

# The New Four Ps of Cold Chain Management

What trends will drive pharma's decision-making around cold chain over the next 12 months?



As regulation ramps up to ensure quality control in the pharmaceutical supply chain, manufacturers are starting to take a closer look at their distribution processes. And the temperature-controlled supply chain—the cold chain—is no exception. A critical byproduct of good manufacturing practice (GMP), an unbroken cold chain ensures product safety, efficacy and overall quality for patients.

As a pharmaceutical manufacturer, staying compliant from a safety and legislative perspective means staying on top of best practices, trends and innovation in distribution. And when it comes to cold chain, keeping watch on four key trends can mean the difference between mitigating risk and a significant supply chain issue.

## Trend #1: Products

The temperature-sensitive product market has grown by more than 50 percent since 2004<sup>i</sup>, and that trend looks to continue in the years ahead. *Pharmaceutical Commerce* projects that what is currently a \$237 billion global cold chain biopharmaceutical market will grow to \$307 billion in 2018<sup>ii</sup>. Not only is product innovation driving the distribution of temperature-controlled clinical trial products to remote locations with hot climates, but the development and production of new biologics also creates the need for temperature-controlled storage and transport.

### IMPACT:

Product trends drive distribution trends. As new therapies and vaccines emerge, manufacturers must take an early look at both their goals and best practices for distributing temperature-controlled drugs. And with advances in research and development processes reducing time to market for these drugs, the window for planning is shrinking. The time to evaluate logistics, costs and potential partners is now.

## Trend #2: Packaging

Innovation in product packaging is driving improvements in distributors' ability to ensure product integrity. From developing high-tech insulating materials to better containers and ways to reduce temperature leaks and seal containers, packagers are, quite simply and in numerous ways, building a better box. This innovation extends to carriers as well, as technological innovation means improved temperature-control capabilities for refrigerated trucks and other modes of transport.

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### IMPACT:

With more and more suppliers and logistics partners able to provide innovative packaging solutions, manufacturers' options for packaging are expanding. This means manufacturers can benefit from both economies of scale and continued improvements as competition in the packaging industry drives suppliers to keep up. Manufacturers should bear in mind, though, that cold chain management often requires far more than adequate packaging—that transport expertise plays just as vital of a role in effective distribution for most time- and temperature-sensitive products.



## Trend #3: Performance

The performance of new technologies and systems for cold chain management is enhancing efficiency and transport logistics. From counterfeit detection devices and asset tracking systems to thermal modeling options, cold chain has shown huge innovation and performance gains when it comes to technology. Storage and transportation systems support wider temperature ranges than ever—including ultra low temperature options that can keep product at -80°C or lower. But it's not only technology performance that's improved; it's also the performance of the processes that underpin an effective cold chain. For example, global transport of cold chain products has gone from a complex proposition to one that's fairly routine—provided that the specialty transport company has a comprehensive understanding of all local regulations and customs requirements, as well as a network of qualified locations.

### IMPACT:

Easier tracking, process refinement and route/mode optimization means the potential for optimized costs and minimized product loss. Manufacturers can also see increases in productivity as they are able to turn the focus away from logistics concerns and devote even greater attention to product performance, marketing and clinical efficacy.

## Trend #4: Partnerships

With so many options and complexities to consider, more and more manufacturers are partnering with third-party logistics (3PL) providers for cold chain distribution. 3PL providers can harness innovation by sourcing both carriers and packaging that ensure safety and quality, and a 3PL's services generally include robust technological capabilities and specialized facilities, with numerous controls for ensuring product integrity.

### IMPACT:

Partnerships enable manufacturers to make product success and improving patient lives a priority by leaving logistics to a third party. In addition, Manufacturers are finding added

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value in specialized 3PL partners like ICS, who can not only leverage pharmaceutical knowledge and industry reach, but are also rigorously certified to ensure regulatory compliance and product integrity.

## Injecting Value

While each of these trends alone may impact a manufacturer's cold chain strategy, the combined effect on pharma is an injection of value to the supply chain. Continuous improvement means improved product integrity and safety, plus increased efficacy when temperature-controlled products get to the right patient at the right time. How will your business turn these trends into tactics for success?

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ii Lipowicz, Mark and Basta, Nicolas. 2014 Biopharma Cold-Chain Forecast. Pharmaceutical Commerce. April 2014. Retrieved from [http://www.pharmaceuticalcommerce.com/index.php?pg=supply\\_chain\\_logistics&articleid=27206&keyword=biopharma-cold%20chain-logistics-forecast](http://www.pharmaceuticalcommerce.com/index.php?pg=supply_chain_logistics&articleid=27206&keyword=biopharma-cold%20chain-logistics-forecast).



## About ICS

ICS, a business of AmerisourceBergen, has provided outsourced logistics and distribution services since 1997. We partner with pharmaceutical manufacturers to deliver third-party logistics that improve the quality and efficiency of their supply chain—especially for products that require special handling.

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