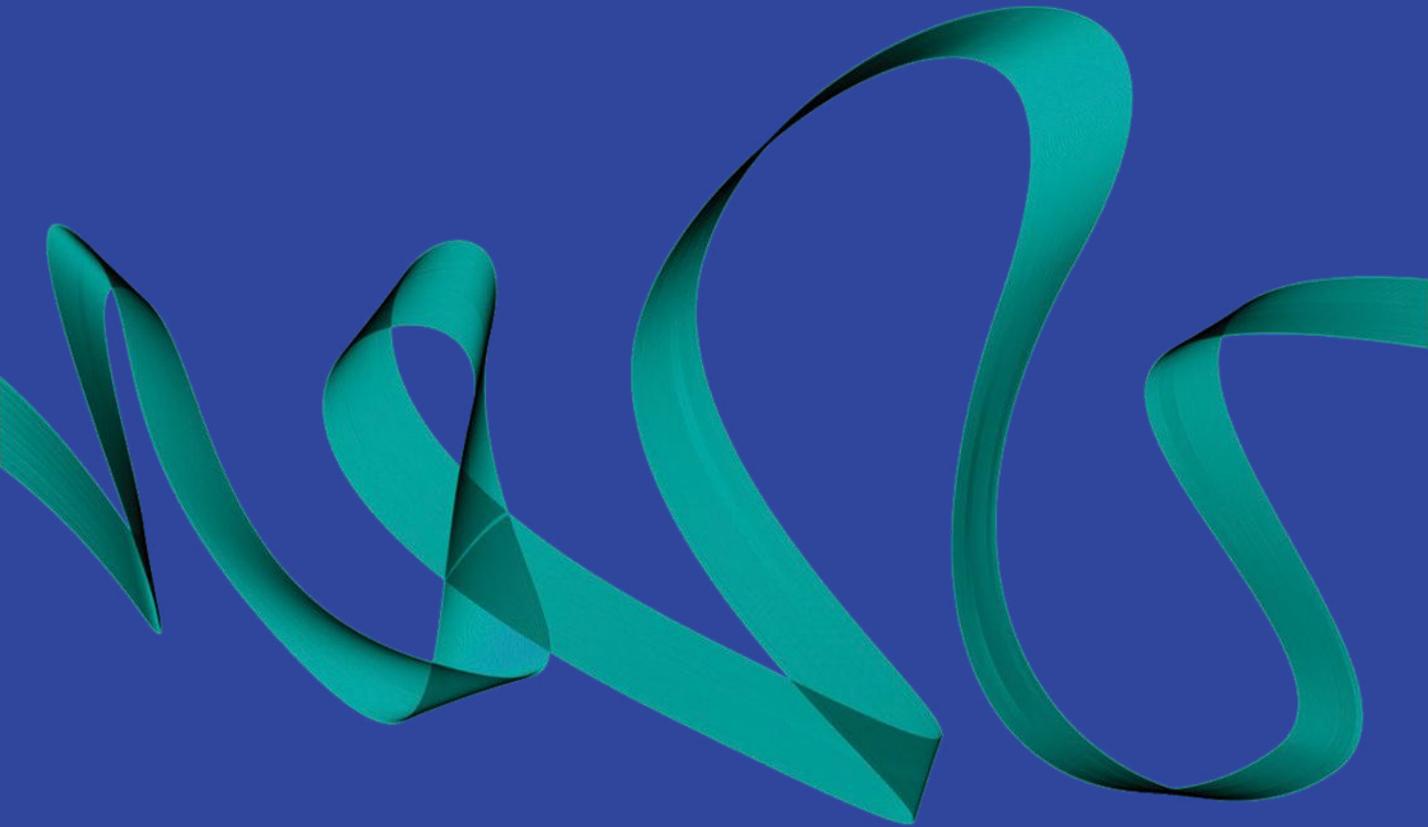




Geared for health — Asean's growing medical and healthcare industry





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Overview

Positive drivers

Middle-income earners are on the rise across the Association of South-East Asian Nations' (Asean), a demographic shift that is driving demand for better healthcare and medical devices that facilitate more efficient treatment. Pacific Bridge Medical forecasts this dynamic will help double the value of the medical device market in the region — whose 10 members are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam — from US\$4.6 billion in 2013 to US\$9 billion by 2019. Other factors, such as the implementation of new public health policies and an ageing population, will further support the sector's growth in the mid-term. As a result, medical equipment manufacturers are increasing their focus on Asean as a key growth market. Other positive factors include:

