

# Unweeding the Pharmaceutical Supply Chain



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Pharmaceutical products require tight supply-chain system since they inherently have a shelf-life issue. And there are methods which could ensure that these products do not cruise to the expiry date marks due to supply chain inadequacies.

Recently, a national news channel aired a special report on the burgeoning mergers & acquisitions taking place in the Indian pharmaceutical industry which made me recall a McKinsey report that predicted: "Indian pharma industry is poised to reach \$ 25 billion by 2010." A report by FICCI says that the Indian pharmaceutical industry ranks fourth in terms of volume (with an eight per cent share in global sales), 13th in terms of value (with a share of one per cent in global sales) and produces 20-24 per cent of the world's generic drugs (in terms of value).

This tremendous growth has spurred the players in the Indian pharmaceutical industry to explore new possibilities of drug research, discovery and development, promising higher capital investments in the near future. Several multinational companies have entered India to market drugs, conduct clinical research and trials and do contract manufacturing. Thus, pharmaceutical research, manufacturing, and outsourcing have received an impetus in the country, making India a global pharma hub.

The factors that could materialise the target of India reaching \$25 billion pharmaceutical market by 2010 include a world-class patent regime and a milieu that furthers innovation and entrepreneurship. Supply Chain & Logistics in the pharma industry are one of the most vital factors that directly boost the operational and functional performance. Supply Chain Management (SCM) is the foremost cost saving strategy used today by pharma companies. SCM mainly integrates the company's internal systems to those of its suppliers, partners and customers thereby weeding out the inefficiencies and synergising the entire network.

## SNAGS IN THE PHARMA LOGISTICS

Based on the argument that pharma must meet its primary requirement of providing medicines to people all over the world where you cannot have a 'out-of-stock' scenario, it often happens that a lot of inventory gets stuck in the value chain and drugs get expired in the process.

Today more and more pharma companies are manufacturing with overseas markets as a prime focus. In this environment security becomes a greater challenge and the potential for tampering increases. Additionally, the economic incentives provided by an increased volume of high-cost drugs, the ability of consumers to purchase drugs over the internet, and advanced technologies available to create counterfeit drugs makes the supply chain more unsafe. The high price of drugs fuels the demand for cheaper supplies. Counterfeits are estimated to constitute approximately 20 percent of the domestic market, into the channel.

Parallel trade is another menace where genuine products enter the market through a grey channel. The danger here is that pharma companies lose the ability to know where these drugs are coming from.

Another problem plaguing the pharma logistics is inadequate infrastructure at the Indian ports. The logistic needs of the pharma industry are temperature, moisture and time sensitive. The finished products require to be treated very carefully as the consignment passes through various stages of handling and transport. Our Indian ports mostly lack temperature controlled warehouses. The existent storage facilities at the ports either have space constraints or have no temperature controlled monitoring. Cleanliness is

another issue at these places which deters the fine storage of pharma products.

Some other issues in the pharma logistics, which are specific to the Indian logistics industry, are tedious customs clearance procedures, time-taking regulatory approvals, problems with export license and permit and congestion at ports. The government regulations are stringent and seem to totally ignore the fact that the logistics needs of the pharma industry are very different from other industries because even a slight delay in transport of finished medicine to the market can increase the lead time of the drug in turn altering the effectiveness of the drug.

#### SCM SOLUTIONS

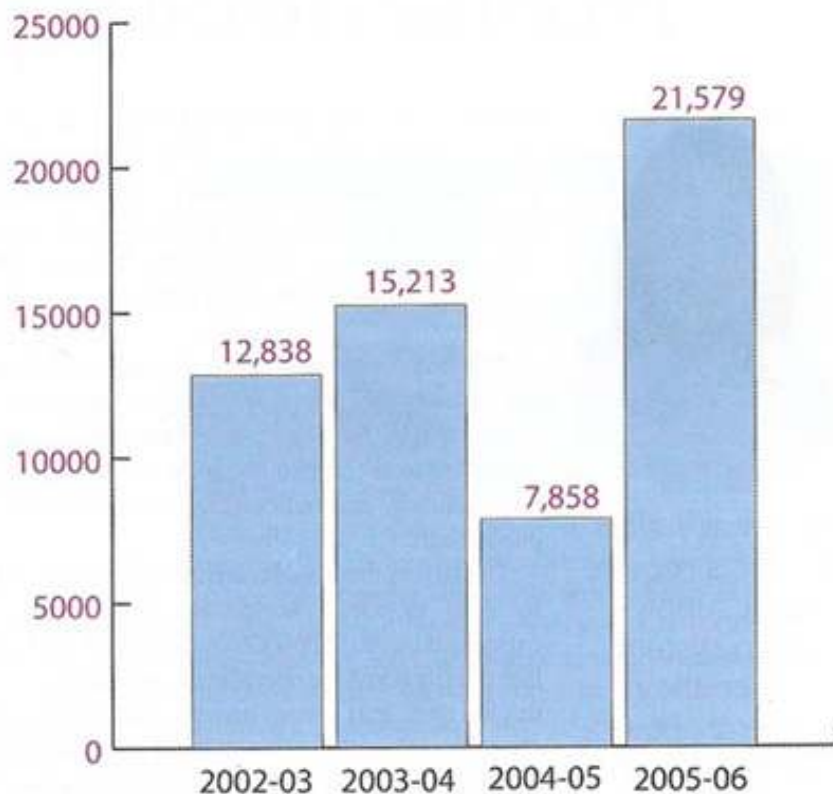
Most of the problems of the pharma logistics and supply chain mandate the use of Radio Frequency Identification (RFID) technology. In simple words, RFID is a track-and-trace technology that creates a pedigree for a product down to an individual unit. This is how it works: a tag is commissioned from the manufacturer's site with lot and batch number, and expiration date. That physical item stores all this information. As it moves through the supply chain, the tag builds a history or "pedigree." This technology tracks individual unit and provides overall visibility thus greatly reducing product diversion and making counterfeiting difficult. While there is no doubt about the benefits of RFID technology with respect to product integrity, tracking capability and inventory management, the use of RFID technology in the Indian pharma industry has been negligible due to high costs.

Another model which can be adopted to secure an efficient supply chain which can combat the problem of expiry of drugs is the First Expiry First Out (FEFO) model. Traditionally, the Indian manufacturing companies adopt the First In First out (FIFO) model in which they prioritise and ship batches to store. The FEFO model has batches of products which are marked by their expiry date. Against this, FIFO priorities shipments by expiry date which gives the pharmaceutical products a longer shelf life and reduces the number of return claims significantly.

To take care of the documentation problems at air and sea ports, the logistic providers can offer value added services to their clients. It would be beneficial for the pharma majors to sign on services with a logistics firm which offers a one stop solution for all logistics needs including managing licensing and documentations, liaise

## Indian Pharma Exports

(In Crores)



with external agencies to manage destruction and delay.

The major technologies which can be employed by logistics firms to address specific problem areas like sheltering the supply chain from counterfeit drugs, protection from contamination, etc are specialised dry ice and gel packaging, barcode scanners, data loggers for temperature control, temperature alarms (hooters) to monitor variations in the temperature, relative humidity (RH) indicators, temperature mapping for the storage area before storing critical and temperature sensitive products (vaccines). Envirotainer is another good option which can be used to transport pharmaceuticals.

In the Indian space, where innovation meets regulation and speed to market can be significantly slowed by disjointed processes and technological systems, logistics companies have to strive to help companies become better informed, integrated and highly proactive. ☺

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