

# *Asia-Pacific Health Industries Newsletter*

Keeping you up-to-date with  
the latest developments

**Issue 13, April 2015**

News and analysis by  
PwC industry specialists  
for pharmaceutical,  
biotechnology, medical  
device, diagnostic and  
healthcare companies  
and healthcare institutes.



## Editor's note

PwC's Global Healthcare Industries network is pleased to present you with its 13<sup>th</sup> issue of the Asia-Pacific Health Industries Newsletter.

The newsletter aims to keep you informed of the latest developments across pharmaceutical industries and healthcare sectors in the region. In this issue, we highlight a number of recent developments that are of direct interest to pharmaceutical and medical device companies, as well as healthcare organisations.

First, in our special issue **Health Industries Updates** section we provide an introductory overview of **Taiwan's health industries**.

In our section on **Healthcare in South East Asia**, we focus on hospital market update in the Asia-Pacific region. In the **Health Economics** section, we highlight our successful project in **Australia** to support the Fred-Hollows Foundation to eliminate avoidable blindness.

In the **Compliance** section, we update the trend of transparency anti-bribery and corruption in pharmaceutical industries in Asia.

Further, we outline **People & Change** developments across different areas, including data analytics to predict attrition rate in **Japan** and talent management in **Singapore**.

In the **Taxation** section, we highlight recent taxation proposals in **Japan** and **Singapore**.

Finally, we present the latest developments in **Pricing and Reimbursement** to cover both pharmaceutical and/ or hospital services in **Australia, China, India, and Singapore**.

We hope that the analysis and information presented are of use to you and your business.

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# Asia-Pacific Health Industries Update



## **John Cannings OAM PwC East Cluster (Asia-Pac) Pharmaceutical & Life Sciences Leader**

Welcome to our 13<sup>th</sup> Edition of the Asia-Pacific Health Industries Newsletter.

In this issue, we include articles ranging across activities in Taiwan's health sector, looking at a specific health economics project in Australia, E-commerce and healthcare system challenges in China, talent management in Japan and Singapore as well as our regular topics around Pricing and Tax within the Asia-Pacific region.

From a macro perspective, dynamic changes are occurring around new regulations, health reforms and industry innovations which are impacting operating models and go to market strategies. As [our recent global thought leadership](#) emphasized, new entrants have pioneered pathways into virtual healthcare, accelerating more affordable and convenient care options in both developed and developing countries.

Another area for potential reform relates to the recent policy discussions around the globe on Base Erosion and Profit Shifting (BEPS) which could lead to in country profitability issues for many participants in the Pharma & Life Sciences sector.

As we highlight in our discussion of new solutions and capabilities, we have developed data analytics on attrition rates in the pharmaceutical industry to help decision making around how to retain resources.

In our healthcare practice, our team has also been engaged in activities with high societal relevance utilizing our robust health economics and analytics capabilities to help eliminate avoidable blindness in Australia.

As we know the social, cultural, religious, economic, political and health infrastructures vary significantly across the Asia-Pacific region, making this region both extremely diverse and complex. Like many other regions, we are also forced to adapt to the rapidly changing environment to improve our quality of care with increasing cost pressures as well as to produce new innovative pharmaceutical products and operate efficiently in a price constrained environment. Thus it is essential for businesses looking to sustain growth in the region to quickly capture the benefits of regulatory changes, health reforms and demographic trends.

In order to help our clients navigate through the current challenges and to understand the changes in your markets, we have taken the opportunity to introduce some of our new team members who have recently joined us in the region.

I would like to take this opportunity to again convey our gratitude to our clients and industry colleagues for their feedback and engagement across the region and to ensure you of our commitment to continue to add value to your businesses.

I hope that you will find this newsletter of use and interest to your businesses and as always we welcome your questions or thoughts on any of the issues. Please feel free to contact me or any of the territory leaders and industry experts whose contact details are set out on the back page of this newsletter

Yours sincerely,

A handwritten signature in black ink, appearing to be 'John Cannings', written in a cursive style.

**John Cannings, OAM**  
Partner

# Special Issue: Health Industries Update

## Taiwan

### Taiwan health industries outlook

Taiwan boasts one of the most progressive health systems in Asia, as well as a highly-regarded national health insurance programme. Yet it faces a number of pressing healthcare policy challenges, including the impact from one of the most rapidly ageing populations in the world and rising healthcare costs.

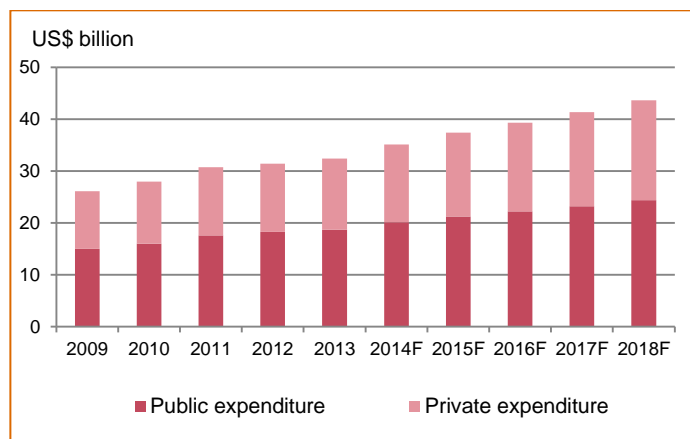
At the same time, healthcare providers and biotechnology, pharmaceutical and medical device companies, both domestic and international, face a dynamic and challenging operating environment in Taiwan, but one which also offers many opportunities for growth potential across the health spectrum.

This article, drawn from a new [PwC publication](#), provides an introductory overview of Taiwan's health industries and examines the future prospects, opportunities and challenges for market participants.

### Healthcare services sector

Taiwan's healthcare system enjoys very high rates of public satisfaction, largely due to its affordable universal coverage and equal access to quality healthcare under the National Health Insurance (NHI) scheme. The NHI is a public-run, single-payer health insurance scheme, which provides mandatory medical coverage for almost all Taiwanese citizens and offers freedom of choice of healthcare provider.

Healthcare expenditure in Taiwan has grown from US\$14.4bn in 1995, when the NHI system was first introduced, to US\$32.4bn in 2013. Taiwan currently spends about 6-7% of its GDP on healthcare, which is similar to regional levels but lower than the OECD average of 9.3%. A key reason for the relatively low spend is that the 2-3% cost of administering the NHI is among the least expensive in the world.



**Figure 1: Taiwan healthcare expenditure, 2009-2018.**

Source: Ministry of Health and Welfare, Taiwan; Business Monitor International.

Taiwan's healthcare expenditure is primarily funded through the NHI, and the rest from private out-of-pocket spending, mostly co-payments for hospitalisations and doctor visits. The NHI has constantly been threatened by financial deficits due to underfunding, forcing the government to tighten healthcare spending. A second-generation NHI was implemented in 2013 to shore up the system's finances, but it will continue to face financial strains resulting from an ageing population and rising healthcare costs.

### Growing needs for long-term care

Healthcare service demand continues to steadily grow in Taiwan. The average length of hospital stay increased from 9.6 days in 2003 to 9.9 days in 2012, and the average annual number of outpatient visits per person rose from 14.3 in 2003 to 15.7 in 2012, which both rank relatively high among advanced healthcare systems. The uptrend has been driven by Taiwan's lack of a gatekeeper system, easy and inexpensive access to medical treatment, ageing demographics and a lack of long-term care facilities.

Taiwan became an ageing society—in which people 65 or older account for at least 7% of the population—in 1993. It is currently projected to become an aged society (14%) in 2018 and a super-aged society (20%) in 2025, and senior citizens will represent around 41% of society in 2060. Taiwan's fast ageing population will increase demand and opportunities for long-term care and related services in the future, but these latest projections also present significant challenges for public healthcare policy.

