Gaumard®
Simulators for Health Care Education

NewroSim™

Traumatic Brain Injury & Stroke Care Training Solution

- 10 Preprogrammed TBI and Stroke Scenarios
- NewroSim™ Scenario Guidebook
- Powerful computer-based hemodynamic model
- Interactive transcranial Doppler waveform
- Model-generated intracranial pressure readings

The NewroSim™ scenario library includes high and low-frequency traumatic brain injury and stroke clinical cases. Every scenario is designed to facilitate the training of students and professionals with the psychomotor, cognitive, and teamwork skills needed to effectively manage and treat patients throughout the stages of care.

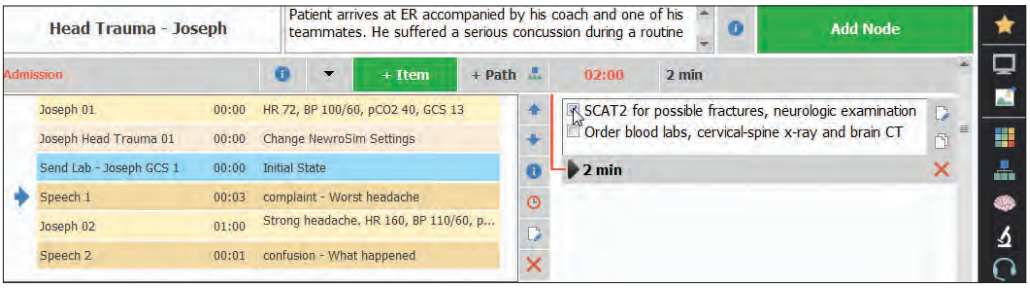
Comprehensive
Includes scenarios for first responders, ED teams, neurointensivists, and other generalists and specialists.

Objective-based
Benefit from measurable goals so you can track progress and improvement over time.

Ready-to-use
NewroSim eliminates costly development time by including all the scenario medical references, mock labs, and assets needed for each case, thus eliminating costly development time.

Expandable
Scenarios are editable, so you can expand the scope of training by creating new exercises to meet your institution's needs.

10 preprogrammed scenarios
1. Diabetes and Stroke
2. Artery Stenosis
3. Thrombolytic Therapy Reaction
4. Stroke
5. Cerebral Artery Thrombosis
6. Head Trauma
7. Hypotension
8. Hypercapnia
9. Cerebral Autoregulation
10. Cerebral Autoregulation II



NewroSim scenarios feature timed objectives, vital sign changes, speech responses, and assets such as labs and CT scans. To run a scenario, simply checkmark the key events to progress the case.

Scenario training guidebook
NewroSim includes a companion training guidebook with supplemental materials for every scenario. The guidebook makes it easy to plan and run scenarios and debrief learning objectives.

- Case overview
- Patient history
- Neurologic exam results
- Simulation parameters
- Expected actions
- Learning objectives
- Supporting literature references
- Mock CT scans and lab results


Head trauma scenario at point of injury


Pupil reactivity during neuro assessment


Sport concussion assessment

The NewroSim™ model integrated into the UNI® software simulates the hemodynamics of the intracranial cerebral vessels and its effects, as seen on the ICP and TCD readings.

UNI NewroSim Control Panel

Integrated

NewroSim is built right into UNI, allowing you (the operator) to manage the scenario from one interface.

Easy-to-use

You do not have to be a specialist to operate NewroSim. The scenarios and NewroSim model automate physiological changes while the corresponding vitals are shown on the TCD monitor in real-time. Now you can simulate conditions and interactions with a high degree of fidelity with minimal manual input.

Powerful

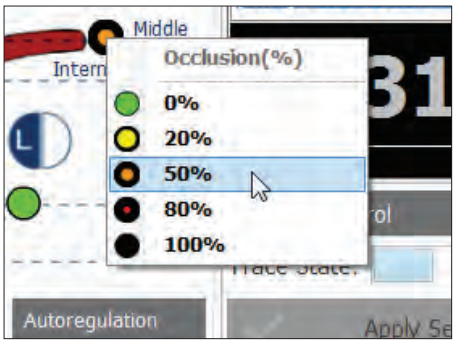
The NewroSim model simulates the hemodynamics of the intracranial cerebral vessels, even calculating interhemispheric compensation. What's more, it can automatically update the patient's presentation, including changes in eye reactivity depending on the condition.

Programmable

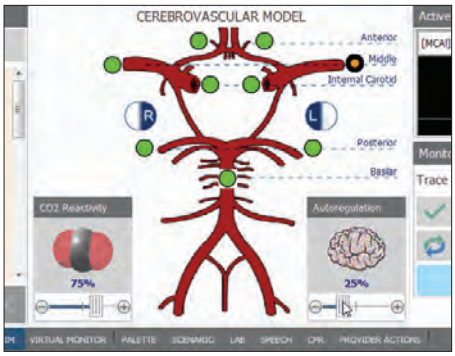
Using the manual controls, you can easily override the cardiovascular parameters and simulate on the fly.

Multimodal

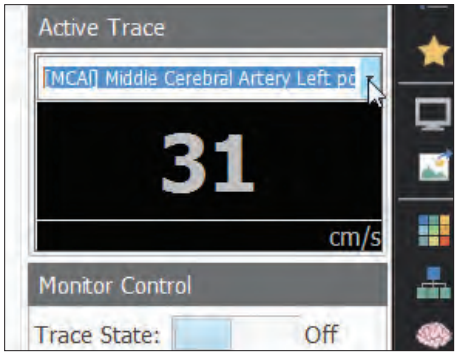
The NewroSim model can be used as a standalone tool to teach learners the relationship between the hemodynamics of the brain and how they'd appear on a TCD waveform.



