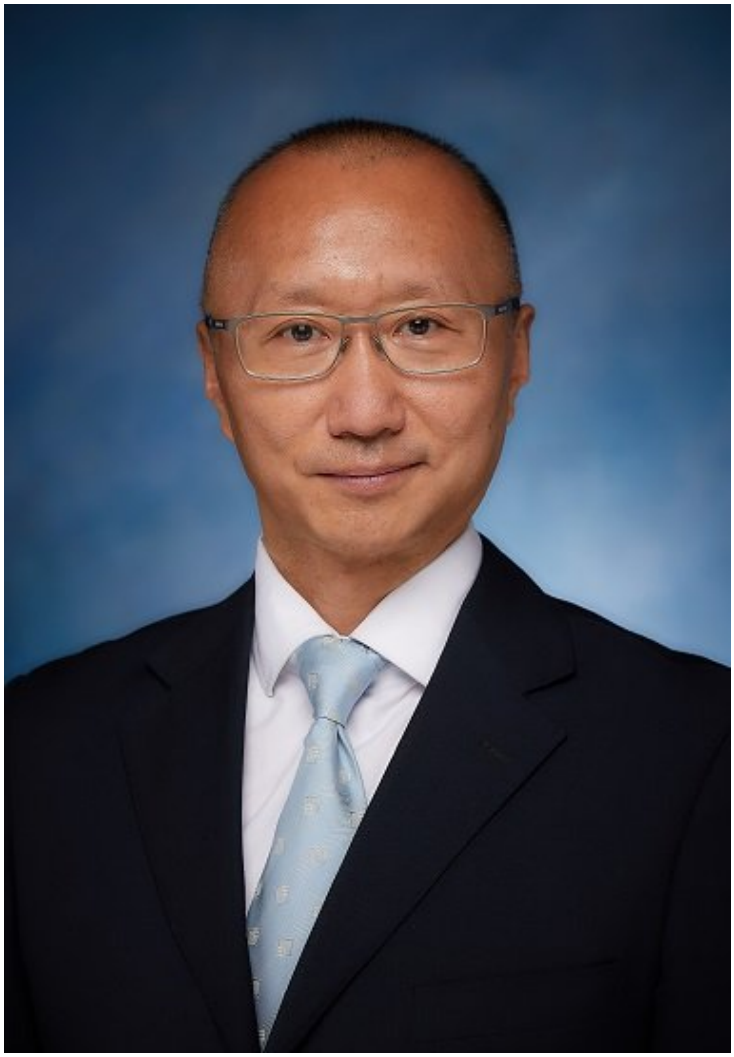
BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

Ã¢â?¬Å?Home-grown companies are building up highly promising research pipelinesÃ¢â?¬Â•

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The Asia Pacific region is slated to record the highest growth rate in healthcare IT, with organizations digitizing in order to ensure patient safety and streamlining of workflow systems.



Asia is the most populous continent, accounting for 60 per cent of the worlds' population. Market access barriers for foreign investors have been diminishing in recent years as governments are showing signs of relaxing regulations surrounding private investment into healthcare. Healthcare spending in Asia is expected to grow at a compounded annual growth rate of 9.2 per cent, compared to 5.6 per cent in the U.S. Private and public hospitals in Asia are increasingly looking to invest in IT solutions in efforts to increase operational efficiency, improve clinical outcomes, and boost profit margins. The Asia Pacific region is

slated to record the highest growth rate in healthcare IT, with organizations digitizing in order to ensure patient safety and streamlining of workflow systems. Southeast Asia is poised for growth. The region's healthcare market is projected to be worth $134.2 billion by 2020.

In this background BioSpectrum spoke to **Sheng-Jie Ni, Managing Director, Product and Solution Development, APAC, FedEx Express**, who made presentation at the Asia Health Conference 2019, in Singapore recently and shared his views on many topics including opportunities and challenges as healthcare trade rises; Important logistics considerations for global expansion and Cold chain best practices.

Edited excerpts-

The healthcare industry continues to expand globally. As businesses in this space look to expand overseas, what are some of the pertinent supply chain considerations they must have? How can they build logistics and transport as part of their quality systems?

The global healthcare industry is undergoing profound change as aging populations drive a growing need for new pharma solutions. This will be especially true for Asia, with more than a billion people over the age of 50 forecast to be living in this region by 2025. Businesses in the healthcare spaces are increasingly recognizing the importance of making their supply chain an intrinsic part of the value chain.

Against this backdrop, here are three key supply chain considerations that businesses must have as they look to connect to more possibilities around the world:

1. Greater shipment monitoring and control with Industry 4.0

Advancements in supply chain technology has allowed healthcare companies an unprecedented degree of real-time tracking and tracing of their shipments through the Internet of Things (IoT). Using this data, pharmaceutical companies can map information such as location, light exposure, humidity, barometric pressure, and shock. They can also ensure the integrity and security of temperature, one of the most pressing challenges for the modern industry.