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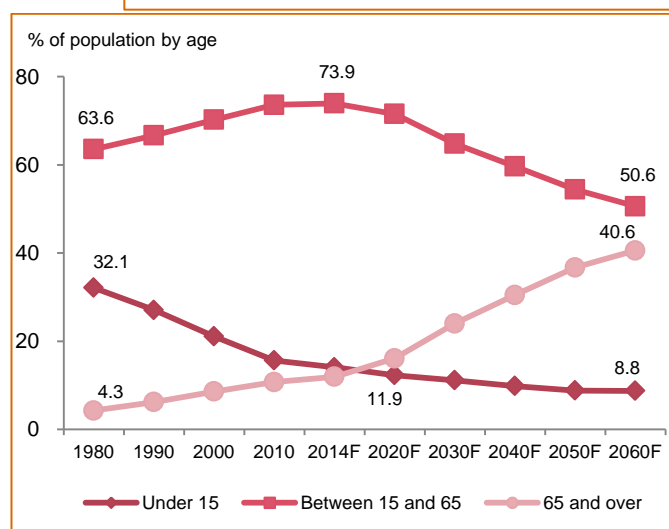
**Table 1: Key features and challenges for Taiwan's healthcare services industry**

### Key features

- Healthcare providers are a mixture of public and private, almost all of which are contracted with the NHI.
- Government-run, single-payer health insurance system which centralises the disbursement of healthcare funds.
- Compulsory health coverage for almost all Taiwanese citizens and freedom of choice of healthcare providers.
- Good accessibility, low out-of-pocket costs, short waiting times and high-quality medical personnel.
- Positive health outcomes and consistently high rates of public satisfaction with Taiwan's healthcare system.

### Challenges

- Universal access with no formal gatekeeper system or restrictive referral regulations.
- Overuse of healthcare services, facilitated by ease of access to medical treatment and facilities.
- Cost-containment policies putting downward pricing pressures on healthcare providers and drugmakers.
- Fast ageing population increasing demand pressures on the provision of healthcare and long-term care.
- Uncertainty over the long-term sustainability of the NHI due to ageing demographics and rising healthcare costs.



**Figure 2: Taiwan demographic structure, 1980-2060.**

Source: *Population Projections for Taiwan: 2014-2060*, National Development Council, Taiwan.

The government is in the process of establishing a comprehensive long-term care system. A draft Long-term Care Services Act, which would regulate the provision of care professionals and the establishment and management of long-term care institutions, is pending legislative review. There are also plans to launch a new long-term care insurance system and encourage more private investment in the sector.

### Promotion of medical tourism services

Another important driver of healthcare demand is the promotional development of Taiwan as a medical tourism destination, with a focus on attracting visitors from China. In recent years, the government has launched several initiatives to penetrate the medical tourism sector, as increasing numbers of people travel abroad to access healthcare. Taiwan is hoping to become a regional major player in this field.

Medical care in Taiwan is on a par with more developed countries but service fees are lower. Its other competitive advantages include the availability of highly qualified personnel and state-of-the-art facilities and procedures. Several domestic hospitals have received international accreditation from the US-based Joint Commission International, which is considered the gold standard in global healthcare.

### Cost pressures on healthcare providers

As of 2013, there were 495 hospitals and 21,218 clinics in service in Taiwan, mostly privately owned. Hospital numbers have fallen by 16% since 2004, compared with 14% growth in clinics over the same period. Cost pressures from reduced reimbursements have caused smaller healthcare providers to exit the market, while the surviving institutions have grown in size as they look to increase revenues. The development of self-paid services has received growing attention by clinics as possible growth drivers.

Besides Taiwan, domestic healthcare providers have also been actively exploring the huge market potential in China, as the government there opens up its healthcare sector to attract funds and reduce the burden on public hospitals. Many Taiwanese enterprises have already established joint-venture and fully-owned hospitals in China, having gained preferential access to its private hospital sector under an economic cooperation framework agreement (ECFA) signed between Taiwan and China in June 2010.

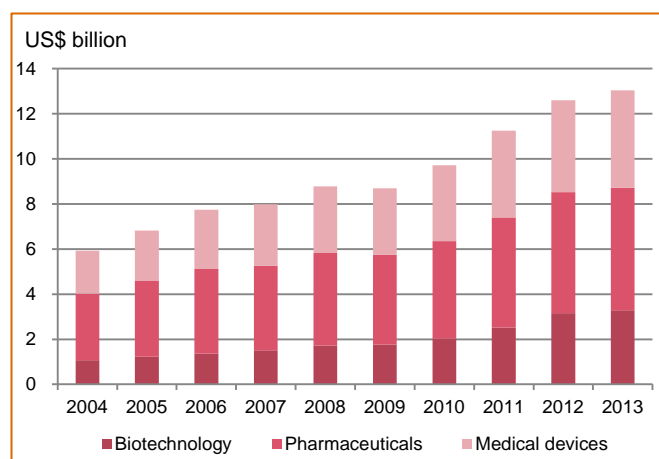
### Biotech, pharma and medical device sectors

Over the years, Taiwan has created a favourable environment for its biotech, pharma and medical device industries. Already in place is a highly-regarded clinical research infrastructure, a high-quality, low cost R&D and manufacturing environment, a large talent pool with capabilities in both fundamental and applied research as well

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as product development, and an industry culture that respects IP rights.

The government has enacted several policies and laws to position biotech, pharma and medical devices as key priority industries for Taiwan in the 21st century. Its policy and financial support has boosted the growth of the three industry sectors over the past decade, as shown below. Their combined domestic market demand totalled US\$13bn in 2013, of which the pharma industry represented the largest share at US\$5.4bn (41.7%), medical devices US\$4.3bn (33.1%) and biotech US\$3.3bn (25.2%).



**Figure 3: Market size of Taiwan's biotech, pharma and medical device industries, 2004-2013.**

Source: Taiwan Biotechnology Industry White Papers 2005-2014, Ministry of Economic Affairs, Taiwan.

## Biotechnology overview

Taiwan's biotech industry is expanding steadily, supported by strong government commitment and private sector interest. A 2009 national plan for biotechnology development helped kick-start the domestic market, which almost doubled in size over the next five years to US\$3.3bn. Although relatively small in size, the market's growth momentum is strong, due to government support, closer collaboration with China on new drug development, and the maturation of company pipelines and service offerings.

Key industry strengths include the availability of a large talent pool, good medical and research infrastructures, and a solid reputation for well-run clinical trials focusing on Asia-prevalent diseases. The government is now focused on building the capability of the biotech value chain in Taiwan. The completion of a National Biotechnology Research Park in 2016 will facilitate translation of drug discovery results to

clinical trials, which is expected to help accelerate development of the biotech industry.

Taiwan's strategic location on the Pacific Rim and its strengthening ties with China also make it an ideal gateway for international partners to enter the Asia region, as well as a springboard for multinational companies looking to enter the large Chinese pharma market. Taiwan and China signed a medical and healthcare cooperation agreement in 2010, which has led to increased collaboration on drug R&D.

With Taiwan's biotech sector in the late incubation stage and attracting strong investor interest, there has been a marked jump in the number of companies going public to raise funds for R&D and growth opportunities. The number of biotech firms listed in Taiwan grew from 37 in 2007 to 83 at end-2013, and their combined market capitalisation grew from US\$3.5bn to US\$21.1bn over the same period.

## Pharmaceuticals overview

Pharmaceutical demand in Taiwan totalled about US\$5.4bn in 2013, having grown by a CAGR of 5.8% between 2008 and 2013, due to high volume consumption of prescription drugs per capita. Prescription drugs for both outpatient and inpatient care account for over 90% of the total pharma market, and the under-developed over-the-counter segment represents the remaining 10% of the market. Taiwan's increasing elderly population and subsequent increased consumption of advanced and high-treatment for long-term chronic illnesses will result in higher demand for prescription drugs in the coming years.