- Asean is home to 620 million people and the world's third largest workforce.
- The region's economic output is US\$2.4 trillion, the seventh largest in the world and above India and will become the fifth largest economy by 2050 (source: McKinsey Global Institute).
- Some 125 million households will enter the middle-income bracket by 2025, representing an increase of 87 per cent (source: McKinsey Global Institute).
- The region benefits from a bi-modal population. While half of those living in Asean are under 30, there are more than 55 million people over the age of 60, a population larger than Korea and equivalent to that in South Africa (source: United Nations Population Fund).
- There is increasing intervention by the public sector in terms of the investment in the healthcare sector and the level of spending.

Medical devices within the AEC

The launch of the Asean Economic Community (AEC), which aims to liberalise intra-regional trade and investment as well as freeing up the movement of labour, is tabled for 31 December 2015. This development should benefit the medical device industry, which has an increasingly bright future within the region due to increased governmental focus on healthcare and medical equipment across a number of member states.

The Asean Consultative Committee on Standards and Quality's Medical Device Product Working Group issued the Asean Medical Device Directive, a set of non-legally binding stipulations established to harmonise regulations across the region that require all foreign medical device manufacturers to register their products in any member state where they have production. It also outlines basic requirements for medical device performance, safety, compliance assessments, a risk-based classification system and the Common Submission Dossier Template. (The template creates a more uniform and consistent format for submitting information about medical devices to relevant regulatory agencies within Asean.) However, each member state retains the right to operate their national regulatory system.

Although the Asean Medical Device Directive was due to be enforced on 1 January 2015, it had not been implemented by the time this research note was published in July 2015.

Spotlight on Myanmar

Myanmar is another Asean country where investors are following the rising potential within the healthcare sector. According to the World Bank, Myanmar was the second highest (after Vietnam) in terms of out-of-pocket (OOP) expenditure in 2012. The healthcare sector in Myanmar has also opened up to foreign investment - with new rules allowing for up to 70% of foreign ownership in clinics and hospitals. Additionally, the ongoing liberalisation of laws and regulations covering investment in Healthcare allows for more foreign insurance companies to establish and operate their businesses locally. Some of these firms include Sampo Japan Insurance, Mitsui Sumitomo Insurance, Tokyo Life Insurance and AIA. Increasingly, Myanmar's medical healthcare system is a private pay system, and we believe that the demand for healthcare services and products will continue to rise as the economy grows.

For further reading on Healthcare in Myanmar, You can download our November 2013 paper, Healthcare in Myanmar here:

English: <http://www.ipsosconsulting.com/pdf/Research-Note-Healthcare-in-Myanmar.pdf>

Japanese: http://www.ipsosconsulting.com/pdf/Research-Note-Healthcare-in-Myanmar_JP.pdf

Medical tourism

Thailand, Singapore and Malaysia are positioning themselves as medical tourism hubs and each enjoys a reputation for providing worldclass treatments at internationally accredited hospitals — Thailand and Singapore respectively have 30 and 15 private hospitals accredited by Joint Commission International (JCI).

Needless to say, the stronger the region's medical tourism sector, the higher demand will be for medical devices.

The medical tourism sector in these three countries attracted 4 million foreign patients who generated US\$8 billion in revenue from 2011–12 as shown in Figure 1. Kasikorn Research Centre forecasts Thai private hospitals will conduct 2.81 million treatments for medical tourists contributing more than 100 billion baht (US\$3.1 billion) to the local economy, an increase of 15 per cent from the previous year.

Affordability is the key driver of medical tourism. Malaysia Healthcare Travel Council research shows the cost of treatment¹ in the US is seven-to-nine times higher than in Thailand, Malaysia or Singapore. Furthermore, each of these three countries is developing itself as a centre of excellence for specific treatments. Thailand has earned a solid reputation for cosmetic surgery and gender reassignment procedures, as well as having a wide range of affordable properties and destinations to choose for the convalescence period. Both Singapore and Malaysia are globally recognised for cardiac and neurological surgery and joint replacements. Thailand, Singapore and Malaysia each had a hospital in the Top 10 World's Best Hospitals for Medical Tourists selected by the Medical Travel Quality Alliance in 2014, with Malaysia taking pole position.

