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Advancing healthcare delivery: DHL white paper identifies trends, changes, and solutions in life sciences and healthcare supply chains

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The rapid transformation of the life sciences and healthcare sector is also driving changes in logistics, prompting these industry players to reassess their delivery methods and supply chain design. Today, DHL publishes a white paper, "Delivering Next-Level Healthcare", that sheds light on six major trends that are reshaping the life sciences and healthcare landscape: patient-centric healthcare, advanced therapies, digital technologies, new industry ecosystems, sustainable solutions, and resilience. The paper also further outlines the impact of these trends on supply chains and provides valuable insights on solutions and best practices for life sciences and healthcare delivery as well as building supply chain capabilities.

"Revolutionary therapies reflect the accelerating pace of medical progress and set the stage for a transformative shift in lifes ciences and healthcare delivery with patient-centric models, digital technologies, and environmentally conscious practices. This therefore drives the emergence of new business ecosystems," says Claudia Roa, President of the Life Sciences and Healthcare Sector at DHL Customer Solutions & Innovation. “The future holds a paradigm shift as next-level healthcare necessitates the creation of next-level healthcare supply chains.”

Increasing individualization in life sciences and healthcare asks for new sustainability concepts

Examining the patient-centric healthcare trend more in-depth, the connection between pharmaceutical manufacturing and end users necessitates closer and more responsive relationships. For example, the way people seek, choose and access treatment is changing. A striking 90% of Generation Z consumers now engage in online research for healthcare costs and options before visiting a physician1. Additionally, the development of clinical trials has seen a shift, where 89% of sponsors use technology to enable a decentralized model in at least one of their clinical trials2, resulting in higher retention compared to studies requiring clinic attendance. In this case, the reduced "people movement” will be replaced by an increased shipment of pharmaceutical goods to an even more diversified destination landscape.

Demographic and industry trends are also driving change in the consumer healthcare segment. Pressure on public health spending, an ageing population, and increasing consumer focus on health and wellness are all contributing to a 12% growth forecast by 2025.3 Additionally, there are new service models and product subscription models emerging, increasing e-commerce sales volume and new product categories. This drives additional supply chain and logistics requirements.

Another major trend is the growth of new therapeutic approaches, including biopharmaceutical products and gene-based medicine. The market for such therapies is forecasted to grow from around US $5 billion in 2012 to almost US $37 billion by 2027. Additionally, biopharmaceutical products are delicate and expensive and need to be handled carefully at every stage in the supply chain. The pharmaceutical industry, therefore, invests over US $17 billion per year in cold chain logistics. This has led to a diverse range of cold chain logistics services, encompassing shipments requiring temperatures as low as -196 degrees Celsius for ultracold frozen products.4

Naturally, this growing demand of complex and often more individualized shipment solutions makes sustainability another prominent trend, one that also resonates across other industries. While 75% of pharmaceutical companies successfully reduced their Scope 1 and Scope 2 emissions by 2021, Scope 3 emissions account for a significant 83% of the industry's climate impact.5 Surprisingly, with this, the pharmaceutical sector exhibits a higher carbon intensity compared to the global automotive industry.

Different healthcare sectors need different logistics solutions

The identified trends are reshaping healthcare delivery across various sectors of life sciences and healthcare industries, including medical devices, consumer healthcare, pharmaceuticals, clinical trials, and governmental and non-governmental organizations. These transformations place new and sometimes varying demands on healthcare supply chains, either by introducing complexity to existing processes or by necessitating the adoption of entirely new supply chain models. This includes ranging from improved visibility and distribution control over segmentation of supply chains and distribution channels to rigorous protection of the shipments and end-to-end real-time condition monitoring – to ensure product integrity. As a result of vaccine shortages during the COVID-19 pandemic, countries are considering a complete overhaul of logistics processes. This includes exploring the possibility of increasing in-country production of critical healthcare products, stockpiling supplies, and switching to more transports of raw materials and active

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pharmaceutical ingredients.

Futureproofing of the supply chain extends to the level of single individualized shipments

As a world's leading logistics company, DHL's white paper shares eight key aspects for companies to consider in futureproofing their supply chain: cold chain capabilities, white glove services, direct to X delivery models, supply chain digitalization, supply chain orchestration, sustainable supply chain solutions, inventory optimization, and regulatory compliance. Companies must for example prioritize the scalability, versatility, and agility of their cold chain networks to effectively cater to changing demands. Patients now expect the same level of choice and convenience in healthcare as they experience in procuring other products and services, such as online ordering or direct home delivery, which calls for logistics capabilities that deliver high service levels and possess the flexbility to adapt to the unique requirements of users.

An extreme challenge in this context is the autologous cell therapies, where treatments are derived from an individual's blood, which requires a tightly controlled two-way supply chain for each patient. Ensuring personalized treatments reach the right patient every time creates rigorous chain-of-identity and chain-of-custody requirements. And because these treatments are still relatively rare in clinical settings, the final-mile service needs to be seamless, intuitive and designed around the needs of the patient and their physician.

To achieve success in reshaping their supply chain, companies must first establish a clear vision of their emerging priorities. Understanding how supply chains operate tomorrow will enable organizations to identify the necessary capabilities to bring that vision to life.

Source: DHL Group

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