To control drug spending (representing 25% of the NHI's medical costs), the government has conducted frequent Price Volume Surveys (PVS), followed by substantial price cuts for both imported and domestically produced drugs. This has resulted in some of the lowest drug prices in the developed world and attracted much criticism from industry stakeholders. The NHI is running a trial of a new drug expenditure target system which it is hoped will offer greater predictability and stability than the PVS system.

Most new and patented drugs (about 70% of total prescription spending) are imported by pharma multinationals, but their market share is under pressure from government policies promoting the use of cheaper locally-made generic drugs, as well as pending patent expirations. Domestic firms mostly focus on generic drugs, but are

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increasingly engaging in original R&D to move up the pharma value chain.

The government is actively assisting the domestic pharmaceutical industry to upgrade its manufacturing facilities in line with the Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme (PIC/S) standards. Taiwan became a member of PIC/S in 2013, and its membership should help boost Taiwan's standing as a pharmaceutical manufacturing hub in the Asia region.

Taiwan is also working closely with China on pharmaceutical issues. In 2010, the two sides signed a medical and healthcare cooperation agreement, which has ushered in a new era of collaboration in the area of new drug development, as they move towards harmonisation of regulations and clinical trials.

## **Medical devices overview**

Taiwan's medical device market was worth about US\$4.3bn in sales terms in 2013, having grown by a CAGR of 7.9% between 2008 and 2013. Further steady growth is expected in the coming years on account of the ageing population and subsequent rise in demand for healthcare products and services.

The Taiwan market depends on imports for high-end medical devices and equipment used in hospitals, as domestic manufacturers mainly produce mid- and low-level products designed for homecare and consumer use. Taiwan's medical device industry is dominated by small to medium enterprises, with 90% of them involved in manufacturing, including OEM/ODM contract manufacturing for multinationals.

In recent years, the government has endeavoured to move the domestic industry up the value-added chain. It has established a biomedical cluster in southern Taiwan to focus on the production of medical equipment, and, in 2012, launched an initiative to promote growth in the areas of kidney dialysis care, respiratory care, in vitro diagnostic technology, microsurgery and high-end dental device technology.

Both medical devices and pharmaceuticals are regulated under the same law in Taiwan, which differs from most advanced countries. The government plans to establish a separate regulatory framework governing medical devices in the near future. Also, as an active member of the AHWP,

Taiwan has been implementing changes to bring its rules on medical devices more in line with the IMDRF framework.

As with the pharma industry, medical-device makers have been somewhat critical of Taiwan's lengthy registration process and the procedures for product pricing and reimbursement. Industry players argue that the system does not distinguish between lower-cost devices and more advanced, higher quality ones, and so may discourage the introduction of advanced and innovative medical products into Taiwan.

## **PwC Observations**

Foreign companies and investors should note that Taiwan's health-related companies generally look to form alliances with CROs and multinationals to develop high-end drugs and advanced devices and expand internationally, either through distribution partnerships, strategic relationships or acquisitions.

While M&A activity in Taiwan's health industries market is still rather limited, PwC expects to see more international companies looking to acquire, or team up with, Taiwanese players to take advantage of their manufacturing and product development capabilities—as well as their experience in marketing and distribution in the region—to increase their Asia presence, especially with regard to the Chinese market.

Taiwan is well positioned to act as a bridge to China for multinationals, given the strengthening ties between the two sides after their signing of an ECFA in 2010, which gives Taiwanese companies preferential access to China's service market, including its private hospital sector. Also, the increasing trend of cross-Strait regulatory cooperation on new drug development and clinical trial testing is expected to help accelerate the market clearance process for Taiwanese drugmakers in China.

*Readers can view the full PwC publication, [Taiwan's health industries outlook: Prospects and challenges](#).*

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# Healthcare in South East Asia

## Singapore

### Healthcare of the future: Are hospitals the only answer for South East Asia?

South East Asia is a region of vast social, environmental, economic and political diversity, which has contributed to the disparate health status of the people in the region. The spectrum ranges from established healthcare systems, such as Singapore's—recently ranked by Bloomberg as the most efficient healthcare system in the world, to emerging countries like Laos and Cambodia, where communicable disease are still prominent.

Irrespective of economic prosperity or health system maturity, there are two common factors that South East Asian countries share: an increase in population ageing and a shift in disease burden, i.e., from infectious to chronic diseases that cause more people to fall ill, more often and for longer periods of time. Combined, these factors are creating an increased demand for hospital services, far beyond current capacity. Many hospitals are reporting bed occupancy rates of over 85%, which international research has shown can have a negative impact on patient safety; resulting in higher rates of patient mortality, hospital acquired infections and/or post discharge mortality.

In a healthcare system, hospitals provide access to a range of diagnostics, specialists and treatment options, in a single location. Intended for urgent and acute cases, hospitals are instead treating an influx of non-acute patients who do not require urgent or emergency treatments. Additionally, non-acute patients typically require longer, more resource-intensive hospital admissions for conditions that could easily be managed in other healthcare settings.

The traditional response of governments, i.e., to increased demand for hospital services, is to build more hospitals. Certainly, in circumstances where there is minimal health infrastructure to deal with existing numbers of acute patients, 'more hospitals' may be part of the solution. However, since demand in many circumstances is being driven by non-acute patients—often with long-term chronic conditions—continuing to rely on hospitals as the primary mechanism for servicing a population's health needs is unsustainable and, for many emerging countries, unaffordable.

Many developed health systems around the world recognise a need to shift the way healthcare is delivered in order to be able to cope with future healthcare demand. Just as other service industries, such as banking, telecommunications and retail, have changed their operating models to better engage

with customers and provide more convenient services, healthcare systems around the world also need to change.

The future improvement and sustainability of health systems, throughout South East Asia, requires a systemic shift away from traditional models of care that centre on hospitals. Instead, a more integrated health system that is tailored for a 'whole of person' approach is needed. Additionally, it should be designed to suit the health needs of its respective population while also being capable of considering social, environmental and economic diversity, at both national and the local community levels.

Integrated healthcare is an approach that promotes: moving more services out of hospitals; providing more home and community care options; developing models of care for the elderly and for patient cohorts with specific chronic conditions, and using more allied health professionals who can support patients to return home sooner and remain out of hospital for longer.

### *PwC Observations*

As developed countries, retrospectively, work toward incorporating 'integration' into their established healthcare systems, opportunities also exist for developing countries to apply these lessons to the design and creation of entirely new systems. Furthermore, as investment in healthcare continues to increase—not only due to government funding, but also through private sector support—an integrated healthcare economy will make South East Asia an attractive market for expanding providers and new market entrants who are looking to deliver accessible, safe, high-quality healthcare.

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# Health Economics

## Australia

### Working globally to eliminate avoidable blindness

The burden of avoidable blindness and visual impairment, which directly affects 285 million individuals, is strongly skewed toward developing countries. Therefore, it is these countries that have the most to gain from the elimination of avoidable blindness and visual impairment, and yet, it is in these countries that investment into achieving these positive outcomes is the lowest.

PwC Australia has worked with The Fred Hollows Foundation (FHF), and other key NGOs across the eye care sector, to develop a series of four reports on the costs and benefits of VISION 2020—the global initiative for the elimination of avoidable blindness, which is a joint programme between the World Health Organization (WHO) and the International Agency for the Prevention of Blindness (IAPB). The reports identify that the goal of eliminating avoidable blindness produces very real benefits and is worthy of considerably more investment than it currently receives. The reports in the series are:

- *The Price of Sight*, which estimates the global cost of eliminating avoidable blindness and visual impairment.
- A benefits framework, for eliminating avoidable blindness and visual impairment.
- *The Value of Sight*, which estimates the value of benefits, in relation to effort, that are gained by working toward eliminating avoidable blindness and visual impairment.
- *Investing in Vision*, which compares the costs and benefits of eliminating avoidable blindness and visual impairment.