Treatments covered in this comparison are heart bypasses, heart valve replacements, angioplasties, hip replacements, hysterectomies, knee replacements and spinal fusion.

¹Treatments covered in this comparison are heart bypasses, heart valve replacements, angioplasties, hip replacements, hysterectomies, knee replacements and spinal fusion.

Country	Estimated earnings	Number of foreign patients	Origin of patients (in order of volume)
Thailand (2012)	\$4.3 billion	2.5 million	Japan, USA, South Asia, UK, Middle East, ASEAN countries
Singapore (2012)	\$3.5 billion	850,000	Indonesia, Malaysia, Middle East
Malaysia (2011)	\$158 million	583,000	Indonesia, Singapore, Japan, India, Europe

Source: Malaysia Healthcare Travel Council, Singapore Tourism Board

Figure 1: Medical tourism in Malaysia, Singapore and Thailand

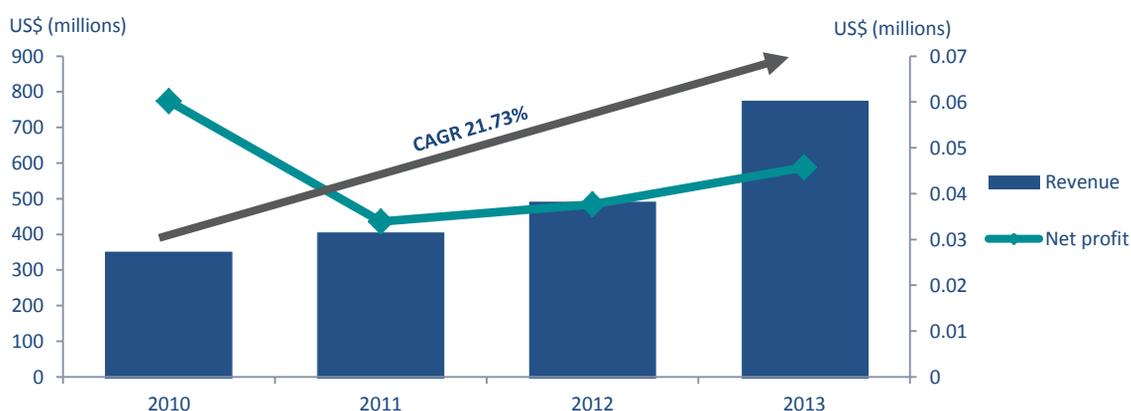
While the Philippines lags Thailand, Malaysia and Singapore in terms of the reputation and popularity of its medical services, the government is doing more to promote medical tourism and raise international awareness of the quality of its medical practitioners while seeking to upgrade their facilities and equipment.

Import focused

Asean countries currently import most of their medical equipment from the US, Japan, Germany and The Netherlands because the region's manufacturers are not yet technologically advanced enough to produce complex machinery such as ultrasound, x-ray machines and MRI scanners.

Ipsos Business Consulting's view is that while medical device companies face intense price competition within Asean, they remain profitable by optimising operating costs and expanding their overall market (see Figure 2).

As a result, these companies saw their accumulated revenue grow with a CAGR of 27.56 per cent from 2010–12. Our analysis revealed the increase in universal health schemes that provide more people with access to health services and thus their spending is a key driver of rising sales for these medical device companies. One such example is the growth in consumable products, which ranged from 15–30 per cent depending on the product sub-categories.



Source: Department of Business Development, Ministry of Commerce, Ipsos Business Consulting

