

MEDICAL TECHNOLOGY AND INNOVATION

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What is the Medical Technology Group?

The Medical Technology Group (MTG) is a coalition of patient groups, research charities and medical device manufacturers working to make medical technologies available to everyone who needs them. Uptake of medical technologies in the UK is not as good as it should be, given their great potential to provide value for money to the NHS, patients and taxpayers. The MTG believes that patients and clinicians need better information about medical technologies so that they can make informed choices about their medical care.

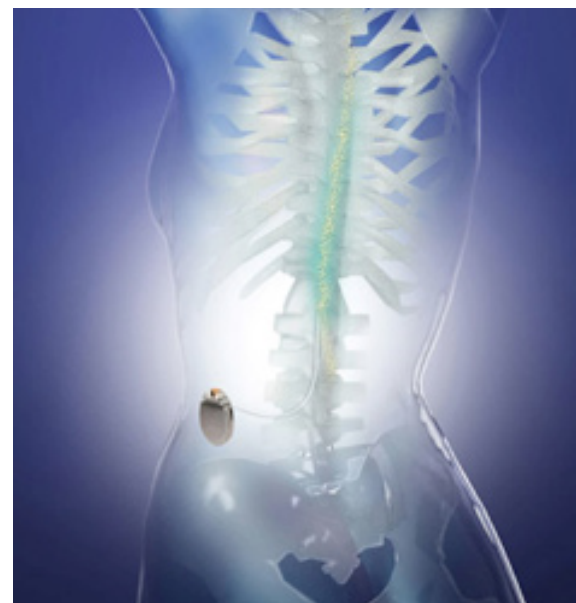
KEY FACTS ON MEDICAL TECHNOLOGY

Medical Technology is *vital* to British patients and the British economy

- In 2008 implantable cardioverter-defibrillators (ICDs) were implanted in Germany at over **three times** the UK rate
(Source – Eucomed)
- The UK has lower levels of pacemaker use than **every country in western europe** except Norway and Ireland
(Source – Eucomed)
- The medical technology industry employs around **60,000** people in the UK
(Source – Eucomed)
- Around **€3.8bn** is spent on medical technology research and development in Europe each year
(Source – Eucomed)
- The UK earns around **€5.6m** from medical technology exports each year
(Source – Eucomed)
- The sector is made up of around **2,000** companies in the UK, mainly SMEs
(Source – ABHI)
- Minimally invasive surgical techniques can allow patients to leave hospital **less than 24 hours** after a hip replacement
(Source – Zimmer)
- Only **one third** of patients with fibroids think they have received adequate information on their condition. In a recent survey **no** patients were offered Uterine Fibroid Embolisation, one of the most successful treatments
(Source – FEMISA)



Medical technologies, such as this replacement hip joint, earn the UK €5.6m in exports each year



€3.8bn is spent on research and development in Europe every year, allowing innovations such as spinal cord stimulation to relieve chronic pain

Valuing Innovation: The MTG and the Kennedy study

Professor Sir Ian Kennedy is conducting a study for NICE into how innovation should be valued. Correct valuation is vital if innovation is to be encouraged, allowing patients to benefit from ever more successful treatments.

The MTG submitted evidence to the study, setting out why costs both inside and outside of the NHS ought to be considered, why low price does not necessarily mean low value, and why patients' experience of value may have nothing to do with finance.

Value cannot be decided simply by looking at an innovation's price. Many relatively high cost products can be good value, and may even save the NHS money in the long run. An example of this is minimally invasive surgery techniques for hip replacements. While the initial costs of this are higher than standard procedures, the total price for a patient's care may be lower – in part due to minimally invasive techniques requiring shorter hospital

stays. Low cost treatments' value may also belie their initial price. For details of this, please see the Medical Technology Group's views on wound care later in this Bulletin.

NICE currently only assesses costs and value to the NHS, whereas many innovations' benefits can be far wider. Without an assessment of costs across government, a treatment's full value cannot be known. This could lead to patients missing out on care, and the tax payer missing out on savings. The MTG believes such calculations should be made by NICE.

The Chief Medical Officer noted in his 2008 Annual Report that up to 25% of people experiencing chronic pain lose their jobs because of their conditions. Thus any treatments which allow people to remain in work will not only be of great value to them, it will also allow savings to be made on Department of Work and Pensions spending such as Incapacity Benefit and Employment and Support Allowance. Technologies which relieve pain, such as Spinal Cord Stimulation or pain pumps, could thus result in large cost savings if it assisted people with chronic pain in maintaining employment.

Of course, medical technology is valued by patients in far more than simply financial terms. For example, the standard treatment for fibroids is hysterectomy, an expensive operation necessitating long periods off work and intensive post-operative care. Yet for many women, a hysterectomy's prime disadvantage is the loss of their fertility. A technology preventing this would of course be of limitless value to these patients. Uterine fibroid embolisation is a non-invasive procedure with quantifiable cost benefits. Yet this will be infinitely overshadowed for those patients whom the technology has allowed to keep their fertility. Similarly, telecare and telemedicine, allowing monitoring and treatment to take place outside of hospital, allow patients less disruption to their day to day lives.