FedEx offers customers our own pioneering technology, SenseAware, which provides safe and compliant transportation of temperature-sensitive shipments in clinical trials and innovative pharma. Our network of connected sensors has the ability to gather, send and monitor data, enabling a comprehensive array of real-time tracking and tracing data.

2. Transportation as a critical part of Quality Assurance (QA)

Transportation has become a major consideration in the QA system for businesses in the healthcare space. Transportation spending among healthcare companies is rising, with Asia's biggest players spending around $3 million on logistics annually.

Highly specialized packaging is a key component of QA, with demand rising exponentially. Around 17 per cent are using specialized or active containers (referring to temperature-controlled transportation), while 12 per cent are using deep frozen packaging.

FedEx offers a suite of customizable healthcare packaging solutions to meet the unique needs of the industry, whether it involves delivering a pacemaker to a heart patient in Taiwan from half way around the world in just one night, or transporting sensitive biomaterials such as human liver cells between Japan and Singapore and have them arrive in perfect condition – the possibilities are endless.

3. Building the right collaborations with logistics providers

Healthcare is a sector where the quality, integrity, and security of the shipment can be life-changing; and where crucial clinical trials can be compromised with just a small change in temperature.

Pharmaceutical companies are increasingly looking to build collaborations with logistics companies, as opposed to transportation vendors, for the assurance that their sensitive and valuable shipments are well taken care of. For example, FedEx has an APAC Healthcare Control Tower that offers specialized Customs clearance, regulatory support, dedicated local hotlines, and a streamlined shipping experience for frozen shipments, including dry ice and packaging fulfilment to hospital pick up by authorized specialists.

Even if shipments do not go as planned, customers want to know that their logistics partners have the pre-prepared contingencies that can be swiftly implemented to protect shipment integrity. For instance, we have a dedicated FedEx Healthcare Priority team that is fully trained for contingency management and proactively monitors customer shipments.

What are the best practices available?

At FedEx we believe there are four best practices in cold chain logistics:

1. Temperature/Environmental protection during transportation

Having quality packaging is the best way to protect shipments. In general, there are two types of packaging:

- Active packaging works physically with a compressor – it requires an electricity socket to function.
- Passive packaging involves use of a pre-conditioned gel to protect shipment temperature.

Choosing the right packaging will involve balancing cost with quality. In terms of cost, it will depend on shipment frequency, and whether the container required will need to be bought or rented. In terms of safety, a passive solution might be best for short-term temperature protection. Longer protection times might require an active plug-in option.

2. Validate and qualify the transportation process

This gives businesses all the options and contingencies so they can make the right decision at the right time for the right product.

It is vital in terms of complying with the Goods Distribution Practices (GDP), and is especially important when businesses have a new product, are working with a new packaging solution, or are sending products to a new market.

3. Apply visibility and monitoring technology

While supply chain control and visibility is important for all industries, it’s absolutely vital for the healthcare industry. From biologic manufactured items, to pharmaceuticals, to clinical trial materials, healthcare shipments are sensitive and difficult to replace.

The traditional way to check these kinds of shipments is with a temperature logger – but technology has moved forward. Connecting every element in healthcare logistics is critical to improving visibility and control over shipments; hyper-precise technology provided by small sensor devices are set to chart a new journey for the healthcare sector, as it moves ever steadily from a post-dated temperature tracking model to a live-tracking model.

At FedEx for instance, we offer customers our own pioneering technology, SenseAware, which travels with the shipment and provides real-time monitoring on the road – so you can track the temperature, location, light exposure, humidity barometric pressure, and shock. This is “journey mapping” at its best.

4. Advanced contingency planning

Contingency planning is not as straightforward as it may seem. A good plan must compare and validate timelines, transportation lanes, modes, air and ground transport, and protecting product integrity during the shipment journey.

Infrastructure is one of the contingencies businesses should always plan for. For instance, a shipment that gets stuck in an airport should have access the cold chill rooms.

At FedEx, we have dedicated facilities designed to protect the integrity of temperature-sensitive shipments in key world hubs like that at the FedEx Express World Hub in Memphis, where we have the FedEx Cold Chain Centre, a first-of-its-kind facility which forms an integral part of the FedEx global cold chain shipping network. Here in APAC, we have cold chain facilities in our hubs in Singapore, Shanghai, and Osaka.

What kind of healthcare-centric products and solutions are offered by FedEx Express for customers in APAC? How FedEx Express is different from other leading players in the region?

FedEx has invested significantly in our healthcare portfolio of solutions and services. In APAC, we deliver our healthcare logistics solutions under the banner of FedEx Healthcare Priority. Our focus in growing the healthcare services in APAC is on the priority service, the specialized packaging, temperature-controlled shipping, and the customized services.

As one of world's largest air cargo providers, we provide a wide range of simple but effective distribution solutions that meet the needs of different healthcare sectors in APAC. For instance, we support the needs of the clinical trial sector into key markets such as Singapore or China, with our flagship next-day delivery to central laboratories in Singapore by 10am, while Australia and Thailand are the first markets to offer all-inclusive pricing that includes dry ice, packaging, and transportation.