These reports, as well as a selection of case studies from various countries, can be found at: [www.hollows.org.au/our-work/research-innovation/investing-vision-reports](http://www.hollows.org.au/our-work/research-innovation/investing-vision-reports)

### Results

The results demonstrate that the benefits of eliminating avoidable blindness and visual impairment far exceed the investment required. In fact, when we simply sum the dollar value of productivity gains for those aged 15 to 49, dead weight loss, and health systems' savings from fewer comorbidities (such as falls), we estimate that the benefits exceed costs by a multiple of 2.8 times the cost. Benefit value is estimated to be at least US\$1,115.4 billion over the ten years from 2011 to 2020; significantly outweighing the additional investment required, i.e., US\$397.8 billion (see Figure 1).

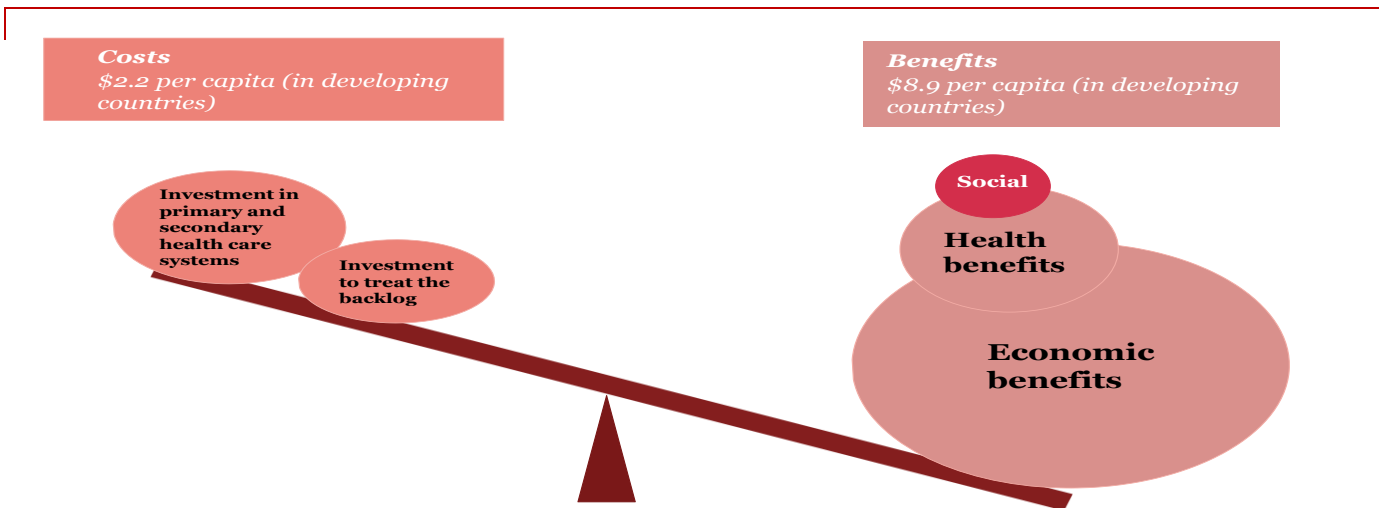


Figure 1: Overview of results

The evidence for investing in developing countries, where the prevalence of blindness and visual impairment are greatest, is even more compelling in developing countries. We estimate the total benefits to be at least US\$522.6 billion (2009 USD) over the ten years from 2011 to 2020. This figure significantly outweighs the additional investment required (US\$127.4 billion; 2009 USD) and presents a **benefit cost ratio of some 4.1 times the cost**. In developed countries, we estimate these benefits to be at least US\$592.9 billion (2009 USD), which also outweighs the additional investment required (US\$270.4 billion; 2009 USD) and delivers a **benefit cost ratio of some 2.2 times the cost**.

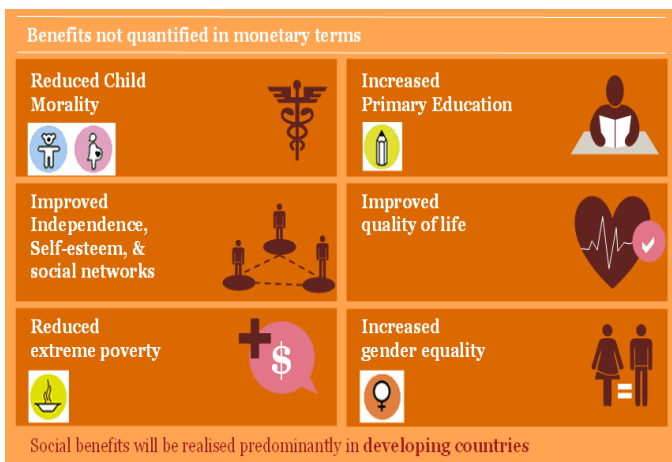
Figure 2 outlines the key cost and benefit categories, including costs such as the investment required across the primary and secondary healthcare sectors, and the investment required to eliminate the current backlog of avoidable blindness, and to deliver economic, health, and social benefits.

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**Figure 2: Breakdown of costs and benefits**

These results are further enhanced by qualitatively analysing the benefits that are not valued in monetary form, such as Disability Adjusted Life Years (DALYs) and social benefits—e.g., increased gender equality and improved social networks (see Figure 3). We suspect that these benefits will be substantially weighted toward developing countries because their rates of disability and disease are generally higher. The DALYs analysis affirms this notion; illustrating that 94% of the world’s DALYs associated with visual impairment is due to developing countries.



**Figure 3: Additional benefits that were not quantified and monetised**

Estimates such these are always subject to uncertainty, and in the more detailed reports we propose key areas for future

research that will help to refine future estimates. These include:

- the prevalence of blindness and visual impairment in the working age population (15-65);
- average income and level of employment in the blind and visually impaired in developing countries;
- the extent to which caring for blind or visually impaired people impacts a person’s productivity, and
- data detailing current expenditure on eye health services and on the current workforce; with respect to eye health and primary care, on a country-by-country basis.

Despite these limitations, sensitivity analysis shows that the benefits of eliminating avoidable blindness and visual impairment substantially outweigh the costs.

### ***A focus on eliminating Trachoma in developing countries by 2020***

Building on the existing work for The Fred Hollows Foundation, we are currently working with FHF and the International Coalition on Trachoma Control (ICTC) in developing a Global SAFE Implementation Calculator—to estimate the global cost of implementing the Surgery, Antibiotics, Facial cleanliness, and Environmental improvements (SAFE) strategy to eliminate Trachoma by 2020.

The elimination of blinding trachoma is a global commitment endorsed by the WHO. While significant progress has been made to achieve this goal, trachoma is still prevalent in 51

# Health Economics

countries, with Africa the most affected continent. In 2011, it was estimated that more than 2 million people are either blind or have a disability as a result of trachoma. Of all prevalence, the majority (more than 75%) is experienced in Ethiopia, Nigeria, Tanzania and Uganda.

The social and economic impacts of trachoma are significant, with an estimated annual loss in productivity of between US\$3-6 billion each year. Furthermore, vision loss and blindness caused by trachoma leads to loss of social status and stigmatisation, with families being locked into poverty cycles as the long-term effects of trachoma are passed from one generation to the next. Elimination of blinding trachoma will transform the lives of millions of people, primarily within the world's poorest populations.

The SAFE strategy is the endorsed mechanism to eliminate blinding trachoma. However, a significant scale-up of the SAFE strategy is required in order to eliminate blinding trachoma, but the expansion will come at some cost.

We will build on some initial cost estimates on the implementation of the SAFE strategy with a cost analysis compiled into the SAFE Calculator. The purpose of the Calculator includes:

- To better estimate the global cost of implementing SAFE, delivering a range estimate of unit costs (rather than static costs) across various environments and scenarios, and provide estimates across the 2015 to 2030 timeframe, with a focus on eliminating blinding trachoma by 2020.
- To provide assistance to national NTD/trachoma coordinators, therefore, developing more realistic estimates of funding needs (contextual), and in the strategic direction of funding.

