One Network Enterprises™

Enabling Patient-Centric Supply Chains

How to meet the growing need for the effective distribution and dispensation of personalized medicines

PATIENT-CENTRIC SUPPLY CHAIN: DEFINING THE BASICS

Patient centricity has always been an evergreen theme for pharmaceutical companies. All medicines, formulations are targeted towards end customers who are patients either through retail or through institutional routes, such as hospitals and healthcare providers.

Until recently, pharma brand companies were not reaching out directly to the end consumers patients as the nature of medicines were not targeted to focused patient cohorts or individual patients.

With the growth of specialized, cell-based therapy where the nature of the dosage and formulation varies within a certain patient population, targeting the last mile is becoming increasingly relevant for pharma brand companies. It is necessary to enable them to drive better cost structure, patient compliance and service levels.

Supply chains are gearing up for patient-centric supply chains by grouping therapy areas across disease type and target patient population niches, which is a good way to identify the appropriate supply chain strategy.

The stage and criticality of a disease strongly influences the supply chain strategy. For example, terminal cancer patients have very different needs, timing, delivery and service levels compared to a vaccine that requires mass administration.

THE NATURE OF PATIENT-CENTRIC SUPPLY CHAINS

There are a couple of factors that make patient-centric supply chains different from other pharma product lines.

Patients as Hubs

Demand sensing becomes very patient-centric and brand pharma companies need to deliberately move from a “push” to a “pull” supply chain. It’s important to understand that demand sensing is not just confined to consumption and inventory data, but also includes reporting adverse reactions and other patient experience-related information back to the brand.

High Variability of Demand

Traditional planning and forecasting engines struggle when demand varies significantly. In this high demand variability scenario of patient-centric supply chains, end-to-end transparency across the supply chain is critical, as demand is uneven and traditional forecasting and demand planning engines fail to keep up with lags in data and signals in the system.

The only way to counter this is to pick up variations in the value chain as early as possible, and through the continuous monitoring of demand as it translates across the nodes through interconnected networks.

5 WAYS PHARMA BRANDS CAN STRUCTURE SPECIALIZED PATIENT-CENTRIC SUPPLY CHAINS FOR PERSONALIZED MEDICATION

The key to solving the patient-centric supply chain is to establish a network that connects all trading partners so they can transact in near real time. This eliminates system lead time and drives higher responsiveness, agility, and resilience.

1. Smart Demand Sensing

Demand volatility is an inherent part of the patient-centric supply chain. For specialized therapy areas, symptoms could alter acutely, which could alter a patient's drug regimen significantly. Therefore, sensing that sudden demand shock and computing the upstream impact in real time is key.

This also requires the hyper-segmentation of patient groups based on demography and other epidemiological factors. Certain brands (eg. AbbVie) are levering standalone portals to capture patient data while safeguarding regulatory protocols such as a HIPAA.

However, standalone portals only solve a sliver of the problem, as they are often not interconnected with other partners in the patient value chain such as distributors and providers, and hence they cannot scale as fast as they should.

2. Cost vs. Service Optimization

End-to-end supply chain process visibility, including from supply nodes to the end tier patient, as well as real-time scheduling, is key to optimizing the trade-off between service and cost.

As a response to fluctuating demand, brands often focus on fulfillment, which leads to higher channel inventory and higher obsolescence. Dosage criteria for personalized meds also change, and brands are alerted after the fact and when it's too late to react.

Some pharma brands therefore are leveraging specific aggregators with cold chain facilities to solve the fulfillment problem. Direct patient engagement models and "cloud-based insight centers" help alert patients directly to supply constraints. This also helps streamline demand.

3. Community Master Data

Given the complex layers in a patient-centric supply chain, a single unified view of patient, product, demand, and supply, is crucial for the effective operation of networks. Standalone master data modules help bridge supply continuity between two sequential data nodes.

However, keeping the last link (the Patient) in mind highlights the need for a centrally orchestrated master data that's maintained and enriched by the entire supply chain community.

4. Serialized Item Tracking with Cold Chain Monitoring

With the new Drug Supply Chain Securities Act (DSCSA) regulations taking effect in the US in November 2023, detailed product provenance is critical for pharmaceutical products.

For personalized medicines implications are even greater, as brands now need to track products through to the last mile

Patient-centric supply chains can improve the overall patient value by increasing adherence, patient satisfaction and compliance. At the same time, it enables pharmaceutical companies to improve and innovate their existing service offerings.

and monitor and report any exceptions around quality and temperature control.

Combination Therapy is often an option for personalized medicine, which means product and batch traceability on a standalone basis and in multiple dosage forms is key to ensure patient compliance and reporting adverse reactions/ contra-indications.

