

### WELCOMING REMARKS

#### **Tan Sri Dato' Dr Michael Yeoh - Chief Executive Officer / Director, Asian Strategy & Leadership Institute**

Tan Sri Dato' Dr Michael Yeoh welcomed the Minister of Health of Malaysia, Puan Sri Datin Seri Dr Susan Cheah and distinguished guests. On behalf of ASLI, he extended a warm welcome to all at the annual healthcare forum. Tan Sri Yeoh expressed his delight to welcome the Minister to deliver the keynote address at this forum. Over the years, YB Datuk Seri Dr S. Subramaniam had always opened conferences for ASLI. He hoped the forum would enlighten participants on the challenges and opportunities in the healthcare sector in our country. Furthermore, he believed that the Economic Transformation Programme (ETP) and healthcare Entry Point Projects (EPP) would be able to transform the healthcare scene in Malaysia and there would be many more opportunities in the sector especially in medical tourism which he hoped would be addressed in greater detail in this forum. There are three important points: Number one is the quality of healthcare in the private and public sector. Number two is the affordability of this healthcare and Number three is the accessibility of this healthcare. Tan Sri Yeoh hoped that the many speakers today would share their valuable thoughts and insights regarding these three important points. In the programme, there would be a new topic on research as it is an important aspect of healthcare. He hoped there would be a greater focus on medical research in future. In conclusion, he thanked the distinguished speakers who had come to share their expertise, the corporate sponsor for supporting the forum and the also the Association of Private Hospitals of Malaysia. He thanked them all for their participation and support, and also the Minister again for gracing this occasion.

### OPENING KEYNOTE ADDRESS

#### **YB Datuk Seri Dr S. Subramaniam - Minister, Ministry of Health, Malaysia**

YB Datuk Seri Dr S. Subramaniam thanked Tan Sri Yeoh for his opening remarks. YB Subramaniam then thanked ASLI for its commendable effort in making the Healthcare Forum 2014 possible. He also expressed his gratitude for the invitation to present the keynote address, entitled "Addressing the Needs of Changing Citizenry", describing it as a wonderful opportunity for him to share his thoughts on the current scenario and our hopes and aspirations for the healthcare industry in Malaysia.

Since independence, Malaysia has made great strides in her efforts to improve the health of her citizens and this is reflected in a number of key health indicators. Life expectancy at birth for both genders has increased over the years, rising from 56 years for males and 58 years for females in 1957 to 72 years for males and 77 years for females in 2011 (WHO, 2007). YB Datuk Seri further underlined that our maternal mortality rate has dropped from 0.32 per 10,000 live births in 1957 to 0.026 today. Likewise, our infant mortality rate has come down from 7.55 per 10,000 live births in 1957 to 0.66 at present, which he termed as indeed commendable for such a young nation as ours. As a result, despite Malaysia's relatively low spending on health, Malaysians enjoy a relatively high overall standard of health.

Furthermore, he pointed out that we have an equitable public health care delivery system. It has been repeatedly acknowledged by international agencies that Malaysia ranks highly amongst countries that have made tremendous health gains and provides reasonably equitable service coverage. Malaysia was ranked as the 18<sup>th</sup> most efficient healthcare system in the world by the Bloomberg news agency. YB Subramaniam highlighted that this has been further supported by the recognition of the United Nations of our success in addressing the Millennium Development Goals, in particular maternal health and our fight against HIV and malaria. The Ministry has also won the 'Global Anti-Counterfeiting Award 2013', awarded by the Global Anti-Counterfeiting Group Network (GACG), in recognition of its efforts in ensuring the safety of pharmaceutical products. Every country in the world faces a myriad healthcare challenges and countries in Asia are not exempted, including Malaysia, which faces several issues and challenges in her endeavours to provide high quality healthcare services to her population in order to improve the status of their health.

YB Subramaniam then spoke on the imbalances and mismatches in terms of resources and workload within our public and private health system. For example, in 2012, although the public sector had only about 8% of health clinics with doctors, they handled almost 49% of all outpatient visits. While there are more hospitals in the private sector, the reality is that almost 82% of hospital beds remain within the public system, which takes care of almost three quarters of all hospital admissions. Malaysia has been successful in overcoming many communicable diseases in the past. However, there are still infectious diseases that pose a threat such as

dengue fever, tuberculosis and malaria. As Malaysia becomes more affluent, there are new epidemics of diseases and health risk conditions of non-communicable diseases (NCD) such as ischaemic heart disease, cerebrovascular diseases, cancers and chronic respiratory diseases such as asthma and diabetes mellitus. According to the National Health Morbidity Survey (NHMS), the prevalence of hypercholesterolemia increased from 20.6% in 2006 to 35.1% in 2011 with 26.6% undiagnosed. The prevalence of diabetes increased from 14.9% in 2006 to 20.8% in 2011 with 10.1% undiagnosed.

He also stressed that Malaysia faces rapid urbanisation, which has created a disparity in healthcare accessibility, not only between the rural and urban areas, but also between the urban poor and urban rich. Rising costs of healthcare is diminishing the affordability factor for lower-income groups. Moreover, health spending in Malaysia has been increasing at rates that exceed GDP growth and it has been driven primarily by rising health spending in the private sector. YB Subramaniam mentioned that there are longer-term concerns for household financial protection as indicated by rapidly increasing expenditure on private health services which are mostly funded by out-of-pocket (OOP) payments (38% of total health expenditure).

