

# Creating Value in European Healthcare

How Europe's medical technology industry  
is delivering on the promise of the *Contract for  
a Healthy Future*



# Table of Contents

Executive Summary	5
Context: Contract for a Healthy Future	6
Common Challenges; Shared Solutions	7
Defining and demonstrating value	9
Medical Technology: An investment or a cost?	11
Value for Society	12
Value for Payers	14
Value for Policymakers	16
Value for Hospitals and Health Professionals	18
Value for Patients	20
Value for Europe	22
MedTech Europe and the task ahead	24
References	25

## Executive Summary

The *Contract for a Healthy Future* commits the MedTech industry to rethink its approach to meeting the changing European market demands by delivering innovations valued by a new set of stakeholders.



***'We advocate a broad definition of value which encompasses health, social, economic as well as financial benefits.'***

2012 has seen major progress in fulfilling the promise of the Contract. The formation of the MedTech Europe Alliance between Eucomed, representing the European medical devices industry, and EDMA, representing the European in vitro diagnostic industry, adds further momentum to this effort. EDMA has embraced the Contract and will also play an active role in its promotion and implementation in the years ahead.

Through a patient dialogue initiative, the industry is reaching out to patient organisations on a regular basis to better understand what value they expect medical technology to offer. Engagement with other stakeholders such as policymakers will also continue through industry participation in high-level conferences and meetings such as the European Commission's successful Innovation in Healthcare event, held in April 2012.

To ensure widespread industry buy-in a steering committee has been established to oversee the implementation of the *Contract*. This year the committee gathered industry executives at the annual European MedTech CEO Roundtable to secure participation in the roll out of the industry strategy.

Ongoing efforts to expand the industry's capacity to invest in health and socio-economic research has resulted in a priority shift within Eucomed and EDMA to deliver data that payers and policymakers need in order to make informed decisions about health spending. Central to supporting investment in innovative technology is thorough understanding of the realities, opportunities and limitations of today's health systems and providing data to demonstrate the value of medical technology.

For payers, policymakers and other stakeholders, proving that new diagnostics and devices are safe and perform effectively is no longer enough. In an age of austerity, we are committed to showing the *value* we can bring to healthcare. That means value for payers, for patients, for policymakers, for hospitals, for health professionals and for European society as a whole. It means combining cost-effectiveness with improved health outcomes.

We believe investment in innovative value-based products is part of the answer to the major challenges Europe faces in ensuring sustainability and providing high-quality care to an ageing population. Through our work to deepen understanding of the value of medical technologies we advocate a broad definition of value which encompasses health, social, economic as well as financial benefits.

Innovation in the medical technology sector has the potential to streamline the money and time it takes to perform diagnoses, deliver acute care and minimise complications, infections and side effects. Technology can facilitate and accelerate solutions to shifting health needs in homecare and e-health. Our products and services can help to reduce increases in healthcare costs, minimise the burden on healthcare resources and promote economic activity by helping people return to work sooner. This will not only bring social benefits by saving on health and social spending but also reduce the burden on families caring for ill relatives.

The MedTech industry will continue to work with all stakeholders to ensure the healthcare system is receptive to value-based innovations with the potential to diagnose, treat and cure conditions, making life more liveable for longer.

## Context:

### *Contract for a Healthy Future*

The medical technology industry recognises the need to change how it works in order to play its part in steering Europe's healthcare onto a sustainable path.

This is encapsulated in our five-year strategy – *Contract for a Healthy Future* – released in an updated version at the European MedTech Forum 2012. The *Contract* prescribes bold thinking for all stakeholders on the delivery of care to European citizens at a time when demographics, human resources and financial pressures are combining to put the system under considerable strain.

The formation of the MedTech Europe Alliance between Eucomed, representing the European medical devices industry, and EDMA, representing the European in vitro diagnostic industry, adds further momentum to the rollout of the strategy. EDMA has embraced the *Contract* and will also play an active role in its promotion and implementation in the years ahead. Both organisations, under a single Chief Executive, have signed up to the *Contract* and moving forward the MedTech Europe Alliance will be the driving force behind the strategy.

The MedTech industry is delivering. Additional resources have been committed to undertaking socio-economic research. Staff has been restructured to deliver the data that payers and policymakers need in order to make rational, informed

decisions about health spending. We are engaging in a detailed and structured way with stakeholders – within the sector itself. Crucially, we have worked with CEOs of MedTech companies, large and small, to secure their buy-in for the move towards value-based innovation. Various industry working groups have also embraced the *Contract* as the basis for their activities.

We are welcoming an ambitious shift in mindset. MedTech Europe is committed to investing in innovations valued by other players within the healthcare system, and to demonstrating the value of our products in a way that meets the needs of payers and policymakers.

