



CONFERENCE HIGHLIGHTS

2017
ASIA PACIFIC

MEDTECH
FORUM

TRANSFORMING HEALTHCARE THROUGH INNOVATION

Key Statistics

The MedTech Forum in numbers



622

Attendees



83

Speakers and
Moderators



29

Sponsors



Delegates from **22** Countries

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Dear friends and colleagues,

For the global medtech industry and healthcare stakeholders, Asia presents enormous and exciting opportunities. Yet after decades of steady progress, conventional approaches to R&D, market access, and commercial excellence are no longer sufficient. To succeed in Asia's diverse and dynamic markets, it may be necessary to develop new products and services; in some parts of the region, innovation may be the only way forward.

At our third annual Asia Pacific MedTech Forum in Singapore on November 7-9, healthcare leaders from around the world came together to discuss these important challenges. Our biggest and most impactful event so far, the Forum brought together more than 600 delegates from over 20 countries, including representatives from leading medtech firms, global technology giants, and innovative startups. Many of Asia's leading regulators, payers, providers, and NGOs were also present.

The theme of this year's Forum was **Transforming Healthcare Through Innovation**, and it showcased an inspiring array of cutting-edge medical technologies and business models. It highlighted the efforts of regional and global business leaders to encourage innovative thinking in all corners of their organisations. And it featured new initiatives from regulatory and market access professionals to ensure that the most innovative diagnostic technologies and treatments ultimately reach patients across Asia.

The Forum also included frank discussion of the many areas where more innovation is sorely needed. Many of Asia's emerging markets, for example, still lack products and delivery frameworks that are appropriate for low-resource settings. Meanwhile, rising healthcare costs in mature markets are driving demand for new models of pricing and reimbursement to ensure that the latest innovations are accessible and affordable.

As the first and only association dedicated to Asia's medtech industry, APACMed will continue to promote shared action to drive innovation that improves standards of care in Asia. We are grateful to our members and partners for their ongoing support in this important mission.

Fredrik Nyberg

Chief Executive Officer
Asia Pacific Medical Technology Association (APACMed)

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ASSOCIATION

Cultivating Innovation

Innovation requires both fresh ideas and a willingness to take risks. How can healthcare leaders foster a culture of innovation in Asia?

In an era of rapid medtech innovation, healthcare organisations have unprecedented opportunities to improve standards of care in Asia. At the 2017 Asia Pacific MedTech Forum, medtech leaders and other healthcare stakeholders from around the world expressed optimism that those opportunities were within reach. Yet to fully leverage the power of new medtech products and business models in Asia, most speakers and participants agreed that new attitudes and approaches towards innovation will be key.

The Forum was opened by José Almeida, Global Chairman, President and CEO of Baxter International. In his keynote speech, Almeida argued that most organisations face four barriers to innovation: complacency, fear, excess process, and an unwillingness to invest in new ideas. He also discussed the dangers of path dependency and conventional thinking, saying “when developing new products and services, we often make the mistake of going back to the same KOLs again and again. Don’t just focus on KOLs—talk to everyone.”

In **Perspectives on Innovation**, a panel that included the Asia Pacific leadership of four global medtech firms, regional business leaders also offered helpful advice for cultivating innovation within their organisations. Anna Marie-Braun, President of B. Braun Asia Pacific and Vice-Chair of APACMed, encouraged medtech companies to set up separate innovation groups and give them the flexibility to take a long view on business challenges. Sanjay Prabhakaran, President of Hologic Asia Pacific, suggested focusing more on opportunities for innovation in market access and last-mile delivery.

Patrick Holt, President Asia Pacific of Cardinal Health, emphasised the importance of building localised portfolios, a process that often requires local R&D operations. New products and ideas can sometimes be imported from abroad, but local teams will ultimately have the best understanding of the key challenges and opportunities in their home markets. To ensure that local teams have the skills to translate insight into action, Holt said that Cardinal was investing considerably in talent development.