Advances in medical technology can pose both increased health system efficiency and encourage unnecessary utilization of expensive treatments in the fee-for-service (FFS) system in the private sector. On the downside, unrestrained growth in the provision of high-technology services, combined with FFS reimbursement schemes have resulted in substantial cost escalation. Thus, a key challenge in employing advanced technology is in assessing its effectiveness in improving patient outcomes. Therefore, this makes the rising cost of healthcare another key concern of the Government. Specifically, he cited that we need to ensure the affordability and accessibility of healthcare would be sustainable in the long run by managing the cost of public and private healthcare.

Next, YB Subramaniam moved on to the topic of addressing the increasing healthcare needs and demands of the people which is certainly bringing about greater challenges to the country. Apart from the problem of congestion and long waiting times, the demand is also driven by the higher expectations of the people and their higher purchasing power. This has been reaffirmed by the World Health Organisation's (WHO) country profile for Malaysia, which reported that "a more educated and affluent public with easy access to information, coupled with

demographic changes and rapid advances in medical technology, has led to rising consumer demands for better health care and expensive new technology". To address these challenges and needs, he proposed that the best way forward would be towards disease prevention and maintaining health, and to provide for healthier citizens by focusing on strengthening Primary Health Care (PHC). One of the main areas of global agreement is the importance of PHC with its strong focus on preventive and promotive care. YB Subramaniam also presented the idea of reintroducing the concept of a family doctor who would be in the know of hereditary defects of a father or son. He said the relationship between doctor and patient would be strengthened and provision of care would be better.

He also briefly described the issue of hospital beds and illustrated it with the example that Perak has more available hospital beds than Selangor, which shows that the migration to Selangor has largely gone unchecked hence we must take steps to address them today. With that, YB Subramaniam thanked everyone present once again and wished the forum every success as he declared it officially open. He also mentioned his anticipation to receive the report from the forum soon.

### **SESSION ONE: The Future of Malaysia's Healthcare Industry – Key Drivers and New Opportunities**

#### **Moderator: Dato' Dr NKS Tharmaseelan - President, Malaysian Medical Association (MMA)**

Dato' Dr Tharmaseelan introduced the three eminent speakers, noting that there were two from the private sector and one from the public sector. He called upon Mr Bryan Lin to start the session. Following that, he called upon Dr Rozita Halina Tun Hussein to explain on the future of Malaysian healthcare. Lastly, he invited Dato' Dr Jacob Thomas to conclude the list of panellists. After the three speakers spoke, Dato' Dr Tharmaseelan opened to the floor for questions.

#### **Panellist: Mr Bryan Lin – Chief Executive Officer, Group Healthcare Division, TDM Berhad**

Mr Lin wished a good morning to all participants and begun with the quote that we need to do something different in the future. To achieve a different outcome, we must think differently. We cannot keep repeating the same old procedures over and over again. He mentioned that we are influenced by various factors and laws which drive healthcare. We have experienced the declining birth rate, migration from rural to urban areas, extension of lifespan,

technology advancement, new fees schedule, environmental issues, mental health issues and private data protection issues as well as accreditation. These are the key drivers which determine the outcome when we focus on the patient, which is the single most important factor. He then explained a few key indicators, starting with the demographic shift. Over the next 20 years, each generation will live longer. The population segment aged 55 and above in 2000 which was numbered at 2 million will rise to 4.9 million in 2020. Another challenge that we face is the skills mix in the healthcare sector. We have the nurse to population ratio improving steadily from 1:477 in 2009 to 1:345 in 2013. However there is a downside as we have the quantity but really lack the quality. For example, there are senior nurses retiring or leaving for better work opportunities. In 2004, a survey revealed that nurses face poor participation in the Continuing Professional Education (CPE) as it was not focused on nurses' needs but on organisational requirements. Hence we face the problem of having a lot of people with insufficient skills.

Mr Lin estimated that medical inflation averages about 10% each year and is projected to continue rising. Thus, people have to buy healthcare insurance and pay higher subscription for such policies. On our healthcare expenditure, Malaysia is spending less than the average set by the WHO. Malaysia only spends 3.9% of total GDP over the years, never going above 4%. On the bright side, Malaysia has seen an increasing trend in the health expenditure per capita over the last 5 years. The major demographic shift and escalating cost of healthcare require us to do something drastic. Mr Lin repeated the same message that we cannot keep doing the same things over and over again if we want to produce a different outcome. The term innovation is to make changes in something established, especially introducing new methods, ideas or products. He gave several examples of innovation such as Apple's iPod, IBM and modified golf buggies. Hence in healthcare, he recommended that we cannot be a jack of all trades but master of none. He concluded that we need a bit of craziness in healthcare, to take risks and to dare to challenge to status quo in order to take it to a new level.

**Panellist: Dr Rozita Halina Tun Hussein - Deputy Director, Unit for NHF, Planning and Development Division, Ministry of Health**

Dr Rozita thanked ASLI and expressed her interest on speaking from the public sector point of view on how to jive the private and public sectors. Moving forward, we must bring the two dichotomies together

for the benefit of all patients. As can be seen across the world, this is the age of innovation for healthcare as mentioned by Mr Lin earlier. With all the current changes globally such as universal health care, the overarching goal is to deliver cost effective patient-centric care. She explained that with the current global economic environment, everyone is looking for services which are value for money. Hence we need to work together in different ways. It has been well documented that the growth of the healthcare sector has seen the adoption of medical technology pushed into the mainstream which allowed for greater efficiency and enabled hospitals can treat more patients in the same time span with better outcomes. However, she expressed doubts on whether we are achieving that. Rapid cost escalation and poorer than expected health outcomes has been the biggest failures in the healthcare market. Health expenditure has been expanding, even exceeding GDP growth and it has been largely driven by larger spending in the private sector while the public sector acts as a safety net.