Additionally, the FedEx Priority Alert service is a global service where an analyst provides around-the-clock support, advanced shipment monitoring, proactive, personalized notification in the event of a delay, and when necessary, customized package recovery.

The FedEx MEDPAK VI°C solution is the first temperature-controlled reusable packaging network service that is offered to customers in Singapore, Japan, and Korea on a "per use and return" rental basis. This industry-first reusable packaging uses Phase Change Material (PCM) technology for precise, passive temperature control, which offers zero temperature deviation and covers a minimum of 96 hours of temperature stability. With FedEx providing fixed pricing per destination and managing the one-way rental and returns, customers can reduce costs on packaging inventory, product deletion, and return logistics. We also have an integrated network that offers full custodial control for the collection and delivery of shipment to support, monitor, and control the end-to-end process.

FedEx Healthcare Priority is supported by a dedicated team. The dedicated FedEx Healthcare Priority team is fully trained for contingency management and proactively monitors customer shipments, while the APAC Healthcare Control Tower offers specialized Customers clearance, regulatory support, dedicated local hotlines, and a streamlined shipping experience for frozen shipments, including dry ice and packaging fulfillment to hospital pick up by authorized specialists.

At FedEx we are able to integrate the time-critical and temperature-controlled parcel and freight needs of our customers into one operating platform. This provides a much more streamlined touch point for our customers and greater control on their shipments.

How do you see competition in the market?

As the world's largest express transportation company, we have built a reputation for bringing greater visibility, control, and security to the world's healthcare supply chain. With the strong support of the FedEx network behind us, we remain focused on investing in solutions to deliver the region's healthcare needs.

Which countries in Asia Pacific are doing better for FedEx Express in terms of volume and value? How do you see the business in these countries during the year?

Healthcare is one of the APAC's fastest-growing sectors, led by the biological and medical sciences industries. With the global biologics market anticipated to reach approximately $400 billion by 2025, global pharma companies are shifting their portfolios towards biopharma. Healthcare companies are seeing more than 50 per cent revenue growth for their biological portfolios.

In terms of specific APAC markets, Japan, China, and South Korea are expected to experience significant growth. Japan is the second largest pharmaceutical market in the world, while its $33.6 billion market for medical devices and materials is among the world's largest. China, already the world's second largest economy, is a major player, particularly when it comes to the fast-expanding domestic market. The Chinese clinical trial supply and logistics market is also expanding at around 10.4 per cent per year. South Korea is Asia's third largest pharmaceutical market, and like China, is a major player in biologics. South Korea's pharma sales are forecast to grow to $18.3 billion by next year.

FedEx has grown our healthcare business in tandem with these markets, and will continue to invest in healthcare solutions to meet the supply chain needs of the region.

How do you see opportunities and challenges as healthcare trade rises in the region?

1. R&D Spending

As healthcare trade rises in APAC, we see strength in pharma research and development spending in Asia. It is not only global pharma companies that are investing in the region; home-grown companies are also building up highly promising research pipelines.

FedEx remains focused on supporting these companies under the banner of FedEx Healthcare Priority in APAC. For instance, we support the needs of the medical device industry in key markets such as Japan, where we not only deliver surgical instruments and devices, but handle reverse logistics.

2. Clinical Trials Logistics

Clinical trials in particular is a large and still-growing business for FedEx, as more and more customers look for transportation services and solutions to send their biological products worldwide.

3. Regulatory Requirements

Complex healthcare trade regulatory requirements are becoming stricter and vary frequently. Overlooking a simple detail can place a business at risk for delays, returned shipments, audits, costly fines, and penalties.

To navigate this challenge, the FedEx Quality Management System (QMS) is specifically designed for the healthcare industry and a Quality Assurance (QA) team that offers a detailed audit trail through the shipment's journey as well as Corrective and Preventative Action (CAPA) needs to ensure that all shipments are compliant to regulations.

What are the important logistics considerations for global expansion for the local companies in the region?

With healthcare trade growing exponentially, local companies in APAC should consider the following when looking at global expansion:

1. Build a robust operational process and plan for contingencies in advance.

A good analysis should compare and validate transportation lanes, modes, contingency planning and protect the integrity of a product during the shipment journey.

2. Adopt best practice and ensure they adhere to industry quality benchmarks.

Good Distribution Practices (GDP) and International Air Transport Association (IATA) “gold standard” guidelines should be factored into a set of standard operating procedures (SOPs).

3. Build a distribution solution that best balances costs and quality.

FedEx surveys show that quality is by far and away the most important attribute for pharma companies today, who want to assure product stability, better manage risks, and maintain quality.

According to you, what are the best cold chain practices the companies from Asia Pacific should follow to be in the race against global players?

Pharma cold chain distribution can be very complex, involving various components such as container fulfilment, customer brokerage, monitoring and intervention, and specialized pickup and deliveries.

Best practice would be for companies to integrate all these into a seamless experience for the customers – so customers would require only one call, one quote, and one invoice.

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