



MEDIA RELEASE
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AUSSIE CATTLE KEY TO GLOBAL MEDICAL TECHNOLOGY INNOVATION

Today, the Australian Broadcasting Corporation program, *Landline*, carried a story of how Australian beef cattle are being used to create heart valves that save lives in Australia and globally.

A number of cattle farms in northern New South Wales and the Toowoomba region in Queensland, are playing a world leading role in this cutting edge medical technology.

The story follows the journey of the bovine pericardium tissue through to the creation of artificial heart valves, known as transcatheter aortic valve implantation (TAVI) and how patients are benefiting.

The aortic valve is like a one-way door leading out of the heart. The TAVI is used in the treatment of aortic stenosis. This is a progressive disease that occurs with a narrowing of the patient's aortic valve opening due to a build up of calcium or cholesterol which makes it harder for the heart to pump blood through the valve.

Around four in every 1,000 people are thought to have aortic stenosis.

The TAVI is inserted into the heart via the femoral artery in the groin and inserted inside the effected artery. This replaces invasive open-heart surgery that for some patients might not even be an option.

As Prince Charles Hospital director of cardiology, Professor Darren Walters says:

"The problem with this condition is it's a bit like being slowly strangled."

This technology is game-changing in the treatment of this condition and Australian cattle industry is playing a critical role in this amazing MedTech industry success story.

The Australian processing facility – Australian Country Choice (ACC) – with world-class facilities and strict quality and hygiene controls measures prepares for daily chilled air freight shipments to Edwards Lifesciences facilities in Singapore and California.

The tissue then undergoes 12-18 hours of individual labour for each valve to be hand sewn into the artificial valve.

To date, more than 150,000 patients have been treated with Edwards Lifesciences transcatheter valves by multi-disciplinary Heart Teams worldwide.

Ian Burgess, Chief Executive Officer of the Medical Technology Association of Australia said:

“The Medical Technology Association of Australia (MTAA) applauds the Medtech industry partnering with the agriculture sector to deliver life saving technology to the world.

“We’re pleased that earlier this year the newer TAVI was approved by the Medical Services Advisory Committee, however, but both Europe and the US approved this technology several years ago.

“We know the regulatory environment could be improved to fast track patient access to medical devices. That’s why it’s critical the recommendations of the Expert Review of Medicines and Medical Devices Regulation be progressed.

“Currently, the *Therapeutic Goods Amendment (2016 Measures No. 1) Bill 2016* is awaiting approval in the Senate, and this Bill will deliver on some of the recommendations of the Expert Review.

“Australia has many of the right attributes to grow a strong domestic MedTech industry – a significant health and medical research and manufacturing capability, quality health system, highly skilled workforce and access to the growing middle-class markets of Asia.

“The industry could be a key pillar of the Australian economy by creating jobs of the future.”

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Media contact:

Polo Guilbert-Wright | 0409 631 828 | polo@mtaa.org.au

Transcatheter Aortic Valve Replacement (TAVR)

TAVR (sometimes called transcatheter aortic valve implantation, or TAVI), is a less invasive procedure which allows a new valve to be inserted within the native, diseased aortic valve.

The TAVR procedure can be performed using one of many approaches, the most common being the transfemoral approach (through a small incision in the leg). Only a Heart Team can decide which approach is best, based on the patient’s medical condition and other factors.

In preparation for the patient’s procedure, the patient may be placed under anesthesia. The doctor will make an incision in the leg, and will insert a short hollow tube called a sheath. This will allow the doctor to put various devices through the sheath to access the patient’s heart. The heart valve is placed on the delivery system, and compressed onto a balloon to make it small enough to fit through the sheath. Once the delivery system reaches the patient’s diseased valve, the balloon will be inflated with fluid, expanding the new valve into place. The new valve pushes the leaflets of the patient’s diseased valve aside, and the frame of the new valve uses the diseased valve’s leaflets to secure itself in place. The balloon is then deflated and removed. The patient’s doctor will ensure the new valve is working properly before closing up the incision.

During open-heart surgery, the surgeon removes the diseased aortic valve and replaces it with either a mechanical valve (made from man-made materials) or a biological valve (made from animal or human tissue).

Did you know?

1. The medical technology industry currently employs more than 19,000 people.

2. The industry is highly skilled with over 52% of employees having a tertiary qualification, and 25% having a postgraduate qualification.
3. More than half of Australian medical device companies have grown from start-ups. 40% of all medical device businesses have been established since 2000.
4. In 2013-14, Australia exported medical devices to 167 different countries around the world for a total value of \$2.1 billion.
5. Medical technology (7.76%) is second only to Civil Engineering (8.5%) and pharmaceuticals in third (6.3%) when it comes to filing patents for innovative technology.

About MTAA

The Medical Technology Association of Australia (MTAA) is the national association representing companies in the medical technology industry. MTAA aims to ensure the benefits of modern, innovative and reliable medical technology are delivered effectively to provide better health outcomes to the Australian community.

MTAA represents manufacturers and suppliers of medical technology used in the diagnosis, prevention, treatment and management of disease and disability. The range of medical technology is diverse with products ranging from familiar items such as syringes and wound dressings, through to high-technology implanted devices such as pacemakers, defibrillators, hip and other orthopaedic implants. Products also include hospital and diagnostic imaging equipment such as ultrasounds and magnetic resonance imaging machines.

MTAA members distribute the majority of the non-pharmaceutical products used in the diagnosis and treatment of disease and disability in Australia. Our member companies also play a vital role in providing healthcare professionals with essential education and training to ensure safe and effective use of medical technology.