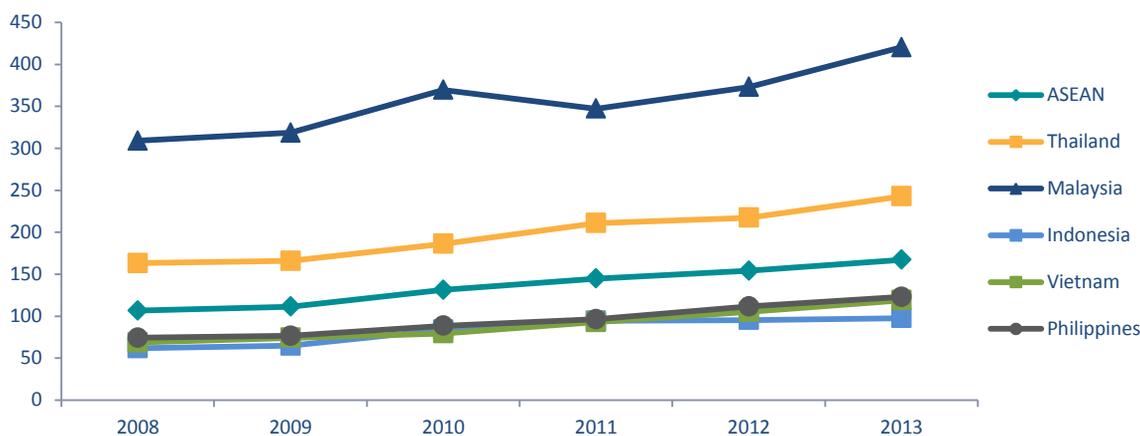
Note: The exhibit shows the average of 20 medical device companies registered in Thailand.

There is an impact from currency effect since THB per USD has appreciated 5.6% from 2010 to 2012

Figure 2: Medical device companies in Thailand: accumulated revenue and profitability

Low base, high potential

Health expenditure per capita is low across Asean with a significant gap between the region's spending and that in developed countries. Japan and the US, for example, spent US\$3,958 and US\$8,608 per capita in 2012 respectively, compared with Thailand and Indonesia which spent just US\$242.8 and US\$97.7. However, Asean's relatively low health expenditure presents potential for future growth. Indonesia currently enjoys some of the strongest global growth in health expenditure at 11.6 per cent CAGR (2008–13), compared to global and regional growth of 5.9 per cent CAGR and 9.52 per cent CAGR, respectively (see Figure 3).



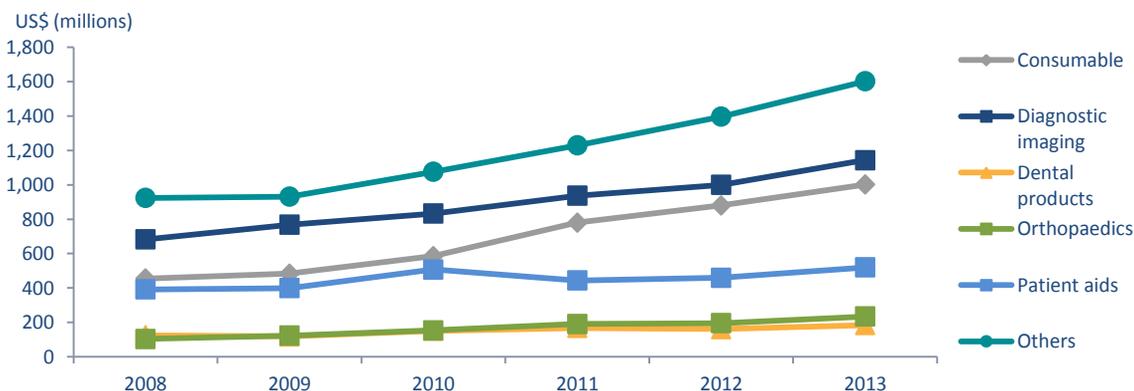
Source: Ipsos Business Consulting

Note: Note: Asean members excluding Brunei, Cambodia, Laos and Myanmar

Figure 3: Health expenditure per capita in Asean

Market segmentation

This study divides the medical device market into six categories: consumables, diagnostic imaging, dental products, orthopaedic products, patient aids and others (such as wheelchairs, other medical, surgical, dental furniture, ophthalmic instruments and appliances).