This work is being completed to underpin cost estimates with a robust and agreed methodology, in order to produce a costing framework that can be updated periodically as new data becomes available. This methodology has been used, drawing on the available data at this time, to determine global cost estimates and will be formally released at a global Neglected Tropical Disease Conference in September 2015.



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# Compliance

## Singapore

### Anti-bribery and corruption update: the pharmaceutical and life science industries

The pharmaceutical and life science industry is one of the most heavily regulated industries in the world. The regulatory environment is continuously changing in response to the effect of globalisation, harmonisation and outsourcing to emerging markets. Pharmaceutical companies are facing unprecedented compliance challenges, and the flurry of recent cases involving allegations of bribery and corruption highlights the increased scrutiny by regulators—not just in the US and Europe, but increasingly in Central and South East Asia. Some recent examples of allegations of bribery and corruption in the pharmaceutical and life sciences industries, include:

- a) In July 2013, four executives from MNC (Multi-National Company) A were jailed on suspicion of orchestrating US\$489 million in bribes to doctors and medical officials in China. The allegations involved payments made to around 700 travel agencies and consultants, who were said to free up bribe money by grossly inflating billings in connection with staff attendance at pharmaceutical conferences. Subsequently, China's state television broadcasted a confession by an executive who admitted to paying off doctors to increase sales. The company subsequently lost 61% of its sales in China.
- b) In November 2013, MNC B agreed to pay US\$2.2 billion to end civil and criminal investigations into kickbacks to pharmacists; in connection with the marketing of pharmaceuticals for off-label use. The settlement with the Federal Government and 45 states was one of the largest healthcare settlements in US history.
- c) More recently, in November 2014, the SEC charged MNC C for violating the FCPA when its subsidiaries made improper payments to foreign officials in Russia, Vietnam and Thailand in order to win businesses. The allegations involved excessive payments disguised as commissions to foreign agents using phony addresses, and off-shore bank accounts. The company's country managers were allowed to communicate through at least 10 different personal email addresses using aliases, and code words such as "bad debts", when referring to the commissions. The company agreed to pay US\$55 million to settle the charges.
- d) In December 2014, the SEC charged MNC D with FCPA violations for providing non-business related travel, and improper payments, to various Chinese Government officials to win businesses. Poor internal controls allowed employees in its China offices to enter into sham 'collaboration agreements' to direct money to foreign officials and send them on sightseeing trips around the world. These officials were often responsible for authorising the purchase of the company's products and the leisure trips funded by the company typically followed business-related travel for these officials. The company agreed to pay US\$2.4 million to settle the SEC's charges.

### PwC Observations

Companies cannot afford to ignore the consequences of non-compliance, which can include not only fines and penalties, but also reputational loss, leading to an adverse impact on sales and market share.

Both the SEC and the UK's Serious Fraud Office have highlighted the importance of a rigorous compliance programme to mitigate bribery and corruption risk. In a 2012 case, the US Department of Justice (DOJ) declined to prosecute a global financial services firm, even though an employee was convicted and jailed for bribery. Contributory factors noted by the DOJ; in its decision to decline prosecution, included the fact that the company had implemented an anti-bribery and corruption programme, which had provided reasonable assurance that employees were not bribing government officials.

PwC anti-bribery and corruption specialists can assist companies in developing a compliance programme to identify and manage risks, and to assess the adequacy and effectiveness of a company's existing programme. PwC also provides monitoring services, including independent spot visits of marketing events or sponsored conferences, to assess compliance with company policy. In the event of an alleged bribery or corruption incident, PwC can assist in investigations and recommend improvements to the compliance programme; to minimise repeat occurrences.

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# People & Change

## Japan

### Utilising data analytics on human resource strategy

Human resource departments in companies across the globe are focussed on key imperatives, such as global talent management and diversity. For example, efforts to maximise the corporation's global resource capabilities are increasingly addressed by investments in global mobility.

Moreover, human capital analytics is now viewed by many Japanese HR (Human Resource) organisations as one of the most important solutions, and is therefore highly sought after. According to PwC's CEO survey conducted in 2012, over 80 % of respondents said that they felt that human capital data analytics is essential for management decisions. However Japanese companies tend not to utilise human capital data as effectively as other multinational companies do.

PwC supports our pharmaceutical clients by developing a variety of human capital analytics models, including potential high performer analytics, and productivity analytics etc. Many companies are using analytics to look at "attrition risk" of their employees. Currently the operational costs caused by employee attrition is approximately 150% of cost of "on-boarding" new employees, which includes training, transfer, hiring, recruiting agent fees etc. It is assumed that this (cost of on-boarding) is approximately 54% of the annual salary of the employee.

Furthermore considering that costs go up still further in the event that an employee resigns, the "risk of attrition" is often underestimated. Analytics applied to estimate attrition risk has a direct impact on lowering attrition rates, and maintaining human capital capabilities.

Attrition analytics begins with discussions between HR staff and managers to capture basic assumptions as to the reasons for employee resignations. Based on these assumptions and the analysis of the correlation between the resigning employee and the corresponding reasons, predictive modelling can be achieved.

The results of this type of analysis can be utilised to not only validate conclusions of HR departments based on years of experience, but also to gain new insights into issues they may not have known about. Moreover, evidence based actions prioritised strategically not only can dramatically reduce high attritions rates, but can also enhance human capital potential.

### *PwC Observations*

In the pharmaceutical industry the risk of resignation can have a potentially huge impact on corporate value, since retention of highly skilled resources is critical to a company's ability to be competitive across the entire value chain.

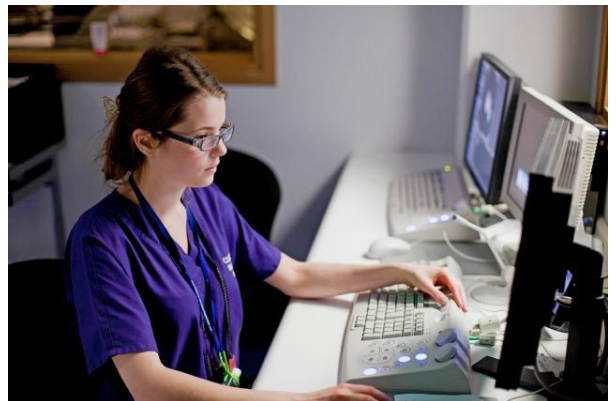
Analytics of attrition risk is a statistical approach to improve corporate value, and to build a strong foundation for growth.

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# People & Change

## Singapore

### Managing the talent dilemma in the life sciences sector

2015 will be the year when Singapore's calibrated foreign labour policy takes full effect with further cuts in the quota system, called the Dependency Ratio Ceiling. The government's ultimate objective is to reduce dependency on foreign talent, build a sustainable local labour pool and boost productivity over the long term.

However, the reality is that job vacancies have gone up, business costs such as wages have increased due to the competition for limited talent, and productivity has not gone up as expected.

Let's look at the rapidly expanding pharmaceutical and life science industry as a case in point, although the manpower crunch also affects many other industries in varying degrees. According to the Economist Intelligence Unit's 2015 Healthcare report, Singapore's strong intellectual property laws and well-developed trade links have attracted substantial investment from research-based pharmaceutical companies, including GlaxoSmithKline, Pfizer, Baxter, Lonza and Roche.

With more companies setting up base here, the same report found that biomedical firms manufactured S\$25 billion worth of products in 2013, up from S\$5 billion in 2000; and pharmaceutical exports amounted to S\$10 billion in 2013.

Singapore is thus seen to be well-placed to become Asia's Innovation Capital in the Pharmaceutical and Life Sciences arena, but the lack of certain specialised skill sets within the local labour pool poses a major challenge and dilemma to further growth and development of the industry.

### Helping the industry grow

At the moment, companies have expressed interest to tap on Singapore's excellent tax incentives, infrastructure and world class environment for research and innovation to grow and expand in the region. But the mismatch between demand and supply for the right talent foils their plans.

