* before the event occurs, and provides you with insights to understand the root cause and inform a potential course of action for your patient.



Acumen Analytics software

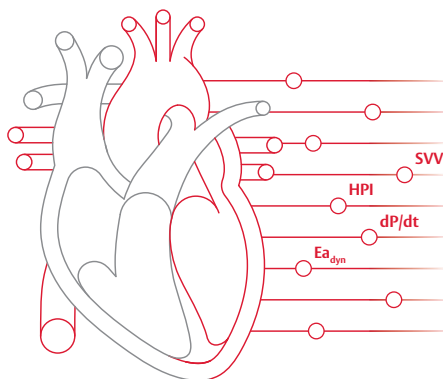
Acumen Analytics software is a retrospective perfusion analysis tool that provides you with insight into a patient's hemodynamic status.



Edwards Lifesciences brings you these advanced clinical insights into your patient's hemodynamic status.

* A hypotensive event is defined as MAP <65 mmHg for a duration of at least one minute.

Product details above



Predictive decision support

Visit [Edwards.com/HPIsoftware](https://www.edwards.com/HPIsoftware)
or contact your Edwards representative.

Know more. Know now.

For more than 40 years, Edwards Lifesciences has been helping you make proactive clinical decisions in advancing the care of acutely ill patients across the continuum of care.

Through ongoing collaboration with clinicians, providing continuous education, and our dedication to purposeful innovation, Edwards continues to develop smart hemodynamic management solutions that enable proactive decision support.

1. Salmasi, V., Maheshwari, K., Yang, G., Mascha, E.J., Singh, A., Sessler, D.I., & Kurz, A. (2017). Relationship between intraoperative hypotension defined by either reduction from baseline or absolute thresholds, and acute kidney injury and myocardial injury after noncardiac surgery. *Anesthesiology*, 126(1), 47-65.
2. Sun, L.Y., Wijeyesundera, D.N., Taite, G.A., & Beattie, W.S. (2015). Association of Intraoperative Hypotension with Acute Kidney Injury after Elective non-cardiac Surgery. *Anesthesiology*, 123 (3), 515 – 523.
3. Walsh, M., Devereaux, P.J., Garg, A.X., Kurz, A., Turan, A., Rodseth, R.N., Cywinski, J., Thabane, L., & Sessler, D.I. (2013). Relationship between Intraoperative Mean Arterial Pressure and Clinical Outcomes after non-cardiac Surgery. *Anesthesiology*, 119(3), 507-515.
4. Khan, J., Alonso-Coello, P., Devereaux, P.J., Myocardial injury after noncardiac surgery, *Curr Opin Cardiol*, 2014, 29: 307-311.
5. Sellers, D., Srinivas, C., Djaiani, G. (2018). Cardiovascular complications after non-cardiac surgery. *Anaesthesia*, 73 (Suppl. 1), 34 - 42.
6. van Waes, J., Nathoe, H., Graaff, J., Kemperman, H., de Borst, G., Peelen, L., van Klei, W. (2013). Myocardial Injury After Noncardiac Surgery and its Association With Short-Term Mortality. *Circulation*, 127, 2264 - 2271

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