PRESS RELEASE

NICE backs use of new cardiac output monitoring device by the NHS

The National Institute for Health and Clinical Excellence (NICE) has today (Wednesday 30 March) published final guidance which supports the case for adoption of CardioQ-ODM in the NHS. Based on the best available evidence and expert advice, the Institute found this new device offers proven advantages for both patients and the NHS. It advises CardioQ-ODM should be considered for use in patients undergoing major or high-risk surgery, or for other surgical patients who may require invasive cardiovascular monitoring.

CardioQ-ODM is an oesophageal Doppler monitor which is used in patients to assess the amount of blood pumped by the heart with each beat. This provides information for the doctor to make decisions about the fluid balance in the patient. It relies on a single-use probe placed in the patient’s food pipe via the mouth or nose. The device then generates a low-frequency ultrasound signal, used to determine blood flow. For patients undergoing major surgery, it’s essential to achieve the best possible volume of blood flow and cardiac output to ensure that major organs get the blood needed to function properly.

The Medical Technologies Advisory Committee (MTAC), who developed this guidance, found CardioQ-ODM reduces post-operative complications, the use of central venous catheters, and a patient’s length of stay in hospital compared with current clinical assessment, with or without invasive cardiovascular monitoring. MTAC also recognized this device is less invasive than other current cardiac output monitoring techniques, such as a pulmonary artery catheter.

1 For example, central venous pressure or pulmonary artery catheter monitoring.
As CardioQ-ODM reduces the length of critical care and in-hospital stay for patients undergoing major or high-risk surgery, it can also save money for the NHS. Further cost savings will result from the reduction in post-operative complications.

However, MTAC is unable to support the routine use of CardioQ-ODM for the management of patients in a critical care environment. The committee recognized there wasn’t enough evidence to recommend CardioQ-ODM in preference to other cardiac output monitoring devices for these patients. MTAC also considered that further research would be helpful to compare CardioQ-ODM with other methods for cardiac output monitoring, particularly in patients in critical care, and noted that trials are currently ongoing.

**Dr Carole Longson, Director of the NICE Centre for Health Technology Evaluation, said:** “We are delighted to advise that CardioQ-ODM should be considered for patients undergoing surgical procedures who would otherwise require invasive cardiac monitoring. This new device offers potential cost savings for the NHS together with improved experiences for patients.

“NICE’s new medical technology programme is designed to simplify the process by which new medical technologies pass from development into NHS use. The Medical Technologies Committee found strong evidence for adopting Cardio-Q ODM in the NHS in specific surgical settings, and we hope it will be used consistently to deliver proven clinical and cost benefits.”

**Ends**

**About the guidance**

1. Oesophageal Doppler monitoring is undertaken with a single-use disposable probe which is placed in the oesophagus via the mouth or nose. A low-frequency ultrasound signal is generated by the device and is reflected by blood cells travelling down the aorta. The Doppler principle is applied to the reflected signal to determine flow velocity.

2. The cost of the CardioQ-ODM is approximately £11,000. The cost of probes varies depending on the intended length of use. The average cost of a probe is approximately £67 for patients undergoing surgery and approximately £118 for patients in the critical care unit. The cost of the CardioQ-ODM and probes may vary because of differences in purchasing contracts.

3. The cost saving per patient, when the CardioQ-ODM is used instead of a central venous catheter in the peri-operative period, is about £1,100 based on a 7.5 day hospital stay and assuming the use of CardioQ-ODM gives a reduction of about 2 days in length of hospital stay.

4. CardioQ-ODM is manufactured by Deltex Medical.

5. This final guidance was produced by the Medical Technologies Advisory Committee (MTAC), which is part of the Medical Technologies Evaluation Programme at NICE.

6. The final guidance will be available from Wednesday 30 March at [http://guidance.nice.org.uk/MTG3](http://guidance.nice.org.uk/MTG3)
About the Evaluation Pathway programme for Medical Technologies

1. Established by NICE in 2009, the focus of this new area of work is specifically on the evaluation of innovative medical technologies, including devices and diagnostics. The types of products which might be included are medical devices that deliver treatment such as those implanted during surgical procedures, technologies that give greater independence to patients, and diagnostic devices or tests used to detect or monitor medical conditions. The independent Medical Technology Advisory Committee has two core remits: selecting medical technologies for evaluation by NICE guidance programmes and also developing medical technologies guidance itself. Manufacturers and clinicians can notify potential technologies via the new online notification system at www.nice.org.uk/MT.

About NICE

1. The National Institute for Health and Clinical Excellence (NICE) is the independent organisation responsible for providing national guidance and standards on the promotion of good health and the prevention and treatment of ill health.

2. NICE produces guidance in three areas of health:
   - **public health** – guidance on the promotion of good health and the prevention of ill health for those working in the NHS, local authorities and the wider public and voluntary sector
   - **health technologies** – guidance on the use of new and existing medicines, treatments, medical technologies (including devices and diagnostics) and procedures within the NHS
   - **clinical practice** – guidance on the appropriate treatment and care of people with specific diseases and conditions within the NHS.

3. NICE produces standards for patient care:
   - **quality standards** – these reflect the very best in high quality patient care, to help healthcare practitioners and commissioners of care deliver excellent services
   - **Quality and Outcomes Framework** – NICE develops the clinical and health improvement indicators in the QOF, the Department of Health scheme which rewards GPs for how well they care for patients

4. NICE provides advice and support on putting NICE guidance and standards into practice through its implementation programme, and it collates and accredits high quality health guidance, research and information to help health professionals deliver the best patient care through NHS Evidence.