Nowadays, even the middle-income and the rich households go to the public sector and the concern is that household financial protection will be eroded for healthcare. Hence, she mentioned that we need to protect our people and give them decent healthcare in both public and private sectors. Right now, existing regulations do not enforce competition so people can tweak the products a bit and resell it under a different name. Dr Rozita reminded us that we must look at containing healthcare charges when providing medical services. Admittedly, Malaysian investors project 10% to 15% profits after tax whereas in the US investors only expect 6% profits from this sector. The government is also enforcing more regulations to ensure that the public receive good quality services at appropriate charges. Some efforts by the government to improve professionalism include training and development programmes. Besides that, the development of more appropriately trained healthcare providers also contribute towards this cause. There is also great opportunity to capitalise on greater economies of scale with bigger facilities and a multidisciplinary approach to increase efficiency and still allow for the smaller health facilities to continue providing their continuum of healthcare. She emphasised on the relevance of these steps as Malaysia faces an aging population with rapidly increasing chronic diseases.

We need to measure health outcomes, share information, be transparent and do more. Particularly for the government, the focus of the change and improvement will be on health management. Hospitals have to be more involved in holistic care for patients. Advances in medical technology should

increase health system efficiency but with the fee-for-service (FFS) system it may encourage unnecessarily high utilisation of expensive technology. This has undoubtedly caused escalation of healthcare. The key is to harness its utilisation for enhancing patient outcomes. For Malaysia, at this stage we should not be developing our own technology. We should take things off the international shelf, which is cheaper and more accessible, rather than to go through the whole process of research and development (R&D) ourselves. There is also greater demand from healthcare providers to keep patients better informed. The middle income group will become key purchasers of personal healthcare as they continue growing in economic stature. The flipside to this is the rising cost. Dr Rozita explained the importance of private-public partnerships (PPPs) to grow the healthcare sector. She called for a transformation similar to the global pharmaceutical industry, which required the convergence of all stakeholders groups to become more connected in order to produce a more holistic approach to make patients the centre of importance. With that she thanked ASLI once again in concluding her presentation.

### **Panellist: Dato' Dr Jacob Thomas - Chairman, Ramsay Sime Darby Health Care**

Dato' Dr Thomas brought up key challenges and points regarding the healthcare system. He quoted the Minister of Health that Malaysians are blessed with good accessibility to healthcare even in the most remote areas of the country and that the quality of care is excellent with costs still reasonable in spite of the 14.5% increase in doctors' fees. The healthcare provided is excellent although Malaysia spends significantly lesser in comparison to other countries in terms of healthcare expenditure as a percentage of GDP. Malaysia also has an excellent network of general practitioners (GP) spread throughout the country. One big challenge that the healthcare industry will face is the possible implementation of the goods and services tax (GST). Although it has been announced that the healthcare sector is exempt, that does not automatically mean no additional costs. This is because the suppliers and vendors of equipment to the hospitals will still be taxed, and outsourced services such as laundry will also be taxed. He explained that over the years, the healthcare industry has outsourced some services such as laundry, housekeeping and catering to improve efficiency. When they buy these services after imposition of GST, they will be affected by the tax. These are the issues which are hard to agree to, and for sure the private sector will transfer the costs to patients. Therefore it will be a huge challenge.

Next he spoke on the data protection act and national insurance policy. He is not against it but rather he is in support of calls to change the current system to a better system. He also touched on the topic of drugs, revealing that hospitals do mark-up the costs for sale. Furthermore, he pointed out that Malaysia has some of the best laws in the world but the problem is enforcement. The dengue issue showed our weakness of enforcement as we found many homes and communities to be breeding grounds for mosquitos. He questioned why Malaysia is not able to clamp down on this although it has resulted in 25 deaths since last March. The other issue he touched on was road traffic enforcement. For example, recently a bus driver crashed a bus because he was texting on his hand phone, which is unheard of in developed countries. These are basic areas which can bring down the costs if we enforce the law more strictly. We also need to address the quality of staff being trained in our country because it is dropping alarmingly. Some of our hospital employees are actually dangerous. During interviews, employers are shocked at what they know and do not know. In concluding, he expressed hope that as we progress, citizens would take responsibility for their own health which would reflect in a healthy society.

### **Q&A Session:**

***Mr John Lee from the Federation of Malaysian Manufacturers (FMM) asked about insurance companies which are looking at developing a unit of medical consultants to address medical costs. That would mean a single party is given the dominance which will ultimately lead to things being unhealthier, so he asked Dr Rozita for her thoughts.***

Dr Rozita said that with regards to the public sector organisations globally, that action does not contravene the Competition Act because it is an act of government. It should make the market work better by increasing competition to provide a level playing field thereby correcting market failure. There are certain characteristics needed to make a market work better which does not exist yet in the Malaysian healthcare sector. From her perspective, she does not know of any company big enough to exert a monopolistic influence on the market to reduce competition.