In his fireside chat on the second day, Mike Mahoney, the Global Chairman and CEO of Boston Scientific echoed the importance of empowering local teams. “*We expect our leaders to drive innovation demands locally,*” said Mahoney in a fireside chat on the second day of the Forum. “*The needs of a place like India are much different from South Korea or Japan, so we expect our local teams to take the lead on identifying research and partnership opportunities.*”

Winning in Diversity, Winning in Innovation, a panel that addressed workplace diversity and its impact on innovation, provided ideas for getting the most out of diverse teams. Sumeet Salwan, Worldwide VP and Head of Human Resources at Johnson & Johnson Medical Devices, recommended avoiding diversity programs that isolate demographic segments and create “echo chambers.” Vinika Devasar Rao, Executive Director of the INSEAD Emerging Markets Institute, talked about how age diversity creates opportunities for younger employees to advise industry veterans on technology and business strategy, a process known as “reverse mentoring.”



To foster a culture of innovation in Asia, regional and global medtech leaders clearly understand the benefits of diverse, empowered teams with a pulse on the needs of local patient populations and the flexibility to invest in new ideas. While many speakers at the Forum acknowledged that such teams are not yet the norm in many markets, most are investing considerably in creating the conditions for them to develop and thrive.

“Your company culture has a big impact on your ability to innovate. Spend time on culture and make sure everyone in your organisation knows your mission.”

José (Joe) E. Almeida
Chairman, President,
and CEO of Baxter International





“ Robotic surgery is still in its early stages, but by developing smaller, less expensive, and more capable tools, we can eventually democratise access to surgical care. ”

Scott Huennekens
CEO of Verb Surgical

The Digital Doctor

Cutting-edge advances in AI, robotics, 3D printing, and other technologies promise to change medicine. What does this mean for the future of clinical practice?

New technologies hold seemingly boundless potential to improve standards of care around the world, but some inspire a mix of emotions. Advances in artificial intelligence (AI), for example, inspired excitement at this year's Forum, but also concern about the eventual automation of many healthcare functions and widespread job displacement across the healthcare industry. Some also expressed doubt that AI will live up to all the hype that surrounds it.

Verb Surgical, a Silicon Valley-based surgical innovation company, believes AI will ultimately be a force for good in medicine. Founded in 2015 out of a partnership between Johnson & Johnson and Google, Verb aims to improve surgical care with AI, robotics, visualisation tools, and other novel technologies. In a presentation at the Forum, CEO Scott Huennekens hinted at a possible future in which portable surgical robots can leverage advanced analytics to perform low-cost procedures with exceptional accuracy.

In a panel titled **Will AI Replace the Doctor?**, speakers also struck an optimistic note. Steve Leonard, CEO of SG Innovate, pointed out that automation of physician responsibilities will help alleviate the crippling health worker shortages that plague many Asian markets. Farhana Nakhooda, APAC Director of IBM Watson Health, countered that AI could never replace physicians, though it would power decision support tools and other capabilities that would make doctors more productive.

A breakout session on **Cybersecurity in MedTech** drew attention to some of the potential hazards of AI and other digital technologies. It investigated the growing risk of cybercrime

and its potential impact on the medtech industry, as well as tips for defending against cyberattacks. Since many hackers target unsuspecting workers in non-technical functions, for example, it is critical that all employees in all healthcare organisations receive basic training in cybersecurity.

Despite the risks, AI and other digital tools are increasingly being incorporated into clinical workflows. For example, many companies around the world are already working on AI tools for reading medical images and suggesting treatment pathways. In the opening keynote on the second day of the Forum, Dr Yasuhiro Suzuki, Japan's Chief Medical and Global Health Officer and Vice-Minister for Health, Ministry of Health, Labour and Welfare (MHLW), identified deep learning for diagnostic imaging as an area of "near-term opportunity."

AI could also help accelerate the advent of personalised medicine, a new paradigm of care in which treatments are tailored to the individual. In a panel session on **Personalised Medicine in Asia**, the speakers agreed that one-size-fits-all treatments would eventually give way to interventions that took into account an individual's unique genotypic, clinical, and environmental factors.

