

All Your Ingredients In One Magazine

Ingredients

SOUTH ASIA

A Saffron Media Publication
Vol. 16, Issue 2, Pages-154


NITIKA
STALL 80 M 70
CPHI
 Frankfurt **2022**
CUSTOMISED EXCIPIENTS EXPERT
TABLUBE
MAGNESIUM STEARATE
PHARAMPEG
POLYETHYLENE GLYCOL
 PEG 400 / 3350 / 4000 / 6000 / 8000

NOVALUBE
SODIUM STEARYL FUMARATE
ACILUBE
 Stearic Acid 50,70,90

TABCELL
MICROCRYSTALLINE CELLULOSE
 101 / 102/112/200/RC591

TABELLOSE
HPMC / HPMC PTHALATE
 COATING MATERIALS

SIMETHICONE POWDER
 30% / 50% / 100%

TABGLIDE
PURIFIED TALC
COLNAT
Ferric Oxide
 Available Colors -Red / Yellow / Black /Brown

PHARMELLOSE
CROSSCARMELLOSE SODIUM
CERTIFICATIONS

Grades Available - USP - NF/ BP / EP / IP
1800 12 11 059
enquiry@nitikapharma.com
www.nitikapharma.com
LUBRICANTS | MINERAL SALTS | EXCIPIENTS | ANTACID ACTIVES

How pharmaceutical supply chain works

DR SANJAY AGRAWAL

WITH the debate over healthcare about to resurface in the news and on social media, it is time to look at the pharmaceutical supply chain. The pharmaceutical industry is rapidly changing. The introduction and acceptance of more expensive, condition-sensitive medications and drug therapies, as well as the growing, disparate range of product types and therapies with shorter product life cycles, have created new complexities for a pharma supply chain that is transitioning from the traditional version to a digital supply chain.

Various forces are pushing the pharmaceutical and healthcare industries in new directions, necessitating a new supply chain model. Here are some examples: The methods by which medicines are evaluated, approved, and monitored constantly evolve. New technologies have emerged that improve the efficiency of manufacturing and distribution operations, speeding up the patient interface.

As the cost of healthcare and prescription drugs in the United States has risen, so has public scrutiny, influencing how risk management and compliance are managed. Today, there is a greater emphasis on patient outcomes, and access to patient information is becoming as important as drug products.

Pharmaceutical companies are struggling to add more stringent regulations and environmental controls. While these factors impact various aspects of the pharmaceutical and healthcare industries, businesses are evaluating their options and taking a strategic look at their current supply chain approach.

Although significant effort and expense have been expended to more efficiently innovate, develop, and market medications, there has been little effort to reconfigure manufacturing and distribution operations or adjust the pharmaceutical supply chain network. According to in-

dustry experts, most pharmaceutical companies have complex supply chains that are inefficient, underutilised, and ill-equipped to deal with new products.

The pharmaceutical supply chain is changing. What is the underlying cause of these changes?

Before we look at the likely changes, let's look at how the pharmaceutical supply chain network works today. To begin, what exactly is a supply chain? The supply chain begins with product development and ends with the end user.

A company creates products and sells them on the market to generate profits. A supply chain includes all the organisational, operational, and value-added activities required to manufacture goods and deliver them to customers.

Brand-name drug manufacturers typically devote a portion of their budget to research and developing new drug therapies, whereas generic drug manufacturers do not. Manufacturers of generic drugs are focused on producing generic compounds that compete directly with the original patented version of the drug product once the patent expires.

Pharmaceutical manufacturers manage the distribution of drug products from the point of manufacture to drug wholesalers and, in some cases, directly to pharmacy chains, specialty pharmacies, hospital chains, and some health plans.

These are the five steps:

1. Pharmaceuticals are created in manufacturing facilities.
2. Are forwarded to wholesale distributors
3. Available from retail, mail-order, and other types of pharmacies
4. Subject to price negotiations and screening by pharmacy benefit management companies for quality and utilisation management
5. Dispensed by pharmacies, then delivered to and taken by patients

Researchers note that there are many varia-

tions on this basic structure of the pharmaceutical supply chain, owing to the constantly evolving players in the supply chain.

The pharmaceutical supply chain network runs smoothly and efficiently thanks to the vital players. Manufacturers, wholesale distributors, pharmacies, and PBMs are among those involved.

A pharmaceutical manufacturer supplies a number of its products that is ideally equal to consumer/patient demand. These manufacturers manage the actual distribution of drugs from facilities to drug wholesalers or directly to retail pharmacy chains, mail-order and specialty pharmacies, hospital chains, and some health plans.

According to researchers, pharmaceutical manufacturers have the most influence over pharmaceutical prices, assessing expected demand, future competition, and projected marketing costs to determine the wholesale acquisition cost (WAC).

The network then moves on to wholesale distributors, who buy pharmaceutical products from manufacturers and resell them to various customers, including pharmacies.