### **SESSION TWO: Health Research Trends – Focusing on Early Detection and Prevention of Diseases to Reduce Healthcare Costs**

**Moderator: Dr Mohamed Ali Abu Bakar – Chief Executive Officer, Clinical Research Malaysia**

Dr Mohamed Ali welcomed the participants and introduced Professor Datuk Dr Looi Lai Ming and Professor Emeritus Dato' Dr V. Navaratnam. The topic focused on early detection and prevention of diseases to reduce healthcare costs and discussions centred upon how to analyse risks to avoid wrongful diagnosis. He called upon Professor Looi to begin. Following her presentation, Dr Mohamed Ali then invited Professor Navaratnam to make his presentation. Dr Mohamed Ali also spoke briefly on 'Obamacare' in the US which covered the entire population by requiring everyone to participate. He also mentioned about an international consortium that judges healthcare outcomes in concluding the session.

**Panellist: Professor Datuk Dr Looi Lai Meng - Distinguished Professor, Department of Pathology, Faculty of Medicine, University of Malaya**

Professor Looi began by thanking ASLI and introduced herself as a pathologist by training with expertise in diagnostic services. In the 20<sup>th</sup> century, there have been many advances in medical technology which has extended life expectancy significantly. However, the scenario in the 21<sup>st</sup> century is very different. We are faced with the dilemma of which areas to invest in. Malaysia is in the category of middle income countries, which have heavy burden of diseases and the two biggest areas causing high mortality are cancer, a non-communicable disease (NCD) and cardiovascular disease. She then elaborated on the issue of cancer, which is a disease that carries high healthcare costs because the treatment required is extensive and goes on for a long time. It is projected that cancer occurrence will increase significantly by 2025, and Malaysia has been following the cancer trend worldwide under the Malaysian Cancer Registry Report 2007. She also shared a few success stories in reducing Hepatitis B occurrence which is important due it causes chronic liver disease and liver cancer, through a vaccine administered in the early stages thanks to research and development. These discoveries were simple but highly impactful and led to Nobel prizes for their discoverers. Professor Looi then moved on to the topic of familial cancer, citing that 10% of breast cancers are hereditary. Candidates with higher risk can undergo targeted screening, prophylactic surgery or chemoprevention.

She followed with sobering data on projected deaths due to diseases, which are the biggest factors in healthcare costs today. Ischemic heart diseases

were the leading causes of global death and premature death in 2010, and Malaysia is not lagging behind these global figures. This showed that diseases of the circulatory system and respiratory system make up the top two causes of deaths in Malaysia. 80% of NCDs are modifiable. One of the most important modifiable factors would be high blood pressure. Another disturbing Malaysian trend is obesity, which led to diabetes and hypertension. From 1996 to 2011, these diseases have more than doubled. Lastly, she spoke on climate change, which includes greenhouse gas emissions and its close linkage to chronic diseases. Often, governments do not realise that. Studies done in London have showed that by mitigating greenhouse gas emissions, the instances of heart diseases and stroke could be reduced by 10% to 20% and the instances of breast cancer by 12% to 13%. Another success story she shared was the Take Care New York (TCNY) programme which reduced the percentage of adults smoking over a period of several years which leads to savings in healthcare costs.

**Panellist: Professor Emeritus Dato' Dr V. Navaratnam - Pro Vice Chancellor of Postgraduate, Research & Strategic Development, Taylor's University**

Professor Navaratnam explored the concept of wellness, which is much more than the feeling of being free from illness. Wellness is a dynamic process of change and growth with many interrelated dimensions including physical, emotional, intellectual, spiritual, social, environmental and occupational. Each dimension is equally vital in the pursuit of optimum health. He pointed out that healthcare is not just about dealing with diseases. Tertiary prevention is very expensive and early prevention, also known as secondary prevention would be much cheaper. Tertiary prevention occurs after a disease has developed and has been treated in its acute clinical phase. Tertiary prevention seeks to soften the impact caused by the disease on the patient's function, longevity and quality of life. Therefore it can be very costly. Secondary prevention would be procedures that detect and treat pre-clinical pathological changes and thereby control disease progression. Screening procedures such as mammography to detect early stages breast cancer are often the first step, and would lead to early interventions that are much more cost effective than interventions after the appearance of symptoms. Primary prevention seeks to prevent the onset of specific diseases via risk reduction by altering behaviours or exposures that can lead to diseases. Primary prevention generally targets specific causes and risk factors and aims to promote

healthy behaviours, improve host resistance, and foster safer environments to reduce the risk of diseases. Examples include smoking cessation and dietary control.

Professor Navaratnam then spoke on healthcare expenditure. The Malaysian government places much importance on the expansion and development of healthcare, which is proven by their 5% allocation of the government social sector development budget into public health care. The World Bank estimates that Malaysia spends approximately 4.8% of its GDP on healthcare. This has helped reduce illness-related healthcare costs. Less than one-quarter (23.1%) of Malaysian adults smoked tobacco of some form, and daily cigarette smokers smoked an average of 14 sticks a day. The prevalence of current tobacco smokers among men was 43.9% compared with just 1% among women who are daily cigarette smokers. A study by the Ministry of Health (MOH) found that half of the total burden of top cancers among men – cancers of the trachea, bronchus and such – are attributable to smoking. Another study estimated the cost of healthcare incurred for treating three selected smoking-related diseases: cancer of the lungs, ischemic heart disease (IHD) and chronic obstructive pulmonary disease (COPD). The annual cost to the provider per patient for each disease was RM 34,529 for lung cancer, RM 20,314 for IHD and RM 19,415 for COPD. The total treatment cost makes up a grand total of RM 2.92 billion, which is equivalent to 0.7% of Malaysia's GDP and 26.1% of the MOH budget. He went on to question the effectiveness of prevention right now, pointing out that these programmes are looking at indicators but not at outcomes. He concluded that it is time for reflection on improving the healthcare system with early prevention.