The tight foreign labour policy and attrition of existing talent to other newly developing biomedical and pharma hubs in the region further accentuates this challenge. This is forcing some organisations in the pharmaceutical and life sciences industry to recalibrate their growth plans in the context of this new reality.

Although the government is investing heavily to nurture the development of skilled and specialised talent in these industries (medical technology innovators, medical device regulatory affairs specialists, clinical researchers, specialised R&D scientists etc), there are still positions where there is a

lack of suitable local manpower. Perhaps it would be prudent to introduce certain temporary measures to lessen the impact of talent shortage so that growth is not impeded.

On its part, the government has heavily invested in upskilling the local labour force and increasing the supply of talent. For example, the Economic Development Board is working with the Workforce Development Agency (WDA) to train people under the Biologics Overseas Skills Training programme. The Agency for Science, Technology and Research (A\*STAR) Science Awards (in collaboration with the polytechnics), A\*STAR scholarships, investigatorship programmes and other initiatives have been launched to encourage Singaporeans to pursue research as a career. Many industry forums are collaborating with government bodies, academia and research institutes to develop training for pharmaceutical and life sciences industry professionals.

The initiatives have resulted in the successful grooming of close to 45,000 R&D personnel (including researchers, postgraduate students, technicians and support staff) over the past five to six years. About 65 per cent of this population comprises PhD/Masters/Bachelor degree holders deployed in both the private and public sectors. A\*STAR scholarships and other academic initiatives and research opportunities have also started reaping benefits by attracting overseas Singaporeans back home.

All these initiatives and many others will hopefully help to address the local manpower supply and demand gap, but it will take a few years to truly have an impact.

It is especially critical in the case of the pharmaceutical and life sciences industries where the trend is rapidly moving from broad-based research and development to focus on more innovative research and niche products and services which require a particular type of skilled specialist that may not be available among the local workforce.

### PwC Observations

It is prudent for organisations in the pharmaceutical and life sciences industries to make the best of what is currently available, optimise their operations to improve productivity while continuing to look for innovative ways to develop and retain talent.

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## Japan

### 2015 Japan tax reform proposals

Pharmaceutical and healthcare companies operating in Japan will be impacted by the changes to the Japanese tax regime proposed by the Japanese ruling coalition in the 'Outline of the 2015 Tax Reform Proposals' (the proposals) released on 30 December 2014. A summary of the proposals relevant to pharmaceutical and healthcare companies is provided below.

**(1) Tax credits for R&D costs** - Currently, the creditable amount for R&D costs (other than specified R&D costs) is 8-10% of the gross R&D costs, up to a maximum tax credit of 30% of the corporate tax liability, with a 1 year carry over period for any excess R&D costs. The proposals will reduce the maximum tax credit to 25% of the corporate tax liability for years beginning on or after 1 April 2015, and the 1 year carry over period will be abolished. For special R&D costs, including joint R&D with universities or public research institutions, the current creditable amount of 12% of the gross R&D costs will increase to 30% (or 20% for joint R&D with non-public corporations). The scope of special R&D costs will be expanded to include royalties on intellectual property paid to certain small- and medium-sized companies. The maximum tax credit for special R&D costs will be 5% of the corporate tax liability.

**(2) Reduction of effective corporate tax rates** - The national corporate tax rate will be reduced from 25.5% to 23.9% for fiscal years beginning on or after 1 April 2015. For large corporations, the income portion of the enterprise tax will reduce from 7.2% to 6.0% for fiscal years beginning on or after 1 April 2015 but before 31 March 2016 (a further reduction from 6.0% to 4.8% will apply for years beginning on or after 1 April 2016). As the enterprise tax is deductible for tax purposes, the effective tax rate for large corporations solely operating in the Tokyo metropolitan area will reduce from the current 35.64% to 33.10%, and then to 32.34% for years beginning on or after 1 April 2016.

**(3) Enhance size based enterprise tax** - The tax rate for the value added base and the capital base of the size-based enterprise tax will be doubled in two steps. For the value added base, the current rate of 0.48% will increase to 0.72% for years beginning on or after 1 April 2015, and then increase further to 0.96% for years beginning on or after 1 April 2016. For the capital base, the current rate of 0.2% will increase to 0.3% for years beginning on or after 1 April 2015, and then increase further to 0.4% for years beginning on or after 1 April 2016.

**(4) Limit to net operating loss deduction** - Currently, if a large company's taxable income after tax deductions for any fiscal year shows a net operating loss (NOL), the NOL can be carried forward for the following 9 years, and the use of that NOL in future years is restricted to offsetting 80% of current year taxable income. It is proposed that the current 80% NOL restriction will be reduced to 65% for years beginning between 1 April 2015 and 31 March 2017. This NOL limit will be further reduced to 50% for fiscal years beginning on or after 1 April 2017. The NOL carry forward period will be extended from 9 years to 10 years for NOLs incurred in years beginning on or after 1 April 2017.

**(5) Consumption tax** - The current consumption tax rate of 8% was scheduled to increase to 10% from 1 October 2015. The proposals have delayed this tax rate increase to 1 April 2017. A multiple rate system for consumption tax (i.e. different rates applying to different products) will be introduced when the consumption tax rate is 10%. This system will have lower consumption tax rates for necessities. The proposals also introduce consumption tax on the provision of cross border 'electronic services' from 1 October 2015. The definition however does not include services where the main transaction is the transfer of a physical asset.

**(6) Other proposals** - Other proposals include a reduction to the dividend income exclusion and a number of changes relating to international tax measures, the individual tax regime and tax administration procedures.

*A detailed information pack on the proposals has been prepared by PwC and available at the [PwC website](#).*

### PwC Observations

Pharmaceutical and healthcare companies should review their current R&D expenditure to assess whether any of the activities falls within the special R&D costs category, in order to take advantage of the increased tax credits available for those costs under the proposals. The changes to the effective tax rate and size-based enterprise tax should be noted for any corresponding changes to foreign tax credits currently claimed by offshore parent companies. Services provided by foreign parent companies to Japanese subsidiaries may be subject to the new consumption tax imposed on the provision of cross border electronic services. It is recommended that companies review the services currently provided to determine whether they will fall within the new rules and be subject to consumption tax in Japan.

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## Singapore

### Taxation proposals updates

Singapore's 2015 Budget Statement was delivered on 23 February, 2015. It included the following tax proposals:

- 30% corporate tax rebate for Years of Assessment (YAs) 2016 and 2017, capped at SG\$20,000 per YA.
- A new tax incentive, the International Growth Scheme (IGS), which provides for a 10% concessionary tax rate for up to five years on incremental income from qualifying activities. This incentive is intended to encourage larger Singapore companies to expand overseas while anchoring key business functions in Singapore.
- Extension of the mergers and acquisitions (M&A) scheme which was due to expire on 31 March 2015 to 31 March 2020, and the following enhancements to the scheme, which take effect from 1 April 2015:
  - Increase in the M&A tax allowance from 5% to 25% of the cost of qualifying share acquisitions, subject to a reduced cap of SG\$20 million (previously SG\$100 million) of the value of qualifying acquisitions per YA.
  - Reduction in the stamp duty relief available on the transfer of unlisted shares in Singapore companies from SG\$200,000 (0.2% of SG\$100 million acquisition value) to SG\$40,000 (0.2% of SG\$20 million acquisition value) per financial year.
  - Lowering of the minimum shareholding acquisition threshold to qualify for the scheme, although additional qualifying conditions are imposed.
- The double tax deduction for qualifying expenses incurred for certain market expansion and investment development activities will be expanded to cover qualifying manpower expenses incurred from 1 July 2015 to 31 March 2020 for Singaporeans posted to new overseas entities, capped at SG\$1 million for each approved entity a year.
- The minimum loan quantum for applications for the Approved Foreign Loan incentive, which provides for reduced withholding tax rates or withholding tax exemption for interest payments on approved loans taken from non-residents to purchase productive equipment, has been increased from SG\$200,000 to SG\$20 million with effect from 24 February 2015.
- Qualifying donations made to approved charities in 2015 are eligible for a 300% tax deduction. Qualifying donations made from 2016 to 2018 will be allowed a 250% tax deduction.
- The investment allowance schemes for energy efficiency and green data centres have been consolidated and extended until 31 March 2021.
- Review dates will be legislated for certain tax concessions to ensure their continued relevance, and certain tax concessions will be withdrawn. Most notably, this includes the 10% concessionary tax rate for income derived from offshore leasing of plant and machinery, which will be withdrawn with effect from 1 January 2016. This will mainly affect sectors for which targeted incentives are not available.
- Proposed changes to the personal tax rates and mandatory social security (Central Provident Fund) contribution rates may also impact the cost of doing business in Singapore.