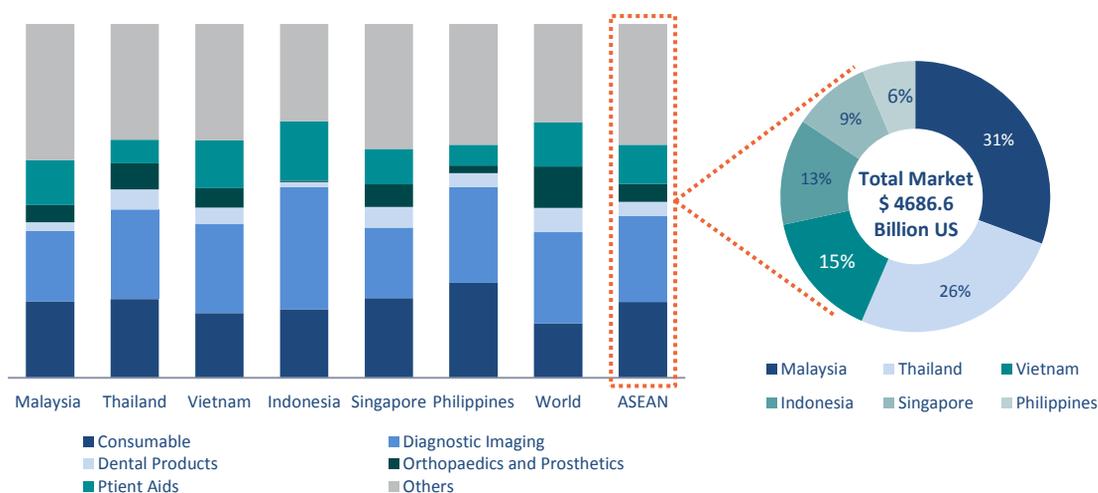
Source: Espicom Business Intelligence, Ipsos Business Consulting

Figure 4: Asean's medical device market size by category

Asean's rapidly growing population has accelerated the uptake of medical devices across the region. For example, if we look at Malaysia then we can see that, despite it having a much smaller population than either Thailand or Indonesia, the country had a medical device market valued at US\$1 billion in 2013. This is roughly equivalent to the market size in each of the other two aforementioned countries. Furthermore, the company Medical Device and Diagnostic Industry (MDDI) forecasts that Malaysia's market will nearly triple by 2018. A main reason for this is the Malaysian government designating the medical devices industry as a key sector for receipt of funding to increase its development and promotion. The country is now investing over 120 millions of dollars in healthcare infrastructure and clinical research. Currently, Malaysia is supplying 80% of the world's catheters and 60% of the world's rubber gloves.

Thailand has Asean's largest diagnostic imaging market with a market share of about 27 per cent, Espicom research shows. Diagnostic imaging is the largest single medical device category both globally and within Asean. However, it achieved a CAGR of 10.85 per cent from 2008–12 (see Figure 4) which is slower than the next largest category, consumables, which had a CAGR of 17.13 per cent.

Epicom also found the size of Asean's dental product market is about half the global average, 3.9 per cent of the medical equipment market compared with 6.9 per cent. This category also has the lowest regional growth rate for medical equipment, just 8.1 per cent per year. It is even contracting in Indonesia where dental care is one of the lowest health priorities.



Source: Espicom Business Intelligence, Ipsos Business Consulting

Figure 5: Breakdown of medical device market by category in 2013²

Public health initiatives — pros and cons

Rising healthcare spending across Asean is the single largest driver of the medical device industry's regional expansion. Most of this expenditure, approximately 60 per cent of total spending in 2013, is paid for out-of-pocket by individual patients rather than from national health schemes or insurance policies, Espicom research reveals. For example, 50 per cent, 55 per cent and 56 per cent of total health expenditure of Indonesia, Philippines, and Vietnam is paid for out of pocket respectively. This is much higher than the average 16 per cent in developed countries. Given relatively low incomes across the region, it is fair to assume that a large section of Asean's population, especially the 440 million people living in rural areas, face financial barriers to accessing healthcare services.

²Figure 5 shows data from the six largest medical equipment markets which account for the majority of trade within Asean.

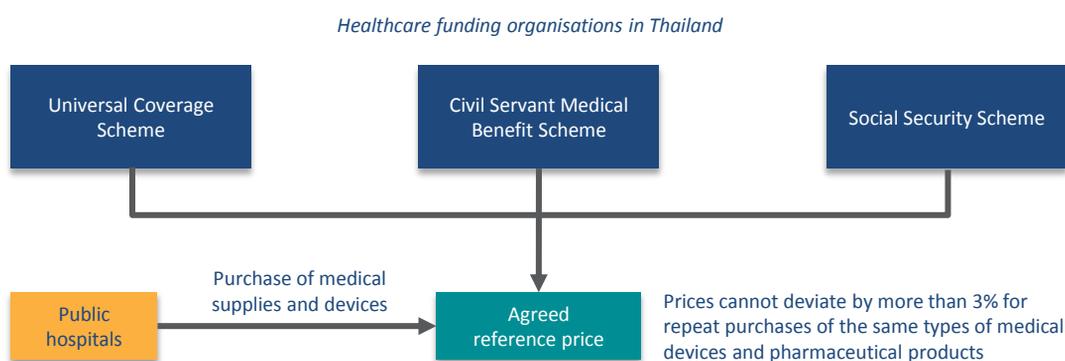
To help increase access to medical services countries such as the Philippines are piloting universal healthcare schemes. Since 2011 the government has spent \$5.3 million on PhilHealth, its national health scheme for low-income families which covers about 25 million people or 26 per cent of the population. Participants in the scheme do not have to pay medical bills when admitted to government hospitals. In addition, the government plans to expand the system's coverage to include the entire population within 2016.

