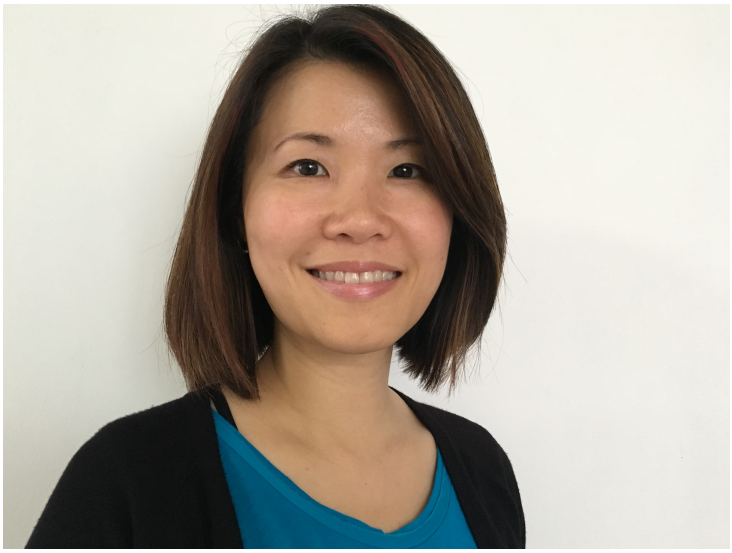
BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

“The medical diagnostics industry will move towards a more targeted and personalized diagnosis”: Charmian Cher

20 September 2018 | Opinion | By Priyanka Bajpai

Demand for healthcare continues to escalate in APAC, driven by rapidly ageing populations with complexhealthcare needs, a shift in focus from infectious to life-threatening diseases and a more informed populace. In Singapore, diagnostics has emerged as a way for earlier and better identification of diseases to control rising healthcare costs. Along with the country’s state-of-the-art infrastructure and high standards of medical practice, Singapore has become a natural choice for many global diagnostic companies to establish their regional business operations. However, despite in-vitro diagnostic being an important early intervention tool for diseases, only two per cent of overall worldwide healthcare spending goes towards in-vitro diagnostics. Recently, Charmian Cher, Director, Clinical Strategy (Asia Pacific), Diagnostics and Genomics Group, Agilent Technologies Singapore Pte Ltd spoke to BioSpectrum Asia about the growing demands of diagnostics and innovation in Asia Pacific and Singapore in particular.



How is the medical diagnostics landscape evolving in APAC region?

Asia Pacific makes up more than half the global population. The region is a melting pot of different cultures, each with unique characteristic and needs. According to a study conducted by McKinsey and Company supported by the Asia Pacific Medical Technology Association (APACMed), the region’s healthcare needs is a reflection of its growing population. Trends such as an increasing aging population, urbanization and chronic respiratory diseases underpin the demand for improved healthcare. As such, private hospitals and MedTech companies are expanding rapidly in the region establishing their R&D facilities, and manufacturing centers. The study added that MedTech industry in Asia-Pacific is estimated to have reached almost USD $90 billion in 2015 and is expected to double by about USD $190 billion by 2025 overtaking the EU as the second largest market next to the US.

Molecular diagnostics is another area that is rapidly growing. Its key applications of interest are oncology, reproductive health and postnatal diagnostics. For APAC, this is mainly driven by precision medicine as most companies look to have more

personalized treatment and disease management widely available to all patients. Rapid development of new genetic technologies such as microarrays and next generations sequencing are helping fuel this growth. As this market evolves, new guideline on genetic testing, data privacy and reimbursement will be established.

As a comparative, which countries have shown more potential in business growth and adoption?

The fastest growing market is China. In 2016, the country announced the world's largest precision medicine initiative which is expected to draw investment of up to USD $9 billion. In addition, with the rapid growth of next-gen sequencing, in January 2018, China Food and Drug Administration (CFDA) refined their in-vitro diagnostic (IVD) for immunohistochemistry and instrument regulation which means that more products can be regulated to the patients which opens opportunity for MedTech companies like Agilent to invest in the country.