The MedTech industry realises that healthcare in Europe is unique. Europe's defining characteristics – our social welfare model, the principle of universal access to healthcare, and tightening budgets – place value at the heart of the healthcare system. Taking into consideration that many of our member companies have their headquarters based in the US, it is of critical importance that we explain to our American counterparts the need to change towards a value-based innovation model in order to remain successful in Europe.

#### Our Commitment

- Acknowledge the need for change
- Embrace, achieve and demonstrate cost-effectiveness, patient benefits, societal needs of patients, payers and policymakers
- Fulfil stakeholders' needs through value-based innovation
- Invest in knowledge transfer with healthcare professionals and institutions to optimise healthcare delivery and quality of care
- Provide medical technology innovations with socio-economic value that ensure sustainable, accessible healthcare and healthy ageing

***'Our industry has the potential to provide cost-effective solutions that assist health systems to become more sustainable. We realise that we must engage with stakeholders in a different way if we want people to understand the value that our products bring.'***

Dr Guy Lebeau, MD  
Eucomed Chairman

## Common Challenges; Shared Solutions



The motivation behind the MedTech sector's drive for a more innovative approach to health service delivery is plain. An expanding elderly population needs and expects a high level of care, yet the number of taxpayers contributing to national treasuries is shrinking.

The proportion of pensioners to people of working age is currently 1:4. This ratio is expected to be 1:2 by 2050<sup>1</sup>. At the same time, the European Commission forecasts a shortage of one million health workers by 2020 – a figure which rises to 2 million if long-term care and ancillary health staff are included<sup>2</sup>.

With half the number of tax-payers funding the system, more people needing care and less people and resources to provide that care, the current approach to health service delivery in Europe is simply not sustainable. Reforming healthcare delivery and leveraging the potential of technology will be essential to meeting society's changing needs. Some of the solutions already exist; others are in the pipeline. If the promise of these innovations is to be fully realised, all healthcare stakeholders must be open to change.

***'If Europe wants its citizens to be healthy... we need innovation in products, services, organisation, delivery and financing.'***

John Dalli  
EU Commissioner for Health  
(26 September 2011, Parliament Magazine)

<sup>1</sup>Guerzoni B. And Zuleeg F., 2001. *Working away at the cost of ageing*. Brussels: European Policy Centre  
<sup>2</sup>Testori Coggi, P., 2010. *Health Trends in the European Union*. *Connaissance & Vie*. Antwerp 23 November 2010



In practice this means, for example, facilitating the shift from hospital-centred care to preventive, ambulatory and community care where appropriate. Hospitals can be expensive, impersonal places in which to deliver care that does not require a specialised environment<sup>3</sup>. In addition, many patients and their families prefer community-based treatment<sup>4</sup>.

Treating patients in hospitals is the default option even when it is not the most appropriate setting<sup>5</sup> but reorienting the system towards preventative and home-based monitoring and treatment is easier said than done. Existing infrastructure is built for the era where health services revolved around bricks-and-mortar institutions.

If the status quo is to be replaced with a more dynamic approach, silo budgeting must end. Funding should be available to care for patients wherever they receive health services and incentive structures should be changed to stimulate innovation in the community care sector. Training for healthcare professionals must be designed not just for those who will work in hospitals and nursing homes but also for doctors, nurses and others who will deliver care to patients in their homes. Patients too should embrace new models of care.

### Case Study: Investing in quicker lab results

The use of mass spectrophotometry allows hospital laboratories to quickly identify bacterial strains infecting a patient, reducing the time of the test from 8-24 down to just 1-2 minutes. This allows for a much more rational use of antibiotic therapy by rapidly identifying the treatment regime to which the patient will best respond. As a result, there is a reduction in the mortality rate of affected patients (by 1.7%) but also a significantly decreased burden on the healthcare system as a whole with hospital stays being reduced by an average of two days where this technology is being implemented.

(Kaleta et. al. 2012)

<sup>3</sup>The Health Foundation, 2011. *Evidence in Brief: Getting out of hospital?*

<sup>4</sup>Penning MJ. Hydra revisited: substituting formal care for self and informal in home care among the older adults with disabilities. *The Gerontologist*, 2002, 42:4-16.

<sup>5</sup>Leff B, Burton L, Mader SL, Naughton B, Burl L, Greenborough WB. Comparison of functional outcomes associated with hospital at home care and traditional acute hospital care. *Journal of Geriatrics Society* 2009;57(2):273-8

## Defining & demonstrating value

One of the key commitments the MedTech industry makes in the *Contract for a Healthy Future* is to demonstrate the value of its innovative technology.

Our members appreciate that the EU's regulatory environment makes Europe a good place to bring new medical technology to market in a safe, timely and predictable manner. Indeed, a recent medtech-focussed article in the *Financial Times' FDI Magazine* praised Europe as a "huge and productive innovation engine that keeps generating a continuous stream of clinical insights and new technologies<sup>6</sup>." But we also hear budget-holders' calls for more hard data illustrating the health, economic and social value of our innovations.

