



SPECULUM S.A.

HUMAN CENTERED
ARTIFICIAL INTELLIGENCE

A photograph of a hospital room. A patient is lying in a bed, looking towards the camera. Two healthcare professionals, a doctor and a nurse, are standing by the bedside, looking at a tablet computer. The room is dimly lit, with a window in the background.

Every patient connected and safe

The Patient Status Engine

The Patient Status Engine is a unique and powerful real-time physiological data capture and analysis platform.

An all-wireless and an end-to-end fully-regulated medical device, the Patient Status Engine, also known as the PSE, frees patients and care teams from the tyranny of cables and wires.

The PSE is a new kind of medical device – a digital platform which is future-proofed and continually upgradable. The PSE is the only system that meets healthcare providers needs for universal patient data capture and analysis infrastructure today - and into the future.

Remote Monitoring

As a remote monitoring platform, the PSE enables patients on acute and chronic pathways to be monitored from home or in any healthcare setting including high dependency and general wards. It offers rapid creation of virtual wards and integrates the patients' vital sign data seamlessly into the hospital's or provider's electronic medical record system.

Efficiency Gains & Increased Patient Safety

As an efficiency tool, the PSE relieves pressure on staff, frees up hospital beds for those who need them the most, addresses severe staff shortages, COVID-19 burnout, and increases patient safety. It automates patient obs, virtually eliminates technical and other false alarms, and enables paperless wards to be set up within hours.

Real-time Data Analysis

As a real-time data analysis and clinical decision support system the PSE alerts healthcare professionals when a patient's physiological data falls outside selected parameter. Automated early warning scores such as NEWS2, MEWS and various PEWS are provided as standards and customised scores may also be specified.

Clinical & Pharmaceutical Research & Development

As a clinical pharmaceutical research and development platform, the PSE offers open API's and access to all raw and processed data. An ever-increasing range of digital biomarkers and condition specific predictive algorithms that run as apps within the PSE platform are offered from this widening community of clinical developers.

Use the PSE to:

- Monitor adults, children & newborns easily and wirelessly
- View and download vital signs
- Share medical records with care teams at the click of a button
- Gain access to a wealth of data about your patient
- Detect deterioration quickly
- Access and utilise AI predictive analytics
- Create personalised early warning scores
- Configure monitoring for all clinical conditions and acuity levels
- Aid patient flow
- Accommodate early discharge
- Reduce admissions and readmissions
- Provide more time to care
- Reduce impact and stress on healthcare staff
- Provide a continuity of care
- Improve the quality of life for patients and families
- Provide acute care anywhere



Innovation at its very best

The PSE is an evolving platform which is also a complete end-to-end, UKCA marked, Class IIa CE-marked and Class II FDA cleared medical device.

Designed, manufactured and delivered knowing that patients, clinicians and families are counting on quality at all times.



Wireless Sensors

Measure heart rate, respiration rate, heart rate variability, temperature, oxygen saturation, continuous or periodic ECG and PPG, and periodic or quasi-continuous blood pressure. Sensors have a built-in 3-axis accelerometer for an extra level of monitoring.



Gateway

A secure tablet computer health terminal which allows complete visibility of your patient's health status and early warning score. Vital sign data is uploaded continuously and in real-time, and customised EWS thresholds can be set.



Lifeguard Dashboard

Provides easy access to patient data direct from a secure local or cloud server. It serves as a live control centre, where staff can remotely monitor patients 24/7, with real-time patient data and early warning indicators presented on computer screens, tablets, laptops and mobiles.



Lifeguard Server

The back-end IT system which features an open API to provide straightforward connectivity to electronic medical records and other hospital information systems. This ensures scalability and that the platform is secure and robust.



Notification Service

COMING SOON!

A key feature of the PSE Lifeguard Server that provides notifications to care teams via SMS messaging, WhatsApp or proprietary provider apps.



Secure Data

The PSE was designed from the ground up with data security in mind. It uses industry standard encryption when transmitting vital sign data between the components of the PSE as well as authenticating each stage to prevent eavesdropping.