“Medicine has always been personalised to some degree, but we’re moving towards a world in which evidence-based and tech-driven personalisation is happening rapidly and on a large scale,” said Dr Ruby Yun-Ju Huang, a clinician-scientist who directs the Translational Centre for Development and Research at the National University Health System in Singapore. Yet most of the panellists also conceded that challenges persist, such as the fragmentation of medical data and the immaturity of personalisation algorithms in some disease areas.

Beyond AI, other cutting-edge technologies are generating similar excitement. One example is mixed reality (MR) devices. Unlike virtual reality (VR), which employs various human-computer interfaces to transport users into a fully immersive virtual world, MR devices typically use headsets that overlay holographic images onto a real-world field of vision. In a presentation on **Mixed Reality in Health**, Dr Simon Kos, Microsoft’s Chief Medical Officer, showcased various potential uses in medicine, including medical education, medical imaging, surgical planning, and telehealth.

Kos explained how these applications might drive improved outcomes for patients. Surgeons, for example, can now use MR headsets to overlay ultrasound imagery on patients in real time, allowing them to operate with greater precision. Medtech firms can use them to visualise clinical workflows in virtual operating rooms, helping them build tools and services that increase patient safety and reduce costs. As the costs of these technologies decline, widespread uptake in clinical practice might be just around the corner.



“ Innovative medical technologies will help Japan address its healthcare challenges. We believe that real world data, cancer genomics, and deep learning for diagnostic imaging are near-term opportunities. ”

Dr Yasuhiro Suzuki
Chief Medical and Global Health Officer
and Vice-Minister for Health, Ministry of Health,
Labour and Welfare, Japan

Asia's R&D Explosion

Asia is becoming a hotbed of medtech innovation, but will new R&D initiatives meet the needs of all patients?

For most of recent history, the majority of medtech R&D happened in the United States and Europe. Yet, as Asia develops, the region appears poised to contribute a growing share of healthcare innovation in the coming years. To capture the opportunity, many medtech companies are investing considerably in Asia-focused R&D.

One of those companies is Boston Scientific, which spent nearly \$1 billion in R&D globally in 2016. During his fireside chat, Chairman and CEO Mike Mahoney said that the company is currently shifting some of its R&D spend to Asia. This includes hiring engineers and establishing dedicated facilities in countries like India, China, and Japan.

A breakout session on **MedTech Investment 2017** highlighted some of the region's most promising R&D hubs. Australia, for example, has a range of government innovation programs and a strong digital health infrastructure that medtech firms can leverage for their R&D efforts, according to Sue MacLeman, CEO of MTP Connect, an NGO that aims to establish

Australia as a hub for medtech, biotech, and pharmaceutical companies.

Other panellists discussed opportunities in Asia's emerging markets. *"China is a particularly vibrant hotbed of R&D activity,"* said Renee Compton Ryan, VP of Venture Investments at the Johnson & Johnson Innovation Centre in California. *"In the past few decades, China went from 'me too' to 'me better,' and is quickly becoming a source of original products and business models."* Hideo Arase, MD of Terumo Asia Holdings and Senior Executive Officer at Terumo Corporation, alluded to similar progress in India, though he also shared concerns that price controls and other government policies could discourage innovation.

In a panel on **Resource-Constrained Innovation in Asia**, several speakers argued that too small a share of Asian medtech R&D was directed towards patients in low-resource settings. *"We've been talking about frugal innovation for a long time but still see few success stories,"* said A/Prof. Anurag Mairal, Director of the Global Outreach Programs at the Stanford Byers Centre for Biodesign.

David Capes, VP of R&D in Greater Asia for Becton Dickinson, pointed out that large medtech firms are often hesitant to invest in frugal innovation because it risks cannibalising their existing product portfolios.

Fellow panellist Prof. Gerry George, Dean of the Lee Kong Chian School of Business at Singapore Management University, said that frugal innovations must overcome a "triple hurdle" before they can have meaningful impact: *"they must achieve scale, disperse geographically, and retain a low-cost profile as they do."* Doing so typically requires having dedicated teams on the ground, added Yashdeep Kumar, VP of Global Innovation Programs at Stryker: *"It simply isn't enough to do a tour of the region, hear the voice of the consumer, and then do the R&D back at headquarters."*

Although relatively few examples of truly frugal innovations surfaced at the Forum, some of the delegates noted that local companies are actively developing innovative products and business models for value-oriented customers in Asia. As R&D spend increases in the region, more case studies may soon come to light.