In the past, it was tempting simply to show the brilliance of a new technology and expect that it would be reimbursed by public health authorities and private insurers. Those days are gone. Yes, data on safety and effective performance are essential, and it is no longer enough simply to deliver better clinical outcomes; what is needed is better *value*.

As MedTech Europe Chief Executive Serge Bernasconi puts it: "We can't focus only on making technology better, faster and safer. Our reflex in the past has often been to answer the concerns of payers with technology – we need to change. Now, we also need to focus on bringing value-based innovation to market with solidly demonstrated economic benefits to payers and other stakeholders."

The industry supports the European Health Technology Institute (EHTI), a socio-economic research body created in 2007 to identify – and fill – gaps in the evidence base on the economic value of medical technology. Working with leading academics, companies and government, EHTI also looks at healthcare financing systems, access to technologies, and how socio-economic evidence is translated into policies.

Eucomed has invested in expanding its health economic team to boost data collection capacity and both Eucomed and EDMA, as MedTech Europe alliance partners, have deepened engagement with external stakeholders and partners. Value-based innovation must be encoded in our DNA.



<sup>6</sup>Atkins W (2012). Europe takes medtech lead. *Financial Times FDI Magazine*. August/September 2012

**What is value anyway?**

When we talk about value, it is important to realise that patients, hospitals and payers define this concept in their own ways. Put simply, patients want better outcomes and less side effects, hospitals want to treat their patients more effectively and efficiently, and payers want to see a return on their investment while offering clients optimal care.

We support a broad definition of value. Our products allow earlier diagnosis and intervention to reduce the need for acute hospital care. They also help sick patients recover more quickly with less side effects and increase overall satisfaction with treatment. The benefits go beyond cost effectiveness

arising from shorter hospital stays or reduced readmissions. Keeping people healthier for longer can have considerable pay-offs for society at large and for the wider economy.

Preserving economic productivity in people is crucial to balancing our demographic equation, while relieving the pressure on families to care for sick relatives for prolonged periods delivers social and economic gains. Some countries – notably Sweden – are already looking at ‘value’ through a wide-angle lens and we will support others in taking a full view of medical technology.<sup>7</sup>

***‘The barriers to shifting to community care are not technological; it’s a matter of reforming the reimbursement and budgeting system.’***

Serge Bernasconi  
MedTech Europe Chief Executive Officer

**Embracing a leadership role in socio-economic research**

In recent years Eucomed has engaged with academia and policymakers to support the creation of the European Health Technology Institute (EHTI). EHTI aims to measure the socio-economic impact of medical technology in Europe. Data produced by EHTI research partners Bocconi University and London School of Economics has served to further dialogue with policymakers, payers and other stakeholders to allow for more informed decision-making.

In addition to previous work, the last 12 months have seen the completion of initial research assessing:

- the availability and use of hospital payments to encourage the cost-effective use of health technology and whether funding is linked to evidence of value
- the (encouraging and/or inhibitive) role of reimbursement in the adoption of innovative medical devices in an ambulatory care setting
- the socio-economic value of medical technologies, including early interventions utilizing hip and knee replacements

EHTI has also developed an online portal, inviting research institutions to communicate their findings on its website ([www.ehti.eu](http://www.ehti.eu)), which it hopes will evolve into an information clearinghouse for the latest medtech-focused research, enabling policymakers, payers and other stakeholders to make informed decisions.

<sup>7</sup>Persson U. A new reimbursement system for innovative pharmaceuticals combining value-based and free market pricing. Applied Health Economics Policy; 2012 Jul 1;10(4):217-25.

# Medical Technology: An Investment or a Cost?

The question of whether medical technologies are responsible for driving inflation in health spending is central to determining their value. That is why the industry is committed to providing evidence demonstrating MedTech’s true benefits.

The notion that technology costs drive healthcare inflation is often traced to Joseph Newhouse, a US health economist, who suggested in the 1990s that the development of new drugs, devices and diagnostics were part of the problem<sup>8</sup>. In short, Newhouse implied that having more treatment options available gave us more things to spend our money on, leading overall costs to rise as a result.

This idea that more innovation equals more spending has stuck. However, on closer inspection, it is worth noting that Newhouse’s influential paper does not imply that medical technologies are unworthy of investment. While advances in technology must be paid for, many innovations can be shown to facilitate *better* outcomes or to deliver savings, therefore representing *smarter* spending.

Medical technology should be seen as an investment rather than a cost. If we live longer, healthier and more productive lives – thanks in part to state-of-the-art medical interventions – technologies should be viewed as cost-effective. That is what we mean by *value*.

