

Pathways to breakthrough innovation in cardiac surgery: An Edwards lunchtime symposium

Sixty years of Edwards innovation are marked at the 2018 EACTS Annual Meeting in Milan with a lunchtime symposium focused on pathways to breakthrough innovation in cardiac surgery, which seeks to highlight the continuing commitment of innovative surgeons, industry partners, health authorities and patients in bringing about the betterment of standards of care.

The symposium, 'Pathways to Breakthrough Innovation in Cardiac Surgery', takes place in Brown 3 between 12:45 and 14:00 on Saturday 20 October.

It comprises a rapid fire session during which selected stakeholders are represented, followed by a debate that forms that core of the proceedings. Central to the talks and debate is the notion of the changing face of innovation: the adoption of new therapies has in the past been principally propelled by experienced, pioneering physicians; today, guidelines and standards of patient safety and device efficacy hold a more prominent role. Nevertheless, early adopters of new technologies continue to be crucial players in assessing new technologies with a view to improving upon the shortcomings of existing therapies.

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captured by current therapies, clinical literature and guidelines, the adoption of innovative technologies and assessing their benefit is a prominent question. In order to resolve this, an ongoing synergy is demanded between key stakeholders involved in innovation to grant access to new therapies, to define quality standards and education needs in healthcare.



Hendrik Treede

Representing the strategic role of industry during the symposium will be Donald Bobo, Corporate Vice President of Strategy and Corporate Development at Edwards. He will speak of the evolution of industry standards with respect to research and development, quality systems and clinical benchmark trials, as well as discussing the continuing role that the company plays in education and skills training in conjunction with healthcare providers. He will also discuss the role the company plays in balancing investment in innovation with other important factors: identifying patient and healthcare provider's unmet needs, and ensuring that new technologies are safe, useable, and clinically- and cost-effective.

The Chair of the EACTS New Technology Task Force, Hendrik Treede (Director of the Department of Cardiac Surgery at the Mid-German Heart Center, University Hospital Halle, Saale), will then discuss the historical development of the partnership between industry and medicine, as well as looking to its future and the critical role that surgeons play in shaping this. The EACTS New Technology Task Force develops the programme of the Techno-College, the concept-driven venture presenting the latest technologies under development in the field of cardiovascular medicine.

In an interview ahead of the Annual Meeting, Dr Treede described the changing

way in which new concepts are developed and brought into broad clinical use. "Industry plays a very important role," he said. "If there is no industry partnership it is very hard to make a product out of an idea. If you look at the history of Edwards, this is a company that nicely depicts how this has been done."

Indeed, the collaboration between engineer Miles Edwards and surgeon Albert Starr that commenced in 1958 led to the creation of the world's first commercially-available artificial heart valve, the Starr-Edwards, providing the cornerstone of the company and marking a new era in the treatment of valvular heart disease. Since then a great evolution has continued, noted Dr Treede, with the development of Carpentier valve repair techniques, the PERIMOUNT valves, and more recently the promising INSPIRIS valve with the new RESILIA tissue. "These examples nicely prove how solid the cooperation between an industry partner and a developing surgeon can be, and what comes out of that."

"The standard products that we use in basic routine have been developed by surgeons who had great ideas and who got the support they needed from industry. When this happens at eye-to-eye level, then it really prioritises the patient. Edwards is a great example of this working well."

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Hendrik Treede

Asked how the relationships between different stakeholders has changed, Dr Treede continued: "Today we are more patient- and outcome-driven. We can also offer more individualised medicine, putting the patient's needs at the centre of our work because we have so many possibilities in treating the patient. This, again, has something to do with the work we have done in the past."

"A surgeon who is very innovative will



often work with very small companies and start-up companies. And the cooperation, especially when it comes to practical research, between smaller or larger industry partners and developing physicians has been more intense in the last years than what I remember it being 20 years ago."

In his concluding remarks, Dr Treede noted the changing role of the surgeon as a key theme of the symposium. "I will be looking into the future where this innovation may end up, and where surgeons can find their role in this whole field," he said. "Of course hoping that this role is an important one."

Following this presentation, Volkmar Falk (German Heart Centre Berlin, Germany)

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explores whether the CE mark alone is enough to justify adopting a new practice or device, as well as the fundamental role

of physicians in the post-market clinical evaluation of new technologies. Cutting-edge technologies in artificial intelligence, robotics and 3D printing are then discussed by Peyman Sardari Nia (Maastricht University Medical Center, the Netherlands).