“Frugal innovation requires more investment from the large multinationals. I’m not talking about CSR—I’m talking about dedicated R&D for low-resource settings.”

David Capes
VP R&D in Greater Asia, Becton Dickinson

“Asia is our fastest-growing region, so we’re investing in innovation. We went from having zero innovation capabilities here just a few years ago to significant R&D operations across the region.”

Mike Mahoney
Chairman and CEO of Boston Scientific



New Models of Care

How innovative providers are tackling healthcare challenges in China, India, and Asia's emerging markets.

Providers are the principal users of many medtech products and services, and usually have a sharp perspective on the epidemiological and sociocultural trends that shape medtech demand, so they tend to be important partners for the medtech industry. This year's Forum included the voice of providers in China and India, two of Asia's most important growth markets. Both showed how innovative care models can create new business opportunities as they extend access to affordable healthcare.

Roberta Lipson, CEO of United Family Healthcare (UFH) in China, was one of the presenters. She spoke candidly about the many problems in China's healthcare system, including overutilisation of healthcare services, overcrowding in hospitals, workforce talent gaps, and conflicts of interest in the medical system. These challenges are compounded by a rising disease burden due to ongoing pollution, rising obesity, and other population health risks.

Yet Lipson also sees signs of progress on the horizon. Policy reforms and government programs, such as Xi Jinping's Healthy China 2030 initiative, suggest that Chinese leaders are starting to take a more proactive and comprehensive approach to care. Efforts are also underway to bolster China's private insurance and healthcare markets, though Lipson said that providers still face high taxes and tricky reimbursement processes.

Amid these challenges, forward-thinking models of private healthcare are emerging. UFH, for example, is building a care network with a common EMR across hospitals, clinics, and home health providers. It pursues business models that incentivise quality care provisions,

such as risk sharing agreements with insurers. It also uses third-party technologies like WeChat to facilitate patient engagement. The ultimate idea is to offer life cycle coverage to patients with primary care at the core.

Similar opportunities exist in India, which faces many of the same problems as China. "Many of India's hospitals look like railway stations," said Rahul Khosla, President of the Max Group and Chairman of Max Healthcare, a private provider network with 14 hospitals and over 2300 doctors. "There is no shortage of patients in India—the bigger challenge is to build basic healthcare infrastructure and find skilled clinicians to staff our hospitals and clinics."

Like UFH, Max Healthcare seeks to overcome these challenges with innovative technologies and operating models. One example is the Max Bike Responder, a motorbike ambulance service that was designed for urban areas where heavy traffic is common. Operated by paramedics and equipped with essential technologies, they are capable of navigating through gridlock, reaching accident scenes quickly, and stabilising patients.

Khosla also discussed challenges related to low penetration of private insurance and high ratio of out-of-pocket payments in India. This shifts the burden of risk heavily on the individual and causes many people to fall into poverty due to unforeseen medical problems, particularly in rural areas where access to quality healthcare is particularly spotty. Private providers tend to focus on urban markets and middle-class or affluent customers, so dealing with the healthcare needs of the rural poor often falls to NGOs.

Friendship, for example, is an international NGO that supports remote and marginalised communities in Bangladesh, including those living on the nomadic islands of the Brahmaputra River in Bangladesh. Runa Khan, Friendship's Founder and Executive Director, spoke at the Forum about her efforts to bring these people quality healthcare by converting old ships into mobile clinics. Her stories showed how NGOs are also adopting innovative tactics to extend access to quality healthcare, and brought a standing ovation from the audience.

Khan also emphasised the importance of thinking broadly about population health challenges: "Simply providing medical care is not enough—to make lasting change, we need to also make sure that all people have access to education, good governance, and other social services." Perhaps the medtech industry has a greater role to play in shaping the social determinants of health through innovative partnerships that look beyond traditional healthcare settings.