In the past, some studies have pointed the finger at drugs and devices as one of several drivers of overall spending<sup>9</sup> but population ageing, decentralisation of health spending powers, rising labour costs, increasing consumer demand and increases in GDP have all come in for scrutiny<sup>10</sup>. However, support for the cost-saving potential of specific technologies – such as laparoscopic<sup>11</sup> techniques and balloon angioplasty – continues to mount.

The European Health Technology Institute performed a systematic literature review investigate the question: does medical technology drive rising health expenditures? Analysis from the 86 studies reviewed suggests that the relationship between medical technology and spending is complex. Findings were frequently contingent on varying factors, such as the availability of other interventions, patient population and the methodological approach employed. Some come with a cost, others represent cost-savings.

In light of these issues, we argue that instead of focussing solely on the relationship between medical technology and healthcare costs, it would be more productive to ask whether investments in medical technology result in better value in healthcare and broader socio-economic benefits<sup>12</sup>.

As we demonstrate in the following pages, medical technology can represent value, in different ways, for all stakeholders in the healthcare ecosystem.

***‘There is still a temptation to presume that new technologies add costs rather than value. I strongly believe that the reverse is true. Many of these technologies – from both the in vitro diagnostics and medical devices sectors – can be the solution to the cost challenge.’***

Serge Bernasconi  
MedTech Europe Chief Executive Officer



<sup>8</sup>Medical Care Costs. How Much Welfare Loss? Newhouse, J.P. Journal of Economic Perspectives.

<sup>9</sup>Technology as a ‘Major Driver’ of Healthcare Costs: A Cointegration Analysis of the Newhouse Conjecture. Okunade AA and Murthy VNR. Journal of Health Economics.

<sup>10</sup>Review of the Literature on the Determinants of Healthcare Expenditure. Martin JJ, Conzalez, MP and Garzia MD. Applied Economics

<sup>11</sup>Managed Care and Medical Technology: Implications for Cost Growth. Chernew M, Fendrick AM, and Hirth RA. Health Affairs, Volume 16, Issue 2. 1997, Pages 196-206.

<sup>12</sup>Fact or Fallacy: Does Medical Technology Drive Rising Health Expenditures? Sorenson C et al, Health Policy, Submitted

# Value For Society

The current economic and demographic challenges facing European society have underlined some perennial truths: we have finite resources and must prioritise our spending accordingly.

When making difficult choices about funding healthcare, it is important to look at the social cost of ill-health. Think of the cost to families (not to mention the workforce) when a parent in his or her 40s or 50s dies prematurely.

To a cold-eyed economist, the lost productivity which results from a sudden early death might be counterbalanced by cost-savings that accrue because the individual does not need care from chronic conditions in their 80s. But as a society, we place a non-economic value on health and life. We want long, active lives for ourselves and each other.

That is how we view mortality, but what of morbidity? Consider the time family members spend caring for elderly relatives with long-term incapacity; the jobs they cannot do and other contributions to their community that must be sacrificed as a result.

From a societal perspective, the resources saved by investing in medical technology can be measured in euros but also in time. That is not to say that the cost savings delivered by technology are unimportant. On the contrary: technologies help foster efficiencies in health and social spending, freeing resources which can be better used elsewhere.



***'Diagnosing diseases earlier can improve survival rates. Take colorectal cancer, for example. If you catch it early more than 90% of people will survive. If it is diagnosed late, the survival rate drops to 6%. When we speak about the cost of implementing a screening programme we should look not just at the impact of additional life years for the health system and the economy, but also for society as a whole.'***

Dr Jürgen Schulze  
EDMA President

## Case Study: Diabetes data management boosts patient compliance

Many people with diabetes do not achieve their therapy targets, leaving them exposed to the risk of developing serious and costly complications. Research shows that self-monitoring of blood glucose (SMBG) at regular intervals during the day improves outcomes in diabetes management.

However, it has been suggested that the volume and complexity of data produced through SMBG can be difficult for patients and busy healthcare professionals to interpret. Computerised data management may provide the solution. A study of an information management (IM) system – the Accu-Chek Smart Pix system – which presents data in a user-friendly way showed significant, medically relevant, and sustainable improvements in glycaemic control in people with diabetes.

Patient adherence to prescribed medicines also improved, along with improved therapy decisions and communication between patients and staff. The IM device was used to visualise the course of blood glucose data in graphs and to discuss them with patients. This helped patients to see, for example, the relationship between high carbohydrate intake and blood glucose increase after meals. The system saved time and helped to optimise therapeutic regimens.

*(Polonksy et al. 2010)*

## That's value

A person with an implantable cardioverter-defibrillator (ICD) has a 98% chance of surviving sudden cardiac arrest; a person without an ICD has a five percent chance.

*(Zipes & Roberts, 1995)*

# Value For Payers



The MedTech sector can offer payers direct cost savings by reducing the time patients spend in hospital but also give better value for the money they spend.