Christopher Young (Guy's and St Thomas' Hospital, and London Bridge Hospital, UK), who co-chairs the symposium alongside Michael Borger (Heart Center Leipzig, Germany), concludes the rapid fire segment with a presentation on the topic of patient power as a way of driving change. Dr Young is Chairman of the patients' association Heart Valve Voice, which works to improve patient access to appropriate care, as well as driving research and policy in the right direction.

Much lies under the bracket of 'the patient voice', including ensured access to appropriate care, and ensuring that patients are both informed and supported. In addition, developing patient-centred outcomes in research and including patients' priorities in policy formation, are contemporaneous issues.

In an interview ahead of the Annual Meeting, Dr Young explained the need for patient advocacy organisations, and what they achieve: "Heart Valve Voice is designed as a way for patients to voice their concerns about treatment, to maximise treatment benefits, to change the way that people will pay for treatment, and to get fair treatment."

"In the UK, some areas get a lot of treatment while others get very little. And although I am a cardiac surgeon, this has nothing to do with cardiac surgery or cardiology. It is really about improving what we do."

Heart valve disease affects around 1.6 million people, he explained, an issue "largely unrecognised" in the UK. "Heart Valve Voice is about making sure that, when you get recognised, the system that you go into is the same system that delivers a fair outcome for everybody, not just for the privileged few or those with the right postal code."

Heart Valve Voice has addressed these issues by a number of different approaches. The organisation has written parliamentary white papers, taken part in parliamentary events and presented at sports and other events, in order to publicise and educate about, for example, the importance of stethoscope checks and

Edwards Lifesciences EACTS Lunch Symposium

Saturday, October 20th
12:45 - 14:00
Room Brown 3

www.edwardscongresshub.com



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Chris Young



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the need to raise awareness about of heart valve disease.

Turning to the topic of his presentation, Dr Young explained how patient empowerment can not only raise standards, but can also drive change in innovation and practice: “Patients have powers they do not realise – certainly in the UK. They go to their doctor and get sent to the local hospital, but they can go anywhere they like in the country. Most of them don’t know that.

“The ones that do know that, get the better care. Some know about keyhole surgery, some know about TAVI. Patients know more and more. We want to stand up for the ones that don’t know as much, to highlight just how much power they have to dictate and change things.

“The example I use all the time is this: when I say patients should have keyhole

“This symposium is an opportunity to meet and discuss, in an open forum, how we can shape the future.”

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heart surgery, some surgeons will turn around to me and say that keyhole is no better. But, if a patient says to the surgeon that they want keyhole heart surgery and the surgeon says it’s no better, then the patient can ask, ‘Why are you going to make a big hole in me? Why don’t you make

a little hole if it is just as good?’ Patients have much more power, because they can persuade doctors. Patients are now better educated, they do their research, they go on the internet. What I want to say is that some patients are very powerful, know an awful lot, and effect change.”

The session as a whole, concluded Dr Young, serves as an opportunity to discuss how patient safety can be maintained when new technology is introduced. Another important balancing act, he added, lies in ensuring the timely development of surgeon’s skills to meet new technologies.

“Patient associations and charities, such as Heart Valve Voice, are increasingly powerful, and their role will no doubt feature in these conversations,” he noted. “This symposium is an opportunity to meet and discuss, in an open forum, how we can shape the future.”

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Saturday, October 20th – 12:45 - 14:00 - Room Brown 3

Chairmen: *Michael Borger (Leipzig), Chris Young (London)*

Rapid fire session

Industry and innovation: what's the trade off?

Donald E. Bobo, Edwards Lifesciences, USA

Surgeons' instinct for innovation

Hendrik Treede, Universitätsklinikum Halle, Germany

Is CE-Mark enough for my practice?

Volkmar Falk, Deutsches Herzzentrum Berlin, Germany

**Robots, artificial intelligence, and 3D printing:
the future of cardiac surgery?**

Peyman Sardari Nia, Maastricht University Medical Center, The Netherlands

New paradigm shift: patients' voice

Chris Young, Guy's & St Thomas', London, UK

The great debate

Breakthrough innovation: incentives, risks and benefits

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