- Manually create stenosis and/or occlusions on the cerebrovascular blood vessels
- Occlusion points can be anterior/posterior and on the left or right side



- Change CO_2 reactivity of the brain's chemoreceptors
- Adjust the autoregulation of the brain



- Monitor vessel status and perfusion directly from the control screen

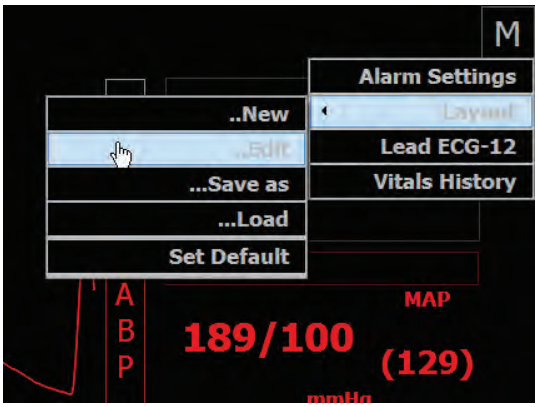
NewroSim™ adds simulated patient vital signs designed to provide participants with the critical physiological information needed to aid decision-making.

- Transcranial Doppler (TCD) waveform and numeric values
- Intracranial Pressure (ICP) readings
- Respiratory and cardiac monitoring

Integrate the NewroSim Monitor to train participants in the following skills:

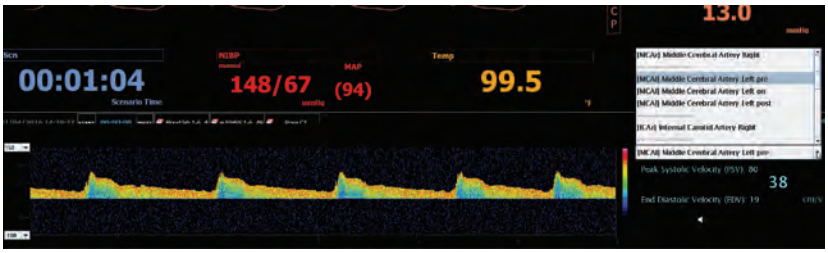
- Monitoring brain vessel status and perfusion
- Monitoring the effects of rescue intra-arterial thrombolysis
- Monitoring vessel recanalization during treatment
- Identifying and monitoring aneurysms and malformation at the brain artery level
- Assess the effectiveness of the sonothrombolysis

Customize the patient monitor to mimic your native monitor screen.



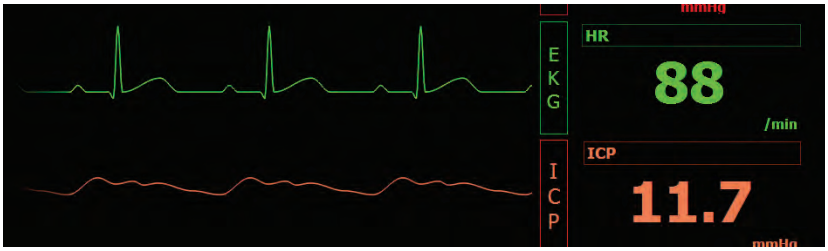
- Display up to 12 numeric values, including HR, ABP, CVP, PAWP, NIBP, CCO, SpO_2, SvO_2, RR, $EtCO_2$, temperature, and time
- Select up to 12 dynamic waveforms, including PAWP, pulse, CCO, SvO_2, respiration, capnography.

NewroSim Patient Vitals shown on optional Gaumard® Vitals Patient Monitor



Transcranial Doppler Waveform and Vessel Selection Screen

The interactive transcranial Doppler allows participants to select between the cerebral arteries to monitor blood flow velocity.



NewroSim Intracranial Pressure Reading & Waveform

The NewroSim mathematical model generates intracranial pressure (ICP) readings. The model automatically calculates changes in cardiovascular variables and reactions to medications administered to simulate real-time readings with the highest degree of fidelity.

NewroSim™

Model#.601

NewroSim license compatible with HAL® models S3201, S3040.100, S3040.50, S3101, S3000, and S1000.

Package contents

- NewroSim Hemodynamic Model
- 10 Preprogrammed Scenarios
- NewroSim Training Guide
- UNI® NewroSim License

Optional Gaumard Vitals™ patient monitor.

- Customizable layout can mimic the look of standard patient monitors
- Customize each trace independently. Users can set alarms and time scales.
- Display up to 12 numeric values, including HR, ABP, CVP, PAWP, NIBP, CCO, SpO_2, SvO_2, RR, $EtCO_2$, temperature, and time.
- Select up to 12 dynamic waveforms, including ECG Lead I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6, AVP, CVP, PAWP, pulse, CCO, SvO_2, respiration, capnography.
- Share images such as x-rays, CT scans, lab results, or even multimedia presentations as the scenario progresses.
- Compatible with NewroSim for HAL® models S3201, S3040.100, S3040.50, S3101, S3000, and S1000.

Gaumard Vitals™ Bedside Virtual Monitor

30080154B

Gaumard Vitals bedside virtual patient monitor. Simulates 20+ dynamic numerical parameters and waveforms. Customizable interface.

GAUMARD Vitals™ Portable Virtual Monitor

30081003A

Portable Gaumard Vitals virtual patient monitor. Simulates 20+ dynamic numerical parameters and waveforms. Customizable interface.

Request a quote

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