The evidence has been mounting for decades. Research has shown that between 1980 and 2000, medical technology reduced hospital stays by 56% and dramatically cut costs<sup>13</sup>. This was achieved in a variety of ways.

Minimally-invasive surgery can reduce post-operative recovery time, meaning fewer days spent in hospital. Patients with cardiovascular disease treated with drug-eluting stents have been shown to require fewer repeat revascularisation procedures (6.6% versus 16.6%) and incur lower average

costs for follow-up medical care than those treated with bare-metal stents one year after the initial procedure<sup>14</sup>. Early and more accurate diagnosis can help doctors to intervene earlier with the right treatment for the right patient. And, where healthcare-associated infections are avoided, there can be little doubt that prevention is cheaper than cure. A US study has shown that treating an infection early costs \$200 to \$300, compared to the \$30,000 on average spent treating a downstream blood infection<sup>15</sup>.

<sup>13</sup>The Value of Investment in Health Care: Better Care, Better Lives, a study by The Value Group, 2004.

<sup>14</sup>Bakhai A, Stone GW, Mahoney E, et al. Cost effectiveness of paclitaxel-eluting stents for patients undergoing percutaneous coronary revascularization: results from the TAXUS-IV trial. *J Am Coll Cardiol.* 2006;48(2):253-61.

<sup>15</sup>Alice Jacobs develops diagnostics that stand the test of time. *Boston Women's Business.* Vol. 11 Issue 1. 2009.

## Case Study: Containing the cost of cancer and liver disease

In people who suffer from late-stage liver disease and certain cancers, fluid can accumulate in the abdomen causing pain, lack of mobility and other complications. This is known as ascites and, in some cases, does not respond to treatment. These non-responsive 'refractory ascites' affect more than 100,000 patients in Europe and the US every year – a number which is growing by 10% annually due to the rising number of hepatitis and obesity-related liver disease patients.

Until recently, the only option for people with this condition was to undergo repeated large-volume paracentesis, an invasive procedure in which the ascites is drained through the abdomen over a period of several hours via a large-bore needle.

Now, a new full-implantable system – the ALFApump – has been developed to collect ascites as it forms and moves it to the bladder where it is eliminated through normal urination. The procedure is minimally-invasive, takes around one hour, and means patients do not need regular paracentesis. This saves on staff time, bed space and infusions of human Albumin which is usually infused during paracentesis. An independent economic assessment by the NHS National Innovation Centre in the UK has estimated that this system will save the NHS £50 million per year.

*(Eucomed 2012)*

## That's value

An analysis was also conducted in four European countries to determine the incremental cost-effectiveness of the PressureWire Fractional Flow Reserve technology for the treatment of cardiac disease. It was found to increase quality-adjusted life years and reduce the number of cardiac events, generating savings of between 500€ and 900€ per patient.

*(Siebert et al, 2009)*

# Value For Policymakers

There is a growing consensus among policymakers that delivering certain types of care in the community has advantages over the traditional hospital-centred model. Technology is crucial to facilitating this shift.

The interests of policymakers overlap with those of other stakeholders. Like payers, they want value for money; like patients, they want citizens to live active and healthy lives.

The ageing population and shortage of health resources are a catalyst to the adoption of user-friendly home-diagnostic kits, remote monitoring systems, telehealth services, mobile health applications, community-based wound care, and the management of chronic diseases at primary care level. These technologies can offer cost-effectiveness and better outcomes.

For policymakers, the challenge is to knit together the various technologies rapidly emerging from the MedTech sector into a joined-up health policy. The industry is working not just to continue delivering innovations that make it easier for policy goals to be achieved, but also to provide the data politicians and officials need to make informed decisions.

## Case Study: Bringing specialist care to patients' doorstep

Where policy has struggled to keep pace with technology, islands of excellence have emerged thanks to the initiative of motivated professionals and companies. Take for example the stroke unit at the North Cumbria Hospitals NHS Trust in the UK. Rural communities are connected to top-class stroke care thanks to a telehealth system.

More than half of all stroke incidents happen outside normal working hours, reducing patients' chances of benefiting from swift interventions in the crucial first 4.5 hours. The remote care system links six acute care trusts and seven Primary Care Trusts which allows them to bring specialists to patients 24 hours a day, 7 days a week, via a video conferencing service. Specialists can diagnose a clot or haemorrhage and decide on what further action to take.

In the year since the pilot project began, a network of staff have fielded 340 calls for advice, with 113 patients receiving life-saving thrombolysis injections without needing to travel several miles to an acute hospital. Tapping into the potential of new innovations and marrying them with existing technologies can help deliver care quickly and locally.