#### Q&A Session:

**Mr John Lee from the Federation of Malaysian Manufacturers (FMM) referred to one of Professor Looi's slides which showed the high occurrence of diseases. He asked Professor Looi for her professional view from an ethical standpoint whether a doctor should suggest, with knowledge of the patient's hereditary background, additional screening that will cost additional money. If this method is done too aggressively, it could further increase healthcare costs.**

Professor Looi replied that from her personal experience dealing with cancer patients, a woman with a history of breast cancer should go through the genetic mutation analysis. In such cases, there should be an educated judgement on the part of the doctor on who to screen. The same goes for

colorectal cancer. Those with family background can be narrowed down and this would reduce healthcare costs of screening. Early detection can reduce the costs of treating the cancer before it develops.

#### **SESSION THREE: New Medical Technology Breakthroughs – Improving the Safety, Reliability and Cost Effectiveness of Medical Devices**

**Moderator: Mr Nitin Dixit - Senior Industry Analyst, Frost & Sullivan Sdn Bhd**

Mr Dixit described the focus of the current topic surrounding safety, reliability and cost effectiveness of medical devices. There are many private companies including universities investing a lot of resources into innovating and producing high tech products and medical devices that are world challengers in terms of efficacy and cost effectiveness. He then introduced the two panellists – Ms Elisabeth Staudinger-Leibrecht and Professor Dr Jasmy Yunus, and gave a brief background of each before inviting Ms Elisabeth to begin. Next, he invited Professor Jasmy. There were a few minutes for the question and answer session. Mr Dixit then wrapped up by summarising both presentations.

**Panellist: Ms Elisabeth Staudinger-Leibrecht - Executive Vice President, Healthcare, ASEAN, Korea and Pacific (ASP), Siemens Pte Ltd**

Ms Elisabeth expressed her delight to address the delegates at this event. She spoke on innovation and on how companies contribute towards innovating medical devices. Innovation is at the heart of product development to advance human health by fighting the most threatening diseases, raising quality and productivity of healthcare and enabling access to healthcare in order to transition to the next-generation healthcare. She then presented an overall statistical framework of the work that Siemens does with some examples of their contribution to the medical sector. She cited breast cancer where frequent mammography usage could drastically reduce occurrence, thereby cutting down the cost treatment through early prevention. Ms Elisabeth then described the healthcare situation in a turbulent political and social environment. Demographic shift and the increasing pace of innovation have led to higher consumer expectations as they become better educated each day.

A clear trend in the industry of imaging is that the impact of imaging is moving closer into the prevention zone, which is before the diagnosis zone. This has drastically reduced costs for both the patient

and the provider. She presented research by Siemens which spent over 1 billion Euros annually in establishing research and development as its key priority. The principle is that there must be clinical, operational and financial value in the research fields that it pursues. The last dimension she touched on was affordability. Siemens is consistently working on bringing down the costs of imaging and other medical procedures. The focus is not just on the devices itself but also every area of the overall medical service. To conclude, she stated that innovation in healthcare will bridge the way for a knowledge-driven healthcare approach.

**Panellist: Professor Dr Jasmy Yunus - Dean, Faculty of Biosciences & Medical Engineering, Universiti Teknologi Malaysia (UTM)**

Professor Jasmy wished everyone a good afternoon. Firstly, he touched on the Medical Devices Act, which is close to his heart. Act 737 ensures that medical devices sold in Malaysia are safe, reliable and work as claimed, which includes clinical trials and evidence-based approaches. The aim is for the outcome of medical technology research to be safe, reliable and effective in achieving its goals. Admittedly, it is debatable that implementing this Act will push up the price of healthcare. However, without the Act there may be a lot of 'Sorcerer's Stones' (pirated or fake goods) in the market. Hence, it is important to enforce this Act in view of the greater good so every company should comply. In UTM, the research activities are focused on medical implant technology and medical imaging. Other research areas in partnership with external organisations are in cardiovascular engineering, rehabilitation engineering, human factors and ergonomics, and instrumentation and telemedicine.

He then briefly touched on medical devices technological breakthroughs in the last decade. There have been many new medical devices such as artificial hearts, medical imaging technology like MRI, devices that support new medical procedures and treatments, medical informatics and also assistive devices like mobility and communication aids. Professor Jasmy shared his thoughts on the artificial heart which he considered to be a major technological breakthrough. In one day, the heart pumps about 7500 litres of blood. Until recently, the only option for many severe heart failure patients had been heart transplant but many died while waiting. He also told the story of the Jarvik-7 artificial heart in 1982. Another segment of importance is bio-printing towards organ fabrication, which is the idea of creating organs artificially. He gave the example of witnessing how the Germans grew the valve of a

person's throat using his own cells. Next, Professor Jasmy gave a brief explanation on surgical robots, which is a significant advancement in medical technology that has saved many lives. One of UTM's main goals is to reduce the cost of producing artificial hearts from RM500,000 currently to RM300,000 in the foreseeable future by working together with institutions in Aachen, Germany. Furthermore, there is the medical device clinical alarm system where the human factor is its most important safety aspect. UTM had proposed a framework to establish the alarm sound based on psychoacoustic perception and psychophysical effects to optimise performance of the alarm system. The research has been done in collaboration with the MOH, the University of Plymouth in the UK and the University of Toronto in Canada. On the case of medical imaging, they have been working with Toshiba to develop imaging devices. In conclusion, the lack of local companies in medical devices manufacturing meant that research work must be done with international collaborators. It has been proven that partnerships between universities and industry are very crucial. He emphasised that this must be addressed to further advance the medical devices field in Malaysia.