5. Predictive Intelligence Driving Higher Patient Experience

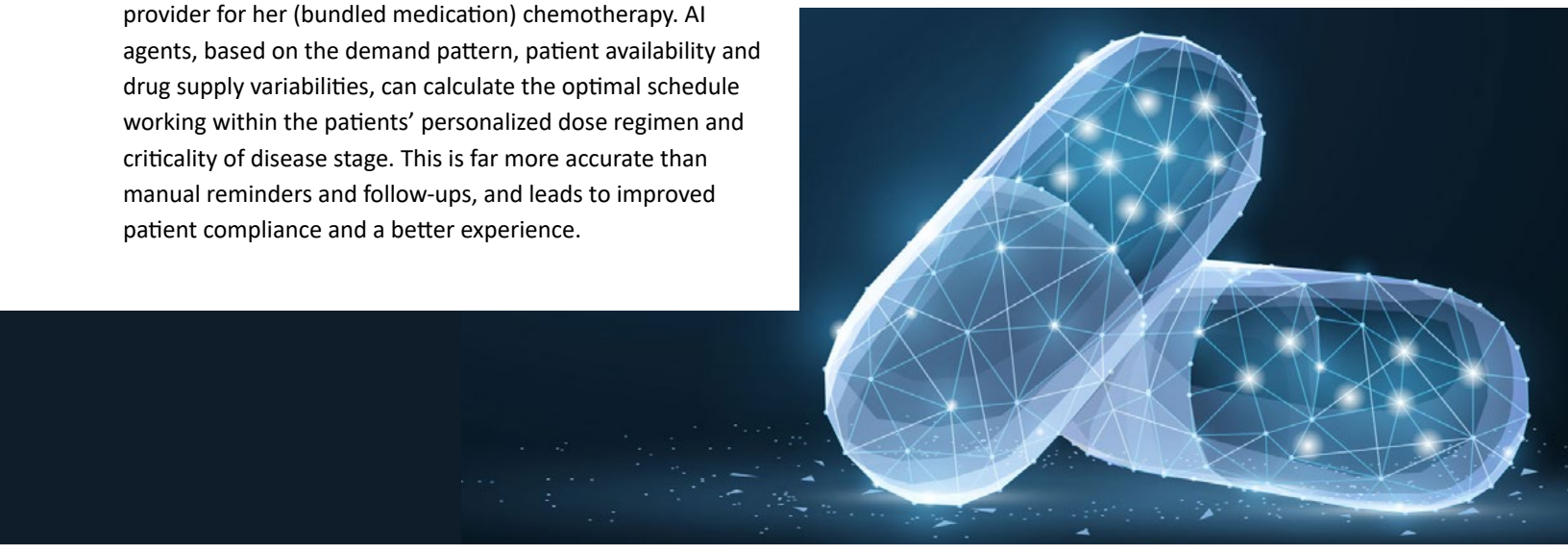
The role of AI agents and predictive intelligence is gaining ever-increasing prominence in patient-centric supply chains. A good example of predictive analytics with the help of hyper-connected networks is patient scheduling.

Take for example, a stage four cancer patient living in a second-tier city who needs to travel 250-300 miles to a provider for her (bundled medication) chemotherapy. AI agents, based on the demand pattern, patient availability and drug supply variabilities, can calculate the optimal schedule working within the patients' personalized dose regimen and criticality of disease stage. This is far more accurate than manual reminders and follow-ups, and leads to improved patient compliance and a better experience.

Personalized medications often need specialized and complex secondary packaging that could be a bottleneck in the overall product flow. A smart AI assistant can factor in any packaging and quality control constraints in its estimation or conversely scout for alternate nodes where patient administration is easier, based on dose availability.

Today's rapidly changing healthcare landscape increases the need for patient-centricity. Patient-centric supply chains can improve the overall patient value by increasing adherence, patient satisfaction and compliance. At the same time, it enables pharmaceutical companies to improve and innovate their existing service offerings.

However, if pharma brand companies maintain their production-centric, i.e., "push" focus, they risk being overrun by competitors; and/or, unable to capitalize on changing reimbursement models.



ABOUT ONE NETWORK ENTERPRISES

One Network is the leader in supply chain control towers and provider of the Digital Supply Chain Network™. It is the only solution that gives supply chain managers and executives end-to-end visibility and control with one data model and one truth, from raw material to last mile delivery.

Powered by NEO, One Network's machine learning and intelligent agent technology, it enables seamless planning and execution, across inbound supply, outbound order fulfillment, and logistics, matching demand with available supply in real-time. Lead your industry by providing the highest service levels and product quality at the lowest possible cost.

Visit: www.onenetwork.com.

One Network Enterprises™

US Corporate Headquarters

4055 Valley View Ln, Suite 1000
Dallas, TX 75244

+1 866 302 1936 (toll free)
+1 972 385 8630
inquiries@onenetwork.com
www.onenetwork.com

One Network Europe

Office 3.03
1 King Street
London, EC2V 8AU

+44 (0) 203 28 66 901
europe@onenetwork.com

One Network Australia/ Asia-Pacific/Japan

+61 401 990 435
cedwards@onenetwork.com

One Network India Pvt Ltd

Westend Centre III, Survey No. 169/1,
Second Floor, South Wing, Sector 2
Aundh, Pune 411007, Maharashtra, India

+91 20 49111800
indiasales@onenetwork.com