PRESS RELEASE

NICE draft guidance on cardiac output monitoring device published for consultation

Draft guidance from the new NICE medical technologies programme on a cardiac output monitoring device is issued today for consultation. Provisional recommendations are made supporting the use of CardioQ-ODM, when it’s used in patients undergoing surgical procedures who would otherwise require invasive cardiac monitoring. For critically ill patients, however, there wasn’t enough evidence for CardioQ-ODM to be recommended in preference to other cardiac output monitoring devices.

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. Evidence indicates that using this device can benefit both patients undergoing certain types of surgery and the health system, with a reduction in post-operative complications, less use of central venous catheters and shorter patient stays in hospital compared with standard care. This draft guidance was produced by the Medical Technologies Advisory Committee (MTAC), which is part of the Evaluation Pathway Programme for Medical Technologies at NICE. This new programme will help enable new medical technologies, or important modifications to existing ones, to be used more quickly and consistently in the NHS.

For patients undergoing major surgery and in critically ill individuals, achieving the best possible volume of blood flow and cardiac output is essential to ensure that major organs get the blood needed to function properly. Currently, cardiac output monitoring can be performed in various ways, including using a pulmonary artery
catheter, which is an example of an invasive technique. CardioQ-ODM is less invasive, as 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 which is used to determine blood flow, which helps in managing the patient's fluid levels.

MTAC considered that for surgical patients, who would otherwise need invasive cardiac monitoring, the available evidence supported a reduction in post-op complications and in how long they stayed in hospital.

However for the management of critically ill patients, the Committee concluded that there wasn’t enough evidence to recommend CardioQ-ODM in preference to other cardiac output monitoring devices. MTAC also considered that further research would be helpful comparing CardioQ-ODM with other methods of cardiac output monitoring, particularly for patients in the critical care environment, and noted that trials are currently ongoing.

**Dr Carole Longson, Director of the NICE Centre for Health Technology Evaluation, said:** “We’re pleased to open the consultation on the draft guidance for the second technology considered by the new Medical Technologies Advisory Committee. These supportive provisional recommendations advise that CardioQ-ODM should be considered for use in patients undergoing surgical procedures who would otherwise require invasive cardiac monitoring. We look forward to receiving comments on our provisional recommendations from health professionals, industry and patient groups to help inform the development of this guidance.”

The consultation will run for 4 weeks, ending at 5pm on 1 November 2010. The consultation responses received will be fully considered by MTAC, and final guidance is expected to be published in December 2010. More information on the consultation is available at [http://guidance.nice.org.uk/MT/80](http://guidance.nice.org.uk/MT/80).

**Ends**

**Notes to Editors**

**About the guidance**

1. The cost models used indicated that the estimated average cost saving per patient, when CardioQ-ODM replaces the use of central venous pressure monitoring in the peri-operative period, is £1062 based on a typical 7.5 day hospital.

2. 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 red blood cells travelling down the aorta. The Doppler principle is applied to the reflected signal to determine flow velocity.
3. CardioQ-ODM is manufactured by Deltex Medical.

About the Evaluation Pathway Programme for Medical Technologies

4. 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

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

6. 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, procedures and medical technologies within the NHS

   **clinical practice** – guidance on the appropriate treatment and care of people with specific diseases and conditions within the NHS.