**Q&A Session:**

***Mr John Lee from the Federation of Malaysian Manufacturers (FMM) asked for the reason why UTM started all these research with such limited funding from the government. At the end of the day, he questioned if it truly adds value compared to the effort and resources put in. Furthermore, many of the technological devices that were highlighted in the presentation have been commercialised and commoditised.***

Professor Jasmy replied that the research would not exactly be starting from phase one as UTM is working with institutions in Aachen who already possessed foundational research. Most things happen that way. Outsourcing from a university's perspective meant training students who are doing their PhD. Currently in Malaysia, UTM is the number one university in terms of intellectual property (IP) products, so companies are welcome to take a closer look at their research.

Mr Dixit pointed out that everyone must bear in mind that there are still many products that are not commercialised yet, and companies invest in a variety of technologies at any given time. He then touched on futuristic technology and how that will change the lives of patients.

Ms Elisabeth said that most inventions which are thinkable already exist in one way or another.

However the key is in data processing and with the additional computer power, there will be better ways to handle huge amounts of data. Sequences and genome databases are pretty good but to make something of the data and look at what needs to be enhanced will be the key, and that is the most exciting aspect of the field.

### **SESSION FOUR: The Rising Stars of Healthcare – Medical Tourism, Aesthetic Medicine and Aged Care**

**Moderator: Mr Suresh Ponnudurai - Chief Executive Officer, Malaysia Healthcare**

Mr Ponnudurai stated that Malaysia is established in many disciplines and should not miss out on the medical industry which has been growing rapidly especially in the last few years. One of the key things we have to look at is medical tourism. It is a benchmark for citizens too because it raises the medical level of our country. He mentioned that it has a huge impact on each one of us because raising the healthcare standard in our country ultimately allows us benefit from the better services. To start the session, he invited Dr Liow. Next, he invited Associate Professor Dr Kadar. Thereafter, he introduced the third speaker, Professor Dr Philip Poi. Lastly, Dr Ahmad presented his piece. In wrapping up the session Mr Ponnudurai reminded delegates of the Minister's buzzwords on healthcare which are quality, affordability and accessibility. He concluded that infrastructure must be in place and that is the primary requirement by the medical sector to be successful.

**Panellist: Dr Liow Tiong Sin - Executive Director and Consultant Aesthetic Physician, Beverly Wilshire Medical Centre**

Dr Liow expressed his delight to share his experience with the participants and outlined that he would be talking about "Aesthetic Medicine: An Evolving Science & A Growing Market". Firstly, he presented analysis and trends from the International Master Course on Aging Skin (IMCAS), which provided facts and key market figures. It reported a solid 7.3% growth in 2013, which is expected to be maintained until 2018. Aesthetic medicine is a scientifically based and clinically proven way of rejuvenating and improving the aesthetics of a person through precise, minimally-invasive mechanisms that stimulate and augment the body's own healing and renewal processes in order to achieve predictable and quantifiable aesthetic and anti-aging results. It is different from plastic surgery

which is often considered invasive and dermatology is primarily concerned with skin disorders. Aesthetic medicine fills the gap between these two areas and uses a gentler approach with minimal downtime.

He then spoke on the selfie trend which coincided with a rise in demand for plastic surgery. Social media is widespread and this is where aesthetics play an important part because people are very concerned with how they look. Celebrities also have a large influence on society as everyone wants to look like them. He also touched on higher disposable incomes and the liberation of women in recent times being factors driving up demand for aesthetic medicine. On another note, Malaysia's population is aging and as they grow older, they would seek out more aesthetic treatment. He gave the example of South Korea where they turn to aesthetic surgery to improve their chances of getting a job or promotion, hence the role of aesthetics in career advancement as well. Dr Liow concluded that aesthetic values cut across all boundaries and does not discriminate among races hence demand is set to continue strongly.

**Panellist: Associate Professor Dr MA Kadar Marikar - Chief Executive Officer, Malaysian Society for Quality in Health (MSQH)**

Dr Kadar presented on "Accreditation of Healthcare Facilities and Services". He explained that accreditation is an internationally recognised evaluation process used to assess and improve the quality, efficiency and effectiveness of healthcare organisations with a focus on patient safety. He showed a graph of countries with National Accreditation Services, with Malaysia being one of them. He explained that accreditation of healthcare is an integral part of healthcare systems in over 70 countries. It is voluntary in most countries, and for Malaysia that is the case too. It consists of periodic or cyclical assessments of organisational and clinical practices. This is usually done through self-assessments, peer reviews, interviews by surveyors or careful study of administrative and clinical processes documentation and data. The process typically culminates in the provision of an accreditation report and accreditation status.