*(Schmenner R 2012)*

## Driving change through dialogue

Eucomed members have embraced the *Contract for a Healthy Future*, demonstrating their commitment to driving change through concerted sector-focussed efforts. Eucomed's Ostomy care working group, for example, has formulated a position paper to highlight the socio-economic value of personalised care. Ophthalmology company representatives have also worked with policymakers to advocate for reimbursement policies that allow greater patient choice in the selection of innovative technology. Yet other forward-thinking medtech professionals have called for greater uptake of remote telemonitoring to make cardiac therapy more efficient and cost-effective.<sup>16</sup>

Progress toward a value-based model has also been made in the framework of the European Network of Health Technology Assessment. The medtech industry has been closely engaged in the network, bringing expertise and experience to the table to build consensus with other key healthcare stakeholders.



## That's value

Patients with insulin pumps and glucose monitors manage disease better with greater adherence to regimens and less daily pain than those who use conventional treatments.

*(Stein & Joshua, 2008)*

<sup>16</sup>PriceWaterhouseCoopers. Moving towards good practice in the reimbursement of CIED telemonitoring, 2012

# Value For Hospitals and Healthcare Professionals

For hospital managers, making the best use of human and financial resources requires efficient and predictable technologies.

By streamlining the time it takes to perform operations, reducing patient recovery time, and minimising complications and infections, services can be delivered well and on budget.

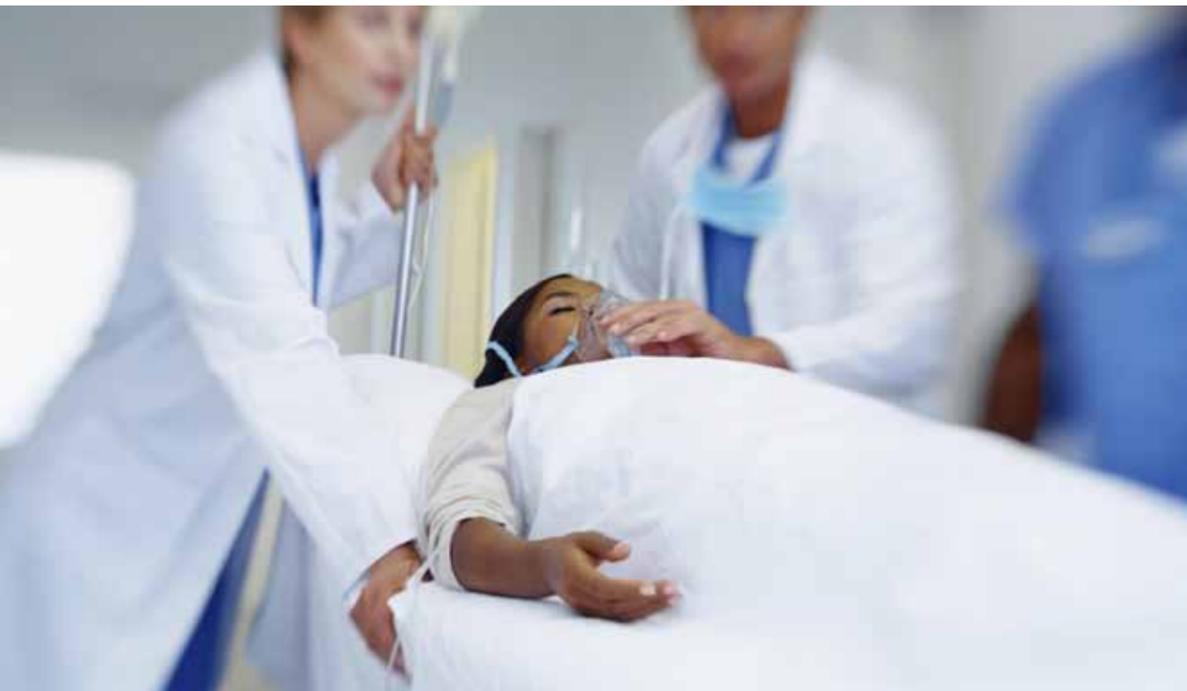
Diagnostics tests performed to tackle antimicrobial resistance through early detection and prevention can provide substantial value by identifying the correct course of treatment. Such innovative technologies not only contribute to effective management of infections but also accurate targeting of antibiotic treatment ensuring efficient management of financial resources.

Better wound management and care of bedsores – facilitated by medical devices – improves outcomes, saves money, and controls the spread of infection, benefiting patients and staff alike. Management also appreciate that

reducing complications helps to control the hospital's liability to patient complaints and compensation claims.

Examples can be found across all medical disciplines from cardiology to anaesthesia. Multiple studies have found that treating chronic pain caused by spinal cord injuries via electrical stimulation results in long-term cost savings of up to €75,000 per patient versus conventional therapy.<sup>17,18</sup>

Doctors, nurses and other healthcare professionals see value in having access to innovative tools which aid patient compliance and, ultimately, improved health outcomes. Job satisfaction inevitably rises when patients do better. That, after all, is what motivates people to enter medical and caring professions in the first place.