In Indonesia, the National Social Security Agency established universal healthcare coverage, Jaminan Kesehatan Nasional (JKN), enabling all Indonesians to access free health treatments and medicines for major illnesses where costs are fully subsidised by government. Moreover, the government forecasts all Indonesians will be registered under JKN for health coverage within 2019. The national health insurance programme will fuel further growth in healthcare expenditure and the medical device market, the values of which are expected to expand by 18 per cent and 17 per cent per year respectively until 2018, representing the highest growth among Asean countries.

These universal healthcare programmes provide a range of medical device companies with new opportunities to sell their products into relatively untapped markets with strong growth potential. However, given the relatively large uninsured population in many Asean countries (there are some 92 million Indonesians and 17 million Filipinos who remain outside of the system or are too poor to access healthcare) further analysis is required to establish how successful public health policies can be at bringing uninsured people into the healthcare systems across Asean and how these developments will affect the medical equipment market.

Cost effectiveness, control and prevention

Thailand is one of the few developing countries to have successfully implemented universal healthcare coverage, which it launched in 2002. The policy covered about 99 per cent of the Thai population by the end of 2013. Out of pocket payments for healthcare had dropped from 33 per cent of total national healthcare expenditure in 2001 to 13 per cent in 2013 as a direct result of the publically funded policy. Despite these positive trends, however, Thailand's healthcare spending accounted for just 4 per cent of country's gross domestic product in 2013, compared with a global average 9 per cent. One of the reasons for having such a low GDP is that over 90% of the country's population is under public insurance schemes. The funding available in the public insurance scheme is not high enough to drive the GDP further. The Thai Government also claims that its reform of the procurement policies and procedures for Healthcare has also led to a fall in the cost of medical devices within Thailand (figure 6).



Source: National Health Security Office, Thailand, market interviews, Ipsos Business Consulting

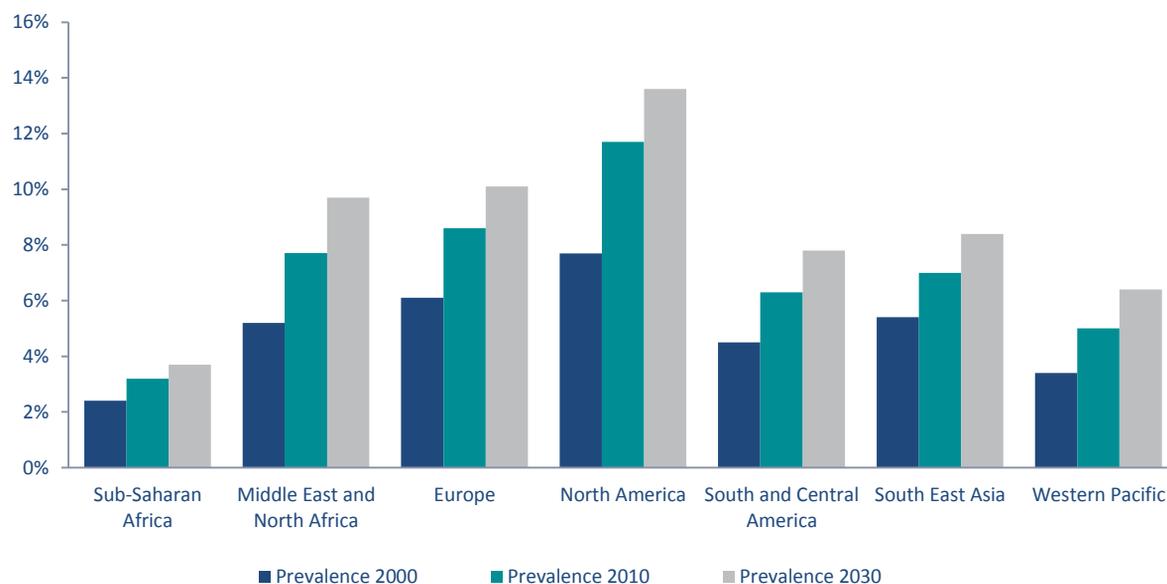
Figure 6: Reform of medical product procurement policy in Thailand

