Advanced hemodynamic monitoring, simplified.

Smart. Innovation.

ClearSight System

Edwards
The versatile ClearSight system provides advanced hemodynamic parameters and continuous noninvasive blood pressure from a simple finger cuff with a convenient self-coiling mechanism.

The ClearSight finger cuff is designed to provide consistent, high-resolution measurements of arterial pressure. Continuous clarity offered by the validated technology of the ClearSight system helps you proactively manage hemodynamic optimization to ensure adequate perfusion.

**Advanced hemodynamic parameters**
- Stroke Volume (SV)
- Stroke Volume Variation (SVV)
- Cardiac Output (CO)
- Systemic Vascular Resistance (SVR)
- Mean Arterial Pressure (MAP)
- Continuous Noninvasive Blood Pressure (CNIBP)

**Extends hemodynamic monitoring.**
The ClearSight system gives you noninvasive access to automatically calculated hemodynamic parameters for a patient population, including patients in whom an arterial line would not typically be placed.1-3

Noninvasive hemodynamic monitoring offered by the ClearSight system enables proactive clinical decisions across the continuum of care, including moderate to high-risk surgery patients. It can also be utilized perioperatively to proactively manage patients’ changing clinical situations in the OR, ICU and even ED.

**Heart Reference Sensor (HRS)**
The ClearSight HRS automatically compensates for hydrostatic pressure changes due to height differences between finger and heart. The HRS compensates for clinician repositioning of the patient’s hand during a procedure or for patient movement.

A simple approach to continuous monitoring
A single ClearSight finger cuff can be used for up to 8 hours for accumulated monitoring of your patient. To increase comfort, two ClearSight finger cuffs may be connected simultaneously to alternate the measurement between two fingers. This allows uninterrupted continuous monitoring up to 72 hours.
Taking noninvasive simplicity to the next level.

Introducing a new design with a self-coiling mechanism within the interior of the cuff that wraps snugly around the patient’s finger.

Versatile sizes
Small, medium and large cuffs accommodate a range of patients. An easy-to-use sizing window ensures correct selection of the appropriate size.

Advanced design
An innovative self-coiling mechanism within the interior of the cuff wraps snugly around the patient’s finger.

Validated ClearSight technology
To accurately mirror arterial line output, real-time finger pressure measurements are performed 1000 times per second utilizing the proven volume clamp method.4

Alignment markers reduce variability in cuff application.

Helpful placement guides
Indicators inside the cuff denote location of photo diodes, to help ensure correct positioning. External alignment markers guide placement to simplify consistent positioning.

At-a-glance confirmation
After application, a color-coded sizing window on the cuff itself confirms if the appropriate size cuff is in place.
Hypotension can lead to hemodynamic instability. The ClearSight system provides access to advanced hemodynamic parameters, including continuous noninvasive blood pressure (CNIBP), to allow you to evaluate hemodynamic instability and guide appropriate treatment.

Episodes of hypotension may be decreased through continuous monitoring. Cleveland Clinic researchers recently showed that continuous noninvasive monitoring reduced the amount of intraoperative hypotension by nearly half ($P = 0.039$).

Early detection of hypotension by continuous hemodynamic monitoring might prompt timely therapy, thereby reducing intraoperative hypotension.

Proactively manage intraoperative hypotension (IOH). Clarity through advanced hemodynamic parameters CO, SV, SVV and SVR can help you determine if the cause of IOH is preload, afterload, or contractility.

If the underlying cause of hemodynamic instability is related to flow generation, continuous parameters can help you determine appropriate fluid therapy.

Additionally, continuous monitoring of advanced hemodynamic parameters enables proactive clinical decisions regarding appropriate treatment to augment vascular volume, reduce anesthetic administration, or use vasopressors or inotropes.

Continuous assessment of pressure and flow parameters offers proactive decision support to help proactively manage the duration and severity of IOH episodes.
Manage the flow component of perfusion to guide individualized fluid management.

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.6-8

Additionally, stroke volume variation (SVV) has been proven to be a highly sensitive and specific indicator for preload responsiveness when managing volume. As a dynamic parameter, SVV has been shown to be an accurate predictor of fluid responsiveness in loading conditions induced by mechanical ventilation.6-8

Manage variability in volume administration.
Advanced hemodynamic parameters provided by the ClearSight system may be used in Perioperative Goal-Directed Therapy (PGDT) protocols to help reduce variability in fluid administration and guide optimal volume management in patients at risk of developing complications.

PGDT analytics software on the EV1000 clinical platform allows you to select, place and track interventions over time while providing key parameter trending data.

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

Fluid Responsiveness Test
Assess volume responsiveness with Passive Leg Raise (PLR) or fluid bolus to determine appropriate intervention. Software computes % change in SV, SVI, CO or CI and keeps historical log of past FRTs.
Clinical decision support screens allow for immediate recognition of rapidly changing clinical situations.

Continuous access to your choice of parameters on the EV1000 clinical platform, when used with the noninvasive ClearSight system, enables you to maintain your patients in the optimal volume range and reduce volume administration variability.

**EV1000 clinical platform.**
Color-based indicators communicate patient status at a glance, and visual clinical support screens allow for immediate recognition and increased understanding of rapidly changing clinical situations.

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**Easy-to-use touch screens** allow selection of the parameters most meaningful for each clinical situation. **Simplified graphics** offer clear updates of your patient’s hemodynamic status.
Intuitive displays simplify workflow across acute care settings where proactive decision support is critical.

Focused screens clarify advanced hemodynamic monitoring information to help guide proactive clinical decisions.

The Focused Main screen presents three parameters in a clear, easy-to-interpret display.

The Focused Trend screen allows you to see trends with all three parameters monitored continuously.

The Focused Charting screen allows you to view all parameters for three of the four categories (flow, pressure, resistance, or preload) on a single screen.
ClearSight system

The ClearSight system is comprised of the ClearSight cuff and EV1000 clinical platform.

1. EV1000 monitor
2. EV1000 pump-unit
3. Pressure controller
4. ClearSight finger cuff
5. Heart reference sensor

Enabling proactive clinical decisions.

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.

Know More. Know Now.

Visit Edwards.com/gb/ClearSight or contact your Edwards' representative.

References
4. Edwards Lifesciences Hypotension US PP--US-2729 (v2.0)