Some wholesalers sell to a broad range of potential customers, whereas others specialise in sales of specific products, such as biologics, or sales to specific types of customers.

PBMs are the next important supply chain players. PBMs have become essential to most consumer drug purchases, despite not being a direct link in the physical supply chain for pharmaceutical products. PBMs collaborate with third-party payers to manage consumer drug purchases by determining which drugs will be reimbursed and how much the pharmacy will receive. Based on the rebates it negotiates with other supply chain stakeholders, this player also determines how much the consumer must pay out of pocket when filling the prescription.

Pharmacies are the final stop before drugs reach the patient. They are arguably the most important because they serve as a communication hub between PBMs, drug manufacturers, and wholesale distributors.

Drugs are purchased by pharmacies from wholesalers or directly from manufacturers. Following product purchase, pharmacies must maintain an adequate stock of drug products and provide consumers with information about prescription drugs' safe and effective use.

Drug costs & the pharmaceutical supply chain

The pharmaceutical supply chain has a sig-



CONTINUED ON p93 ►

How complex supply chain raise patient costs

CONTINUED FROM p92

nificant impact on drug prices. Consumers face higher out-of-pocket costs, while health plans face increased drug spending.

According to a report from the Pharmaceutical Research and Manufacturers of America (PhRMA), one of the main reasons prescription drug costs are making headlines is the complexity and number of players involved in the drug supply chain.

As per the report, prescription drugs heavily rely on negotiations between wholesalers, pharmacies, pharmacy benefit managers, and insurers. The authors noted that while rebates have increased recently, patients' out-of-pocket costs have skyrocketed.

According to an article, the amount an individual pays for a brand-name drug depends on their insurance plan, the list of drugs it covers, the size of their deductible, and the deal an individual's insurance company has negotiated with the drug's manufacturer.

As health plans with high deductibles or co-insurance have become more popular, more patients have higher out-of-pocket costs. They may be unable to benefit from negotiations because their co-payment is based on the list price rather than the negotiated cost.

The study discussed several examples of how the complex supply chain can raise patient costs. One of the case studies involves a patient who has been prescribed an HIV medication with a list price of \$3,000. Although the patient received a 20% rebate, her coinsurance is \$612 based on the list price. The patient is then required to pay an additional \$100 over what they would have paid if the coinsurance had been based on the negotiated price.

According to a National Community Pharmacists Association (NCPA) study, high generic drug prices have harmed almost everyone in the pharmaceutical supply chain. Consumers face higher co-pays and prices, while health plans face increased drug spending. Physicians are also discovering the need to prescribe alterna-



tive drug therapies, and consumers sometimes decline their medications.

Both providers and consumers face risks and challenges in the pharmaceutical supply chain. However, in a health-conscious society, managing pharmaceutical supply chains presents complexities because it involves life-saving medicines that patients require.

What are the challenges in the pharmaceutical supply chain?

Although the pharmaceutical supply chain is successful, it also faces numerous challenges. According to a report from researchers at Imperial College of Science, Technology, and Medicine, all businesses with an efficient supply chain follow a four-step process: demand management, inventory management, distribution, secondary production planning, scheduling, and primary manufacturing.

The global information analytics business discussed various process challenges such as lack of coordination, inventory management, lack of demand information, human resource dependency, order management, temperature control, and shipment visibility.

For example, the "Forrester effect" is a business technique used to analyse any supply chain disruptions and is an important business step.

However, according to the researchers, the Forrester effect is observed at the primary manufacturing site, which poses a challenge because it is the least responsive part of the supply chain.

This makes it difficult for businesses to address supply shortages, national supply tenders, and epidemics.

Researchers at Imperial College of Science, Technology, and Medicine reported more specific challenges, such as uncertainty in the pipeline of new drugs. Which drugs will be successful in trials, and what dosage and treatments will be most beneficial?

This year, PWC also published a report that stated that to meet the demands of a growing market, the pharmaceutical supply chain must undergo a "radical overhaul."

According to researchers, the radical overhaul includes more diverse product types and therapies with shorter life cycles, new methods for assessing, approving, and monitoring medicines, a greater emphasis on outcomes, new healthcare models, and various other changes.

How can the pharmaceutical supply chain be improved?

Four strategies for increasing supply-chain resilience

- Complete transparency. A lack of visibility into the business practices of suppliers and suppliers' suppliers can be a major risk for pharmaceutical companies.
- Stress testing and reassessment regularly.
- Shock exposure has been reduced.
- The executive plan includes supply-chain resilience.

Overall, the pharmaceutical supply chain is critical for patients to receive the medications they require without experiencing stress or roadblocks. Even though the supply chain faces numerous challenges, businesses can take the necessary steps to ensure a smooth process from product manufacturing to patient delivery.

(The author is leading pharmaceutical consultant)