In 2010, the Ministry of Public Health introduced the Central Price Regulation procurement policy. The policy requires public hospitals to limit purchases according to newly agreed reference prices. Hospitals which fail to set the ceiling price are referred to the Office of the Auditor General of Thailand. Furthermore, the ministry forecast the cost of pharmaceutical products and medical supplies/devices would fall by 20 per cent from 2010–14.

The reform has put downward pressure on prices within Thailand's medical device market, especially consumable products such as syringes, needles, catheters and suturing materials, which are usually purchased annually in large volumes. Competitive pricing is the key factor in determining which brand wins a closed auction, the preferred purchasing mechanism for public hospitals. This means medical device manufacturers with local production, or who manufacture products in countries with low labour and logistics costs for exporting to Thailand, will gain a competitive advantage. For example, both Nipro and Terumo manufacture in Thailand and the Philippines and as a result have gained significant market share compared to other importing manufacturers of consumable products.

Procurement at Indonesian hospitals participating in the JKN system operates differently than in Thailand. While the government does not control the price of pharmaceuticals and medical devices, it has reformed how hospitals are reimbursed under the national health insurance programme. Each hospital receives a lump sum based on the number of JKN patients under its care. There is no reimbursement for additional operational costs, including prescription drugs and medical supplies, as these expenses are bundled in the initial lump sum. Hospitals therefore directly share the burden of patient costs. It is expected that most public hospitals and some private hospitals participating in JKN will focus on controlling the price of medical supplies as the main way to reduce costs they have been forced to absorb.

In most Southeast Asian countries cancer, diabetes, tuberculosis and cerebrovascular conditions are the most significant health risks. Global forecasts estimate there will be 439 million diabetes patients by 2030, 80 per cent of which will be in developing nations. Malaysia, Thailand, Singapore, the Philippines and Indonesia are currently all ranked in the top 15 countries with the highest diabetes-related deaths, an Ipsos Healthcare UK study found.



Source: Ipsos Healthcare White Paper on The Type 2 Diabetes Pandemic and the Race for the Optimal Treatment

Figure 7: Diabetes prevalence in key regions (2000–30)

Diabetes is often only identified in Asean nations when the disease is at an advanced stage, mainly due to a lack of preventative measures and infrequent health check-ups, which makes treatment more difficult. The Thai government is focusing more on prevention and control practices by implementing reimbursement schemes for annual check-ups for major diseases. The schemes include free HIV testing twice a year at all public hospitals, reimbursement for cervical cancer tests under all national health schemes, free annual blood-sugar tests and x-rays for patients with a high risk of contracting tuberculosis.

Prevention and control programs increase demand for diagnostic products. However, it is worth mentioning that the first stage of the Thai scheme only required fairly simple diagnostic tests which use relatively inexpensive technology. Since then the government has broadened reimbursement coverage to include more advanced tests, which has seen an upturn in test efficiency and accuracy. It is expected that both Indonesia and the Philippines will follow a similar development path to Thailand in terms of implementing cost-effective prevention and control programmes.



Source: Market interviews and IBC analysis

Figure 8: Healthcare development stages under Thailand’s universal health coverage

Conclusion — moving ahead under the current market landscape

Providing effective cost management and introducing new cutting edge technologies will be key success factors for medical device companies wanting to become market leaders across Asean. While competitive prices, which are buoyed by low labour costs, provide a chance to win tenders in public hospitals, the introduction of new technology enables companies to transform the market and gain greater market share. (For example, using liquid cultures in tuberculosis diagnostic has aggressively replaced solid culture tests for the disease, and the introduction of vacuum tubes for blood testing provides more sanitary, convenient and time-efficient method compared to conventional tubes.)

However, not every new technology can be used in the market. To successfully transform current practices across Asean, manufacturers must have a clear holistic understanding of the market including key unmet needs, evolving price and reimbursement policies, and the ability to connect with the key policymakers in relevant countries.

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