



## Introducing HD-ICG™

### High Definition-Impedance CardioGraphy (HD-ICG) for ODM+

- Non-invasive
- Easy to use
- Cost-effective

Deltex Medical now offers a range of haemodynamic solutions to suit any patient and surgery type:

- Oesophageal Doppler Monitoring
- Calibrated Arterial Waveform Analysis
- Non-invasive HD-ICG

HD-ICG is suitable for a wide range of applications:

- Emergency Department
- Awake surgery
- Pre/Postoperative monitoring
- Intensive Care/HDU
- Ward

HD-Impedance CardioGraphy (HD-ICG) provides continuous and accurate measurements of Cardiac Output and other haemodynamic parameters. HD-ICG disposable electrodes are placed on the neck and chest. The electrodes transmit and detect electrical and impedance changes in the thorax. After stabilising, using HD-Z signal filter technology, these electrical currents are then utilised to measure and calculate haemodynamic parameters, including:

- Stroke Volume/Stroke Volume Index
- Cardiac Output/Cardiac Index
- Heart Rate
- Ventricular Ejection Time, corrected for heart rate (VETc)



Charloux *et al.* A new impedance cardiograph device for the non-invasive evaluation of cardiac output at rest and during exercise: comparison with the "direct" Fick method. *Eur J Appl Physiol.* 2000 Jul;82(4):313-20.

The authors report:

“ We conclude that the PhysioFlow provides a clinically acceptable and non-invasive evaluation of cardiac output under these conditions. ”

Bour and Kellett. Impedance cardiography: a rapid and cost-effective screening tool for cardiac disease. *Eur J Intern Med.* 2008 Oct;19(6):399-405.

The authors report:

“ These different patterns of ICG waveform are relatively easy to recognise and can be cost-effectively and quickly obtained to reliably distinguish between normal and abnormal cardiac function. ”

Terblanche *et al.* Decreased Cardiovascular Hemodynamics as Possible Mechanisms of Hypotension during Cesarean Delivery under Spinal Anesthesia: Role of Thoracic Impedance Cardiography. *Society of Obstetrics Anesthesiology and Perinatology (SOAP)*, March 2008 (abstract).

The authors report:

“ We propose that a continuous monitoring of these cardiovascular functions (i.e. hemodynamics) may provide insights into the mechanism(s) of hypotension during a Cesarean delivery under spinal anesthesia. ”

Vorneck *et al.* Thoracic electrical bioimpedance: a tool to determine cardiac versus non-cardiac causes of acute dyspnoea in the emergency department. *Emerg Med J* 2010;27:359-363.

The authors report:

“ This study demonstrated that non-invasive TEB cardiohaemodynamic parameters can differentiate between cardiac and non-cardiac-related causes of dyspnoea in ED patients presenting with acute breathlessness. ”

For further information, please contact us: **01243 774837** to locate your Deltex Medical Regional Sales Manager or Clinical Sales Specialist.



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