Dr Kadar explained that the focus of standards for the Malaysian Society for Quality in Health (MSQH) consists of organisation and management, HR management and development, policies and procedures, facilities and equipment, quality improvement activities and safety requirements. The MSQH certification roadmap starts with a license, which is the minimum requirement. After that has

been met, the service must be delivered for 12 months, and then that is followed by validation and finally certification that it has complied to all requirements thereby indicating that it is highly credible organisation. Through the MSQH survey reports, he presented the accomplishments of accredited hospitals amongst which better amenities were provided. The outcome of the accreditation process produces many benefits and he concluded with that, thanking the audience for their attention.

**Panellist: Professor Dr Philip Poi Jun Hua - Division of Geriatrics, University Malaya Medical Centre**

Dr Poi focused his presentation on aged care and started with a graph – the Gapminder World Map 2010, which rated countries in terms of health and money. It showed that amongst ASEAN countries, the highest percentage of older persons were in Singapore at 7.1% of the population. It is followed closely by Thailand and Indonesia in second and third place respectively. Dr Poi explained that this is due to the decline in fertility and mortality which had hit developing countries approaching the horizon of developed status. People are living longer but not enough babies are born. The speed of population aging is rising in Malaysia in terms of the percentage of people turning 55 years and above. This means that the dependency ratio will rise, resulting in more numbers of older people being dependent on less numbers of younger people in Malaysia. Nowadays, children like to stay with their parents to save money and this trend has resulted in the three-generation households. However, it is different from previously where this arrangement arose out of children taking care of their parents because now it is the parents taking care of the grandchildren.

Next, Dr Poi presented on the social changes that have impacted senior health. Urbanisation stood at 72% now hence living arrangements have been transformed. There have been drastic changes in social and family network, with accompanying changes in values. There is also an increase in the numbers of females participating in the workforce, which had affected the birth-rate. He highlighted that the provision of good aged care services depends on elderly friendly hardware, like wheelchair ramps and nursing homes. He mentioned that he has only seen one mall fully equipped with all the necessary elderly-friendly facilities in Malaysia and that is Subang Parade. In conclusion, he stressed that we need to do more to prepare the right facilities for the elderly to meet the needs of their care and keep them in good health.

**Panellist: Dr Ahmad Razid Salleh - Director, Medical Practise Division, Ministry of Health**

Dr Ahmad started by explaining two existing laws – the Private Healthcare Facilities and Services Act 1998 (Act 586) and the Care Centre Act 1993 (Act 506). The first law covers provision of care for a person and is directly under the purview of the Ministry of Health. The second law regulates some facilities to offer care for aged persons and comes under the purview of the Ministry of Women, Family and Community Development. These laws are reviewed from time to time to meet the needs of the current generation. He then spoke on the scope of aged care, which should govern both private and public facilities and services and be inclusive of not just standard healthcare but also personal care and mobile healthcare. He also touched on the classification of care recipients, which had three tiers. The first tier is independent living, the second tier is assisted living and the third tier is dependent living. The mechanism of the law includes the approval to establish and the license to operate. The standards required for the facilities and services are based on their tier classification, and it covers also the number and qualification of staff as well as the type of infrastructure.

Dr Ahmad then moved on to aesthetic medicine which falls under the Private Healthcare Facilities and Services Act 1998. It includes provisions for the premises, hospitals, areas of interests and dental clinics. He then presented the guidelines on Aesthetic Medical Practices for Registered Medical Practitioners. It is an area of medical practise which embraces multidisciplinary modalities dedicated to create a harmonious physical and physiological balance through non-invasive, minimally invasive as well as invasive treatment modalities which are evidence-based. These modalities focus on the anatomy and the physiology of the skin and its underlying structures to modify otherwise 'normal' (non-pathological) appearance in order to satisfy the aesthetic goals of the patient and are carried out by the registered medical practitioner.

**SESSION FIVE: Healthcare Financing – The Key to 'Affordable Access for All'**

**Moderator: Mr Andrew Chan Yik Hong - Executive Director, Healthcare Leader for Malaysia, PricewaterhouseCoopers Capital Sdn Bhd**

Mr Chan gave his opening remarks and invited Dr Chua to share his perspectives on financing healthcare. He then invited Dr Nik to share her thoughts on the matter. Finally, he invited Haji

Amiruddin to share his piece. Mr Chan closed the session with a few remarks and thanked the panellists for their time and insights.

**Panellist: Dr Chua Hong Teck - Director of Healthcare and Low Income Households, PEMANDU, Prime Minister's Department**

Dr Chua presented the World Health Report 2011, which showed that the healthcare financing system is about three important factors: raising funds, reducing financial barriers and allocating the funds in an efficient and equitable way. These factors will determine whether health services are available for everyone. Regarding the factor of raising revenue as a source of funding, the availability of funds is fundamental. The largest source of funding is from the MOH (44% in 2012) and the MOH budget has been growing at 12% yearly. Malaysian healthcare spending continues to grow at a fast rate too. Furthermore, it is important to note that the public and private sector mix of expenditure has not changed much even though there has been tremendous growth of private hospitals and other facilities. Dr Chua then delved into the sources of this funding for health expenditure. His next point was about reducing financial barriers so that the poor can get sufficient and equitable access to the medical services provided. There exists the concept of prepayment and pooling of resources by the MOH to provide medical insurance to the vulnerable group. To help with escalating doctors' fees, consultation fees are regulated too, to keep the price down and limit the maximum that doctors can charge.