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# Pricing & Reimbursement

## Australia

### A second wave of Simplified Price Disclosure (SPD) cuts

Price Disclosure was introduced as part of the PBS reforms back in 2007. Since then Price Disclosure in Australia has been through two major reforms the most recent being Simplified Price Disclosure introduced just prior to the last Federal Election without consultation with Industry.

The second round of price cuts to off patent drugs listed on the Pharmaceutical Benefits Scheme (PBS) in Australia under the new Simplified Price Disclosure arrangements came into effect on 1 April, 2015 and will now occur on a rolling basis now every 6 months.

The value of the 1 April price cuts is estimated to save the Government approximately AU\$387 million a year, with total savings from the 2007 PBS reforms (as amended) now likely to reach AU\$20 billion.

These cuts impact not only the companies supplying generic and/or off patented drugs but also Pharmaceutical Wholesale Suppliers and Community Pharmacists as they see their respective dollar margins fall.

Pricing & Reimbursement also remains high on the agenda for Originator companies as they continue to be faced with challenges such as:

- Comparator price erosion, where a new originator molecule has a generic comparator;
- The low success rate for many new drugs seeking reimbursement under the PBS via “cost effectiveness” submissions to the Government’s independent advisory committee the Pharmaceuticals Benefits Advisory Committee (PBAC), and
- A lack of trust between the Industry and PBAC around the listing process.

The current tight fiscal environment continues to dampen both the Department of Health (DoH as payer) and Treasury’s appetite to provide the industry with some certainty or predictability over future pricing policy.

This has led some companies to decide to withdraw or not launch certain products into the Australian market due to the prevailing uncertainty and experience with price negotiations. We are also starting to see an increase in some companies making their products available under private

script rather than go to the expense and uncertainty of seeking PBAC recommendation and reimbursement under the PBS.

### *PwC Observations*

Originator Pharma companies need to re-establish and develop an open and trustworthy relationship with Government, DoH and PBAC to reverse the trends we are seeing in these relationships and the potential for future products not to be listed in Australia.

The Government has recently announced a review of the PBAC guidelines and hopefully this will go some way in re-establishing trust in the system, which has served Australia well over many years.

New players or entrants looking to expand into the Australian generic Pharma market need to factor in these regular price cuts to existing and future revenue streams.

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# Pricing & Reimbursement

## China

### The government gives the market a freer hand in China's healthcare system

In recent years, China's healthcare system has undergone rapid transformation toward offering transparent and affordable care. At the recent National People's Congress, the Premier Minister reinforced the Government's commitment; he stated that drug price controls will be gradually lifted and market forces will play a greater role. This plan—in combination with fierce price bidding in provincial tendering, and a trial for hospitals conducting prescription drug (Rx) price negotiation—is changing China's industry landscape.

It is also important to note that the lift on price control is not simply about the elimination of caps on retail price. Based on the draft policy for drug price reform, which the Government released in November 2014, the new drug pricing structure presents several implications:

- 1) The empowerment of social medical insurance programs to explore reasonable pricing by adjusting reimbursement ratios;
- 2) Price negotiation among pharmaceutical companies, hospitals and other stakeholders for innovative drugs (also known as off-patent originals, manufactured by multinational pharmaceutical companies) under patent protection and not covered by social medical insurance;
- 3) Government control over the bidding process for blood products not covered by social medical insurance, as well as vaccines and birth control medicines paid for by the Government;
- 4) A ceiling on the factory price and retail price of high-risk anaesthetics and psychotropic drugs, and
- 5) A limit on the daily medical reimbursement amount, allowed to individual patients or disease, for low-price essential drugs.

In addition, the Government is encouraging hospitals to negotiate drug prices directly with pharmaceutical companies and keep any savings as income. It is expected that this "second pricing negotiation" policy, following the price-driven provincial tendering process, will place more pressure on market entry opportunities and the profitability of pharmaceutical companies.

### PwC Observations

The Chinese Government is driving a significant national trend in drug price reduction. Therefore, it will be crucial for pharmaceutical MNCs to review their China market activity and reshape their strategy, in both off-patent and in-patent medicine markets.

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# Pricing & Reimbursement

## India

### Increase of foreign direct investment in India's insurance sector

Indian government has taken a big step by passing the insurance bill which was languishing in parliament for more than 6 years. This bill aims at raising the foreign investment cap in insurance sector from 26 per cent to 49 per cent. This measure was necessary for expanding the penetration of insurance in the country which is very low at present.

The amendment act removes archaic and redundant provisions in the legislations and incorporates new provisions to supply Insurance Regulatory and Development Authority of India (IRDAI) with the flexibility to discharge its functions more effectively and efficiently.

This bill covers aspects beyond life insurance, providing more funds for development of infrastructure. The law provides that 15 per cent of the premium should be invested in building infrastructure.

The premium will not flow out of the country but will remain within the country and the interests of policy holders will be protected by the Insurance Regulatory and Development Authority (IRDA).

The amendments to the laws will enable the interests of consumers to be better served through provisions like those enabling penalties on intermediaries / insurance companies for misconduct and disallowing multilevel marketing of insurance products in order to curtail the practice of mis-selling. The bill provides for imprisonment of up to 10 years for selling policies without registration with the regulator IRDA.

The amended law will enable capital raising through new and innovative instruments under the regulatory supervision of IRDAI. The legislation will also allow PSU (Public Sector Undertaking) general insurers to raise funds from the capital market.

#### Impact:

The new bill will increase coverage of health insurance through higher participation of foreign insurance companies in India. It could also pave the way for initial public offering of some existing JVs between Indian and foreign insurance players. It will also in some way benefit individual policy holders by bringing in more transparency on features, less dependence on insurance agents, more distribution points for insurance policies, simpler products, and flexibility in paying premiums through instalments and faster claim settlement.

### PwC Observations

Greater availability of capital for the capital intensive insurance sector would lead to increased distribution reach to both underserved and unserved areas, more innovative product formulations to meet diverse insurance needs of citizens, efficient service delivery through improved distribution technology and enhanced customer service standards.

References:

<http://www.financialservices.gov.in/pressreleases/Press%20Brief%20130315.pdf>

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# Pricing & Reimbursement

## India

### Hospitals are full, but margins are low!

*Renewed imperatives for cost control and operations optimisation*

#### Identifying the problem

Private healthcare is a complex industry where multiple sub-components like consultants, manpower, supply chain and consumables, overhead costs, marketing need to be managed in a way that the patient experience is up to expectations and the hospital makes healthy margins. While a few hospitals are able to operate at optimal margins on maturity (25-30% EBIDTA) a majority of the hospitals face the challenges of not being able to manage these sub-components efficiently thereby compromising on profitability.

#### Taking action

To address this problem hospitals are putting a greater focus on their bottom line by focusing on cost control and operations optimisation. Cost efficiency has to factor in the key sources which are human resources, consumables & medicines as well as the overheads for the business functions.