“ The traditional response to China's healthcare challenges was simply to build more hospitals, including many with more than 1000 or even 2000 beds. Today, China's leaders are taking a more proactive and comprehensive approach to care. ”

Roberta Lipson
Founder and CEO of United Family Healthcare



The Value of Innovation

How are regulatory and market access professionals ensuring that medtech innovation is encouraged and rewarded?

As the pace of medtech innovation increases, regulatory and market access professionals across Asia face two key challenges. First, they must ensure that regulators have the internal capabilities to evaluate new technologies quickly. Second, they must develop pricing and reimbursement schemes that strike a fair balance between rewarding innovation and controlling costs. Neither task will be easy, but the Forum showcased an array of case studies and approaches that may help.

Dr Yasuhiro Suzuki, the Chief Medical and Global Health Officer and Vice Minister for Health at Japan's Ministry of Health, Labour and Welfare (MHLW), spoke in his keynote about the situation in Japan. He presented extensive data showing that Japan performs well in many population health indicators but faces rising pressure from rising healthcare costs. Most of these costs are due to the introduction of new and expensive treatments, but also driven by a rapidly-ageing population, health worker shortages, and overutilization of healthcare services. Dr Suzuki explained how Japan seeks to reduce costs without sacrificing access to novel

medtech innovation. He indicated that new cost-cutting measures may be on the horizon, but mostly for high-volume medicines, not treatments for rare diseases. He also described efforts to improve regulatory capacity, as evidenced by significant reductions in the "device lag" in recent years, and new measures to accelerate evaluation of novel treatments in regenerative medicine, cancer genomics, and other innovative technologies.

Regulators from other Asian countries are working towards similar ends. In a panel on **Regulatory Agility and the Need to Fast-track Innovation**, representatives from the China Food and Drug Administration (CFDA), Korea's Ministry of Food and Drug Safety (MFDS), and Singapore's Health Sciences Authority (HSA) all discussed measures to improve the regulatory workforce, increase the speed and quality of evaluations, and create special pathways for innovative products. APACMed's Regulatory Affairs Summit, which was hosted on the day after the Forum, provided further insight and context on these changes.

A panel on the **Changing Landscape of Medical Device Pricing and Reimbursement** also raised the issue of value-based healthcare (VBHC) policies, which seek to reward providers and life sciences companies for the overall value they bring to healthcare systems. VBHC policies often rest on new models of pricing and reimbursement that seek to measure outcomes that matter to patients. They come in many forms, but most seek to compensate healthcare stakeholders when their products and services keep patients healthy—not just when patients are treated.

"Value-based healthcare is all about shifting the conversation from cost to patient outcomes," said Dr. Hsien-Hsien Lei, Vice President of Communications and Value-Based Healthcare at Medtronic APAC. *"That shift is still in its early days, but will ultimately deliver benefits for patients, medtech companies, and other stakeholders."*

To make that shift happen, the panellists agreed that more detailed data on treatment pathways, patient outcomes, and costs is needed.

The shift also requires an entirely new class of professionals with a full mix of skills to manage and interpret this data. This includes knowledge of information technology, health economics, government policy, clinical affairs, and pricing and reimbursement.

To drive meaningful regulatory change and ensure that innovation is fairly rewarded, industry collaboration and multi-stakeholder partnerships will be crucial. The same is true for the ongoing efforts to bolster Asia's healthcare workforce, improve access to quality care, and create new products and services that meet the diverse needs of patients in Asia.

This year's Forum highlighted strategies for inspiring innovation, success stories from across the healthcare ecosystem, and areas of unmet patient demand. Meeting those demands may not always be easy, but doing so remains our ultimate obligation.



“Historically, innovation meant more expensive products and higher costs for payers. We need to change that.”

Harry de Wit
President & Chief Executive Officer Asia-Pacific,
Fresenius Medical Care

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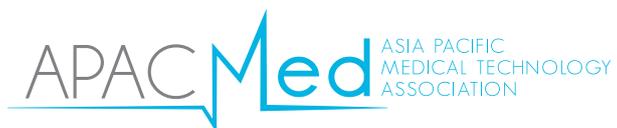


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