Singapore is starting to catch up. Currently it is home to more than 60 multinational MedTech companies. Eight out of 10 top global players in the life science tools industry have some form of activity in Singapore across manufacturing, R&D and headquarter functions. As part of Singapore's development plans, the commercial arm of the country's science and research agency A*STAR launched the Diagnostic Development (DXD) hub in 2014 to accelerate Singapore's readiness of locally developed diagnostic products.

In addition, the South Korean government is putting funds into clinical precision medicine and we see that growing in the coming years. Japan is the most regulated market in APAC. For South Asia-Pacific, the fastest growing countries are Australia, Thailand and Vietnam where they are adopting to new technologies faster than rest of the region.

What is the driver or competitive advantage fueling this growth?

Government focus is eminent. Apart from that, the population is educated about the need for testing via media and internet and thus drives demand for diagnostic check.

What are your views on the convergence of digital technology and medical diagnostics? Can you please elucidate this with some examples and trends?

Digital technology has dramatically changed every industry including the medical field. In order to enhance our equipment and solutions, Agilent has leveraged both acquisitions and internal innovations.

For Agilent Diagnostic and Genomics Group (DGG) the acquisition of Cartagenia (clinical grade SaaS-based NGS and CGH variant assessment software), Lasergen (next generation sequencing technology) and Genohm (laboratory information management system) will complement the vision of the full laboratory workflow in NGS from when the patient sample comes into the lab until the final diagnosis. This complete workflow solution will eventually allow a clinician to have all the data and information needed to make a diagnosis at his/her fingertips, consolidated from multiple testing modalities.

Like many companies, Agilent is moving to a digital model that depends heavily on cloud technology. We plan to digitize life sciences through different initiatives from offering our customers with SaaS-based laboratory management to connected lab tools through our iLab Solutions Group.

High-quality diagnostic technologies still remain inaccessible and unaffordable in many places. What efforts are being made to increase this outreach and adoption? Is Agilent doing anything to handle this?

Singapore is a strategic location for us because it gives us access to neighboring countries where we have yet to establish our presence. We break geographical boundaries and come as close as possible to the countries we feel we can help make a difference by introducing to them our equipment to improve their healthcare solutions.

Agilent is focused on developing complete NGS and microarray solutions for cancer and constitutional analysis which will allow labs with little expertise to adopt and implement. These simplified solutions will not only include the necessary components to go from sample to report but will involve expert service and support to guide users through verification within

their labs.

In 2015, we launched Agilent University in Singapore which offers more than 200 technology courses for our customers and field support engineers across Asia Pacific and the Middle East regions. We have also collaborated with other universities, most recently with Monash University in Malaysia. The Monash-Agilent Centre for Integrative Biology combines Monash's research excellence with Agilent's breakthrough solutions. Agilent provides hardware and software as well as training and ongoing support to the staff of Monash University.

Just last month, Agilent opened a new 11,000 square feet Global Solution Development Center in Singapore to meet the increasing demand for fully tested solution, optimize laboratory processes and introduce transformative ways to boost productivity.

What may be some of the logistical or regulatory impediments that hinder such initiatives?

As mentioned earlier, geographical boundaries hinder us from reaching other markets to introduce diagnostic technologies. As such, these markets lack awareness that we provide such equipment to improve their healthcare solutions. Singapore is a strategic location for our company as it gives us access to the surrounding countries where we have yet to establish our presence.

What changes, regulatory or otherwise, can help accelerate the growth of in-vitro diagnostics?

The patient is of course the most important part of the equation. In order to give them the best treatment it is important that laboratories should have access to the best equipment and solution in the market.

Government assistance and funding support is essential to help laboratories to stay on top of technology and ahead of the rapidly changing market. One initiative that can be done is by allowing patient for test reimbursement. Today, it is mostly only the drug prescription that is eligible for reimbursement. Much the same way, it will encourage more patients to track their health to drive demand for IVD.

How do you see medical diagnostics industry evolving over the next decade? What can be some of the regulatory and infrastructure drivers to realize better global healthcare for the population at large?

The medical diagnostics industry will move towards a more targeted and personalized diagnosis that will provide more suitable treatment for the patient. As mentioned in the earlier question, it is essential for government to provide assistance and funding support to help laboratories stay on top of technology and ahead of the rapidly changing market. In addition, providing education to increase awareness will encourage people to track their health.