We are working with NICE to encourage Professor Sir Ian Kennedy to consider these points. His findings will be presented to the NICE board on 22 July 2009.



Telecare devices allow patients to be monitored at home

High impact, low cost: Medical technology and chronic wound care

The term ‘medical technology’ can invoke images of complex, expensive solutions, yet the reality is often very different. In addition to the benefits offered by high-technology equipment, great advantages can be provided by simple, cost effective treatments, especially in the field of chronic wound care.

Katherine Murphy, Director of the Patients Association said

“medical technology isn’t just about expensive machines. Cutting edge advances mean that even the simple dressing can make enormous differences to patients whilst remaining low cost and suitable for everyday use”.

Leg ulcers are one of the most common forms of chronic wound, especially among older patients. They are associated with significant levels of pain, reduced mobility and social stigma, which can lead to depression. Treatment is very time consuming, sometimes accounting for half of a community nurse’s work.

Effective treatment is thus of vital importance in improving patients’ quality of life and saving NHS time and money. Cost savings can also be felt by wider society, for example, patients’ recovery may allow them to retain their independence and remain in their homes.

There are over 400 wound dressings available, and certain key performance characteristics are required for any such dressing. The dressing must absorb and retain exudate, keep harmful chronic wound exudate away from the surrounding skin, perform efficiently when used under compression, be easy to remove and be demonstrated as cost-effective. Selecting the appropriate dressing thus requires considerable clinical skills.

Some advanced wound dressings’ high absorbency means that they can be kept in place for relatively long periods of time, limiting the amount of expensive nursing care needed. Others contain silver, a powerful antibacterial which can limit the spread of MRSA.

Leg ulcers limit patients’ mobility, and patients may feel embarrassment about odours, both of which lead to limited social engagement. Such quality of life factors of course have vast impacts on patients.

The Lindsay Leg Club Foundation, an MTG member that promotes innovative methods of ulcer treatment in a social environment, sees addressing such factors as of vital importance in ensuring successful treatment.

Ellie Lindsay, the Lindsay Leg Club Foundation’s founder said,

“an holistic assessment of a patient’s wound is possibly the single most important constituent of healing a wound and will lead to rational decision-making. Patients who trust their treatment and see sustained improvements in their condition will be motivated to take an active interest in their health and take steps to ensure they get better quickly. This allows them to enjoy life and limits their dependence on the NHS”.



A multidisciplinary Leg Club team treats patients in a social setting

Appropriate evidence based wound dressings and innovative nursing can make vast differences to individuals experiencing life with a leg ulcer.

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TECHNOLOGY SHOWCASE:

ICDs

Implantable cardioverter-defibrillators (ICDs) are used to correct heart arrhythmias. This small device is implanted in the chest, and is connected into the heart to continuously sense its rhythm. When it detects that an abnormality has occurred, it delivers a tiny electric shock to restore normal beating.

ICDs are used for those at risk of sudden cardiac death, in patients with some forms of heart failure, and those who have undergone surgical repair for congenital heart conditions. Sudden cardiac death alone affects around 50,000–70,000 people in the UK each year¹, including many lives which could be saved by increased use of ICDs.

ICDs are very effective, NICE estimates that they can lead to a 50% reduction in the risk of cardiac death². They are recommended by NICE in some specific circumstances, yet their use is not widespread in the UK.



ICD can halve cardiac deaths, but access to them is a postcode lottery

Patricia from Yorkshire has an ICD.

“In 2001 I started feeling very dizzy and eventually passed out. I was diagnosed with Brugada Syndrome, a rare condition causing abnormal heart rhythms. I was alarmed to find out that the condition carries a high risk of sudden death.

There is no cure for Brugada Syndrome, but I was offered an ICD which constantly monitors my heartbeat, and delivers a small shock when it detects an abnormality. This gives me great peace of mind – allowing me to do the things I enjoy like walking in the Dales without worrying about my heart.

My ICD had to kick into action when I felt the tell-tale dizziness when having dinner with friends. If I had no ICD, it’s likely that I would have died. I think of it as my guardian angel which has given me back my life.”

ICDs are implanted at a rate of around 55 per million in the UK, compared with over 350 million per million in the US. Use varies wildly even within the UK, in Herefordshire and Worcestershire only 29 per million are implanted, compared to 89 per million in Leicestershire, Northampton and Rutland (2007 data from the Cardiac Network Device Survey Group). This means many people could be dying unnecessarily due to lack of access to vital technology.

The MTG calls on clinicians, NICE and policy makers to ensure appropriate levels of ICD use.

¹NICE Technology Appraisal on Implantable cardioverter defibrillators for arrhythmias, July 2007
²NICE Technology Appraisal on Implantable cardioverter defibrillators for arrhythmias, July 2007