This involves looking at multiple levers including lower utilisation of human resources as well as assets like Operation Theatres and Cath labs and equipment like MRIs, CT scans etc. An improvement in the utilisation levels can not only lead to improved revenues but also higher customer satisfaction levels due to lower waiting times and faster discharge times. Similarly improved utilisation of staff like nurses and doctors who spends 30-40% of their time in non-productive activities can improve their output. Outsourcing of non-core activities and continuous analysis of the contracts and its efficiencies helps.

The consultants are an important cog in the wheel for a hospital facility and arriving at an optimal incentive model for them along with the right mix between the contribution from visiting consultants and in-house doctors is critical to both the revenues as well as the profitability of the hospital. Doctor availability on time can lead to lower waiting times for patients, higher utilisation of assets and lower discharge times improving the efficiency of the operations as well as higher customer satisfaction. A lower length of stay for the patients can also help improve the Average Revenue per Operating Bed (ARPOB) and also the margins for the hospital.

Materials account for a majority of the costs in a hospital and an efficient supply chain, which finds a balance between

maintaining an optimal inventory with the right re-order levels can add significantly to the bottom line.

Lack of pricing mechanisms based on scientific principles like Activity Based Costing methods lead to under-pricing of services. A proper approach would help in identifying specialties making sub-optimal returns and taking corrective action. Improved utilisation of assets through dynamic pricing mechanisms in non-peak hours can also be explored.

Hospitals also have a diverse payer mix of cash paying individuals, corporates, Insurance companies and government business. An unfavourable payer mix, which is not in line with the cost structure of the hospital, can severely impact the hospital's profitability and, therefore, needs to be addressed.

#### PwC Observations

With increased competition in the healthcare market and by virtue of health insurance providers taking an increasingly larger share of the patients, cost control and optimisation of operations to improve efficiencies and margins is the new mantra for hospitals. This will help them continue delivering quality healthcare to their patients without increasing the prices and costs to the patient significantly whilst at the same time not compromising on their profitability.

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# Pricing & Reimbursement

## Singapore

### Pricing and reimbursement updates

Singapore is a fundamentally private pocket payer driven market. There are various schemes under which health cover or the expenses out of critical needs are met. However, the approach is primarily market driven.

Patients receive drug subsidies based on their paying status and the scheme under which the drug is covered (e.g. Standard Drug List, Medication Assistance Fund, inpatient drug subsidy, etc). Some drugs are subsidised only for specific clinical indications. Co-payment of 15% applies to treatments for approved chronic conditions.

Medisave is a national medical savings scheme, which helps individuals, put aside part of their income into their Medisave Accounts to meet their future personal or immediate family's hospitalisation, day surgery and certain outpatient expenses. Withdrawal limits apply on per day, procedure or monthly basis for in-patient and annual limits exist as well.

MediShield which will be replaced by MediShield Life end of 2015, is a low cost catastrophic illness insurance scheme. It is designed to help members meet the medical expenses from major or prolonged illnesses from which their Medisave balance would not be sufficient to cover.

MediShield/MediShield Life operates on a co-payment and deductible system to avoid the problems associated with first-dollar, comprehensive insurance. The premiums for MediShield/MediShield Life is payable by Medisave. Annual premiums for MediShield and MediShield Life range from SG\$50 - \$1,190 and SG\$130 - \$1,530, respectively. Under MediShield Life, there will be premium subsidies (tiered by age) for Singaporeans depending on household income. These premium subsidies can run from 15% - 50%. However, with the introduction of MediShield Life, there will be better protection from the very old to those with pre-existing illness and potentially higher payouts for all Singaporean and Permanent Residents.



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# East Cluster Updates

## *PwC East Cluster: People update*

### *Japan*

#### *Japan Healthcare Practice Team:*



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Tim is an experienced leader with a strong foundation spanning over 23 years in the industries, having resided in Japan. He is bilingual (J&E).

As a long time consultant in Japan, Tim has helped Pharmaceutical clients with globalisation projects, and execution across diverse regions.

As head of Foresight Japan Tim was integral to the successful Argus Japan implementation.

Project leadership, team development and a focus on positive project outcomes are two factors that have contributed to Tim's success in this industry.



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Takefumi is a professional consultant with 18 years of proven experience in PwC and other strategic consulting firms. He focuses on strategy, corporate turnarounds, new market entry and process engineering.

### *Australia*

#### *Public Health Sector Expert:*



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Dr Rohan Hammett is a Consultant Physician in Gastroenterology. Over the last two decades, he has worked in the Australian, US and UK Health systems and performed senior clinical and management roles within the NSW and Commonwealth health systems. Key areas of expertise are: Strategic policy relating to health system funding and sustainability, Integration of primary, community and tertiary care, Service and capital planning, Medicines and Medical Device regulation, Clinical Redesign.

#### **Key Example Projects**

- Deputy Secretary, Strategy and Resources, NSW Ministry of Health - development and implementation of strategic policy initiatives and inter-government and Commonwealth-State relations.
- National Manager (Chief Executive) Therapeutic Goods Administration, Commonwealth Department of Health and Ageing, Australia - regulatory responsibility for pharmaceuticals, medical devices, biological and complementary medicines and strategic contributions to health system policy development as member of Commonwealth Department of Health and Ageing Executive Management Team.

# PwC Publications

## Asia-Pac regional perspectives:



### **From vision to decision** Pharma 2020 (2013)

Many of the conditions that will determine what happens in 2020 are already in place: most of the products that will be launched are already in the pipeline; processes being used to develop them are similar to those of the past 10 years; the prevailing management culture remains that of the late 20th century, and a demanding commercial environment will likely continue. We focus on how companies can reach 2020 in a position from which to benefit from more favourable conditions thereafter.



### **Issues and Decisions** A Report on the Australian Pharmaceutical Industry (2013)

This is PwC's third survey of the Australian pharmaceutical industry, and the first in conjunction with Medicines Australia. The report represents and reflects views and concerns across the industry, identifies emerging issues and trends that require attention, and examines how different segments are responding and dealing with these trends.



### **Asia-Pac Health Industries Newsletter** (2014)-December issue

In this edition we highlight a number of recent developments that are of direct interest to Pharmaceutical companies and healthcare organisations including: developing a China strategy in the med-tech industry; drivers to achieve Universal Healthcare in India; Transparency measurement in Australia and China; M&A on the rise in Taiwan; and Tax updates in Australia and Singapore.



### **Asia-Pac Health Industries Newsletter** (2014)-July issue

This issue highlighted important developments within the Pharmaceuticals & Life Sciences and Healthcare industries in the Asia-Pacific region. The newsletter included articles on Digital Health and Big data in India and the rise of integrated care in Australia, as well as our regular topics on Compliance, M&A, Pricing and Tax.



### **India Pharma Inc.** Changing landscape of the Indian pharma industry (2013)

India had an efficient pharmaceutical industry that manufactured affordable drugs and sold them to the Indian market, as well as exported them to the rest of the world. However, lately it has been the target of rising FDA scrutiny over quality. This new report highlights suitable strategies for mitigating the risks emanating from recent challenges, and sustaining growth into and over the next decade.



### **Taiwan Health Industries Outlook** (2015)

An introductory overview of Taiwan's healthcare, biotech, pharma and medical device sectors. This report examines the future prospects, opportunities and challenges for market participants. It's primarily targeted at international companies and investors interested in Taiwan's health industries market.

## Other publications:



These and other publications can be found on PwC's Pharmaceuticals & Life Sciences and Healthcare websites at [www.pwc.com](http://www.pwc.com)

# About PwC

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As a global leader serving Pharmaceuticals and Life Sciences companies, PwC has extensive experience working with organisations across the industry, including: proprietary and generic drug manufacturers, specialty drug makers, medical device and diagnostics suppliers, biotechnology companies, wholesalers, pharmacy benefit managers, contract research organisations, and industry associations. We have aligned our practice with the broader health industries market to ensure that our people are well-versed in the relationships between suppliers, providers, payers, and customers.

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