## Case Study: Increasing availability of lungs for transplantation

New technology allows doctors to evaluate lungs outside the body prior to transplantation, reducing the risk of rejection and making more lungs available for transplantation. Only 20% of donated lungs are accepted for transplantation. The main reason for this is that donors often undergo treatments which damage the organ. As a result, up to one in four people on the waiting list for a lung transplant die before a suitable organ becomes available.

Ex vivo lung perfusion (EVLP) allows damaged lungs to be repaired, making them suitable for transplantation. Normally only lungs from brain dead donors are suitable but this technology allows organs from deceased individuals to be used. More than 200 patients have gotten 'new' lungs thanks to this method. Advances in this area also increase the time that lungs survive outside the body which makes it easier for the transplantation team to match the organ with the right recipient. Because the organ can be preserved for up to 22 hours, there is no need for expensive night-time surgery.

In the past, performing EVLP was time-consuming, labour-intensive and took up a lot of space. The latest technology from Vivoline makes this procedure easy to set up and does not require expensive operating rooms.

*(Eucomed 2012)*

## That's value

Early identification of diabetes through screening of targeted populations could save billions of euro in medical expenses and indirect costs associated with undiagnosed patients.

*(American Diabetes Association 2008)*

<sup>17</sup>Bala MM, Riemsma RP, Nixon J Kleijnen J. Systematic review of the (cost-)effectiveness of spinal cord stimulation for people with failed back surgery syndrome. *Clin J Pain*. 2008 Nov-Dec;24(9):741-56.

<sup>18</sup>Kemler MA, Furnée CA. Economic evaluation of spinal cord stimulation for chronic reflect sympathetic dystrophy. *Neurology*. 2002 Oct 22;59(8):1203-9.

# Value For Patients

Medical technology offers earlier diagnosis and intervention, less time in hospital, the opportunity to continue working, and greater patient empowerment.

We are all patients. All of us in Europe – policymakers and payers, doctors and nurses, health planners and device designers, patient advocates and those who never think about healthcare until they become sick – will at some point have contact with the health system. Each of us has a stake in creating a health system that invests in cost-effective technology that delivers better outcomes.

What we expect, in essence, is that the diagnosis, treatment and care we receive makes life more liveable for longer. Whether that means curing, managing chronic diseases from home, returning to work shortly after minimally-invasive surgery, living with a customised ostomy device, or benefiting from extended survival rates for certain cancers, medical innovations are improving the quality and length of our lives.



***'To succeed in this changing environment, medical technology companies must develop a deep understanding of patient behaviour and leverage actionable insights from behavioural economics. To make their business models more patient-centric, companies will need to develop life-long relationships with their customers. Their brands will increasingly be based on the patient experience.'***

Dr Guy Lebeau, MD  
Eucomed Chairman

## Case Study: Taking control of our own health? *'There's an app for that'*

The revolution in communications technology has handed a new sense of control to patients through mobile health applications. The explosion in the use of smartphones has opened the door to user-centred innovations that were unimaginable less than a decade ago.

Just look at how smartphone apps are being used in the field of mental health. Research shows that depressed people using a behavioural activation app felt less depressed after eight weeks, compared to a control group.

Managing depression is expensive for developed countries. An estimated 15-17% of people suffer from a depressive disorder at some point in their lives and the costs of treatment and of lost productivity are high. Finding effective ways to promote mental health – through a low-cost medium that patients like – is one way of reducing this health and economic burden.

Smartphones can also become diagnostic tools. A study in Sweden, where 80% of doctors have smartphones, showed how an iPhone app can increase detection of skin cancer. Detection rates of skin cancer lesions are notably higher among specialist dermatologists so accessing specialist care – even remotely – gives a better chance of early diagnosis.

By combining the built-in digital camera in an iPhone, a customised dermoscope and a smartphone app, Swedish doctors were able to carry out 'teledermoscopic' evaluations of skin lesions. The accuracy rate was comparable to face-to-face consultations.

For patients, this teledermoscopic system offers the reassurance that comes with specialist assessment and all with just a few clicks on a device they already own and use daily.

(Ly et al., 2012; iMedicalApps, 2012)

### That's value

Advances in medical technologies significantly reduce patient recovery times. For example, endometrial ablation - the removal of the lining of the uterus - is a procedure for women suffering excessive menstrual bleeding who cannot or do not wish to undergo hysterectomy. While recovery from a hysterectomy takes about 6-8 weeks, recovery from endometrial ablation normally takes only 2-4 days.

(Carter, 1997)

# Value For Europe

The value that the MedTech sector delivers for Europe comes in several forms, notably by developing innovative tools to deliver efficient and cost-effective healthcare for citizens, and in fostering job creation and economic growth.

Improving the health of our ageing population is one of the grand challenges facing European society. That is why the European Commission selected Active and Healthy Ageing as the theme for its first European Innovation Partnership. Medical technologies can help to deliver the kinds of game-changing value required to steer our health service onto a sustainable path.