In conclusion, he presented a few options to move forward. Amongst others, he proposed to have a tax-based system, a prepayment and savings system and also suggested that the government consider a social insurance scheme covering new employees which could be extended on a voluntary basis to existing employees. On more progressive steps forward, there should be better collaboration between public and private healthcare providers and facilities. We should implement a "lower-cost but high quality healthcare model". Lastly, he recommended a financing policy that helps people take care of themselves, their families and their own health. Thus, all the lifestyle diseases that we have now can be prevented.

**Panellist: Datin Dr Nik Amsharija Mohamed - General Manager, Medical and Rehabilitation Branch, Social Security Organisation (SOCSO)**

Datin Dr Nik presented her thoughts and experience from the viewpoint of SOCSO. SOCSO Malaysia is

currently insuring 14.7 million workers who earn less than RM 3000 monthly. She explained that SOCSO has an Employment Injury Insurance Scheme which is a protection for work-related commuting accidents. Then there is the Invalidity Pension Scheme which is a 24-hours protection for invalidity from illness or accident or death irrespective of cause. Datin Dr Nik explained that social security is all about people and health is a key component of an individual's well-being as well as being a prerequisite for optimal human capital. Health is an important factor in managing and controlling social security expenditures. We should not see it as a cost, but as an investment instead.

She spoke about SOCSO's Return to Work (RTW) Programme which was launched in 2007 to assist SOCSO Insured Persons (with employment injury as well as those claiming for invalidity pension) to return to gainful employment through systematic disability case management. In capacity building, SOCSO has built a rehabilitation centre in Melaka which provides specialised Return to Work care and physical rehabilitation for SOCSO's Insured Persons. SOCSO plays the role of a social security institution in Malaysia. She described how they overcame challenges with early intervention and prevention, empowering people, ensuring accessibility and effectively collaborating with stakeholders including the government, the private sector and the NGOs. In conclusion, she highlighted that SOCSO's schemes are win-win strategies and stressed that prevention definitely pays.

**Panellist: Haji Amiruddin Abdul Satar - President & Managing Director, KPJ Healthcare Bhd**

In an ideal world, it would be best without accidents and injuries. Haji Amiruddin shared his perspective as a private hospital operator and spoke about their efforts in reducing the healthcare costs and spending in the country. Careful development and spending on hospitals can contribute towards significant reduction in healthcare spending. In any development of a new hospital, it is important to set a long-term cost reduction schedule. The investment structure consists of two parts, the cost of obtaining funds and the equity versus loans balance. Hence the resulting capital expenditure must be well managed. It is important to select the location of the hospital to purchase the land. Following that, other important considerations include deciding whether to renovate an existing building or construct a new building from scratch. Then the costs of equipment need to be assessed, which ranges from bed units to test tubes. They will be classified under units, modalities and complexities. For a new hospital, it will be important

to get the appropriate amount of equipment because buying too much or too little will result in underutilisation or overstocking.

Haji Amiruddin described operating efficiency as the key to having a productive hospital, and such efficiency covers supplies and medicines. There is a clinical supply chain which must be organised and optimised to the objectives. The goals are to improve patient care and safety, reduce expenses, increase revenues and enhance clinical staff satisfaction. On stock management, inventory is an important aspect to have discipline in, such as ordering materials and medicines. Medicines still belong to the vendor and not to the hospital, until it is charged to the patient. Consignment is a good way to cut down costs and make it more efficient. There are also areas for lesser involvement of physicians. With that, he concluded his speech as the last speaker at the forum.

### **KEY TAKEAWAYS & RECOMMENDATIONS**

The overall tone of the forum was set towards refocusing on the patient in order to deliver patient-centric healthcare measured across the three important dimensions of quality, affordability and accessibility.

A key requirement is innovation. Several speakers spoke about the role of innovation in improving quality, affordability and accessibility of healthcare and called for greater support from the regulators to foster innovation not just in research but also in policies and operational processes by providing a conducive and encouraging environment where it is valued and hence can thrive.

Public-private partnerships were also advanced as a means toward improving quality, affordability and accessibility in the areas of skills training for healthcare staff especially nurses; primary and secondary prevention targeting lifestyle factors; and research and development partnerships involving universities and industry.

Issues such as the GST, Data Protection Act and the National Insurance Policy were highlighted, with calls for regulators to give more consideration towards their impact on healthcare quality, affordability and accessibility especially in the private healthcare sector during the planning and implementation stages.

Collaboration within the government for better law enforcement in order to reduce incidences of road

traffic accidents as well as malaria, dengue and similar diseases were called for as it is a logical and practical way of reducing the burden on healthcare services thereby containing its costs to maintain quality and affordability.

Also, attention were brought towards raising funds, allocating funds efficiently and equitably as well as reducing financial barriers to ensure the sustainability of healthcare financing so as to maintain quality and accessibility while improving affordability. Both the public and private healthcare sectors need to carefully plan infrastructure and development spending.

While focusing on taking care of the healthcare needs of the general populace, the objectives of profitability and sustainability should not be set aside. In this, medical tourism plays a role. It is a rapidly growing sector especially in the areas of aesthetic medicine and aged care as the regional population ages. To support its growth while improving quality, regulatory enablers are needed in the form of improved legislation and accreditation.