Medical Technologies: The Ones to Watch

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The growth in sales of medical technologies is set to outperform prescription medicines over the coming five years. Data from Evaluate Medtech indicates that over the period 2011 to 2018, the overall global compound annual growth rate for the sector will be 4.4%, in contrast to just 2.5% for drug products. Relatively simpler regulatory approval processes have helped to make this an exciting area for innovators and investors, and there is evidence of increasing interest from both groups.

In vitro diagnostics represent the largest single segment; by 2018, the expected market will be $55 billion—an eighth of the total medical technologies market size of $440 billion. Much of this growth is being driven by molecular diagnostics for conditions and diseases such as cancer, infection, STDs, and chronic diseases, plus genetic testing.

However, what we consider to be the six “ones to watch” are all in other areas of medical technologies. Top of the list is transcatheter valve replacements, designed for the minimally invasive treatment of aortic valve disease. The first of these devices, Sapien from Edwards Life Sciences, was approved by the FDA in 2011 for patients with inoperable aortic valve stenosis, having been on the market in Europe since 2007. TAVRs from Medtronic and St Jude Medical are also on sale in Europe, and future FDA approval seems likely. Sales are predicted to grow dramatically—at a CAGR of 20% to reach a market size of $1.5 billion by 2015.

The second one to watch also falls into the cardiac care market: left ventricular assist devices. These mechanical circulatory devices for patients with heart failure can be used in patients awaiting a heart transplant, as a treatment in themselves,

or as a temporary aid for a recovering patient. Various products are already on the market in both the U.S. and Europe, notably a miniaturized device from Heartwave, and the Heartmate II from Thoratec. Growth estimates for this sector in 2013 are an impressive 23%.

Renal denervation, the third of our ones to watch, is a technique for treating resistant hypertension by inactivating the renal nerves. This is, potentially, a huge market, with many patients being either resistant to drug therapy, or failing to take their medications properly. A patient will only need to be treated once, with the minimally invasive procedure being administered via an endovascular catheter. Medtronic's Symplicity catheter system is already available in Europe and Australia, with U.S. trials underway. Several other players have products on the European market, including St Jude Medical, Covidien, and Boston Scientific. The market size could reach as much as $5-10 billion a year over the next decade.

Next, there is robotic-assisted surgery. Computers or telemanipulators are used to direct robotic arms to assist physicians in carrying out operations, whether minimally invasive or open. Intuitive Surgical's da Vinci system, for example, miniaturizes a surgeon's hand movements, enabling extremely fine control of tiny instruments to be achieved. The Rio system from MAKO Surgical, meanwhile, focuses on hip and knee replacement surgery. While these systems are very expensive—the da Vinci system, for example, costs upwards of $1.75 million—the market is expanding. Growth of 11% to a total market size of $3.6 billion by 2016 is predicted.

Fifth on the list is a cervical disc replacement. Now used in approximately 5% of patients who would otherwise have been subject to spinal fusion, these artificial replacements for damaged neck discs reduce the need for future surgical procedures and improve the patients' quality of life. Although it's still early, clinical evidence of their advantages is growing, and payers are increasingly viewing them favorably. It's estimated that up to a fifth of all spinal fusion patients could instead benefit from disc replacements, providing the potential for huge growth from the 2012 market of $200 million.

Finally, there is the mobile health sector. Based on devices such as mobile phones and tablets, the aim is to reduce healthcare costs by providing a viable alternative to in-person consultations between patients and their healthcare providers. While still early, rapid growth is predicted from the 2011 estimated market size of $720 million, with the huge—and growing—number of smartphones in the pockets of patients. Typically, they allow patients to make their own health decisions based on data analysis. Apps include an iPhone heart rate monitor from Cardiio that requires no additional device, and Sanofi's iBGStar blood glucose meter. These home-use diagnostic and monitoring tools are set to lead the way for future growth in medical technologies. The data generated by devices, such as glucometers, blood pressure monitors, and infusion pumps, will be able to alert remote caregivers of problems that may require intervention. This has the potential to reduce physician visits and improve patient outcomes. The growth in minimally invasive techniques that can dock into technology the patient already has—like a smartphone—is likely to be driven by patients, who are empowered to improve their own healthcare.

Diagnostics, monitoring equipment, and even some types of imaging products are all likely to follow this path. In-home products will need to be cheap, easy-to-use, and extremely reliable. But if patients' behavior can be modulated to comply then the growth in this area will surely be huge.

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