The economic contribution of the industry to Europe is substantial. MedTech Europe's members provide high-end jobs in Europe by re-investing in R&D and employing thousands of people in advanced manufacturing facilities. More than 500,000 people are employed medical technology companies in Europe. From small businesses to global corporations, the medical device and in vitro diagnostic industries in Europe represent a market worth over €95 billion.

Europe is valued by the industry too. The regulatory systems for medical devices and diagnostics in Europe are second to none. Making the latest technology available to patients can currently be achieved just as safely and more quickly in Europe than in other developed markets, giving European citizens access to the latest devices first.

## Shared challenges

At a time when budgets are under pressure, it is crucial that public funds are spent well. This means taking a smart approach to cost-containment – favouring expenditures that deliver value.

For the MedTech industry, public procurement contracts in Europe are a major source of potential income as public sector clients are often the largest market players. However, authorities at national and regional level are increasingly focused on buying the cheapest available medical technologies through centralised procedures. As a result, large contracts are often awarded on the basis of price rather than value and can put small and medium-sized companies (SMEs) at a disadvantage. Authorities sometimes tend to buy from the lowest bidder rather than choosing the Most Economically Advantageous Tender (MEAT).

SMEs are the drivers of innovation in Europe and because of their key role in developing novel technologies. A less restrictive, decentralised approach to procurement would offer SMEs an equal opportunity position when replying to tenders, critical to keep this balance and to ensure long term continued innovation to the benefit of all.

***'Our technologies can add tremendous value but our task is to prove and explain the value we deliver to all key stakeholders. I believe that what our industry can deliver for society in Europe is not well known.'***

Dr Jürgen Schulze  
EDMA President



## Case Study: Faster screening cuts costs, improves outcomes

Infections can cost lives and soak up scarce resources. However, the earlier treatment begins, the better outcomes will be. That is why advances in screening technology are of value to the health system.

Deploying the Xpert GBS screening system during labour can decrease neonatal infections and length of stay by 90%. In fact, this screening technology helped doctors in a Paris hospital to reduce neonatal hospitalisation days by 47% and reduced ICU bed days by 90%.

Similarly, using a quicker test for enteroviral meningitis cuts the duration of antibiotic treatment by more than two days and also reduced hospitalisation by two days. Discharging patients earlier saved €1,116 per patient.

Healthcare-associated infections are a major challenge in several European countries. MRSA is one of the most common 'hospital superbugs' and failure to contain an outbreak can be expensive, sometimes even forcing ward closures. Preoperative real-time S. Aureus screening can show whether a patient is carrying MRSA or another less problematic form of the bacteria. Quick and effective screening significantly reduces length of stay by 1.8 days. Prevention costs seven times less than treatment.

(Huizing et al. 2011; El Helali 2012; Bode 2010)

# MedTech Europe: The Task Ahead

In the first year since the launch of the *Contract for a Healthy Future*, the MedTech sector has begun to deliver data to support its value-based innovations and embarked on meaningful engagement with stakeholders.



Our patient dialogue, discussions with various stakeholders and participation in high-level health conferences has allowed greater understanding of what stakeholders expect from medical technologies and given us the opportunity to communicate the ideas behind the *Contract*.

A steering committee has been established to oversee the implementation of the *Contract* and industry leaders have come together at a CEO Roundtable to sign up to this five-year strategy.

To follow through on our commitment to deliver data to demonstrate the value of our innovations, we continue to support the European Health Technology Institute (EHTI) and are shifting more of our internal resources to our economics team.

The work will continue in the coming years through MedTech Europe, an alliance of medical technology industry associations. The alliance will see Eucomed and EDMA working together in pursuit of the goals set out in the *Contract*.

This will mean building on the momentum generated over the past 12 months within the MedTech industry and deepening our engagement with other stakeholders to discuss our respective roles in steering European healthcare onto a sustainable path. We must not forget that we all have a role to play. Together, members of MedTech Europe will work to define and communicate how technologies can improve cost-effectiveness and health outcomes. *That is value.*

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[www.edma-ivd.eu](http://www.edma-ivd.eu)



[www.eucomed.org](http://www.eucomed.org)



## MedTech Europe is

an Alliance of European medical technology industry associations. The Alliance was founded by EDMA, representing the European in vitro diagnostic industry, and Eucomed, representing the European medical devices industry. Other European medical technology associations are welcome to join the Alliance, established to represent the common policy interests of its members more effectively and efficiently.

## Our mission is

to make value-based, innovative medical technology available to more people, while supporting the transformation of healthcare systems onto a sustainable path. We promote a balanced policy environment that enables the medical technology industry to meet the growing healthcare needs and expectations of its stakeholders. In addition, we demonstrate the value of medical technology by encouraging our members to execute the industry's 5-year strategy.

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