

Eighth UPS® Pain in the Chain Survey

Survey Snapshot





Key findings

Strong pulse: areas of success

Healthcare and life sciences logistics decision makers are seeing success addressing **product security**. Their reported success rate in this area saw a 20 percentage point jump over 2014 findings. IT-based solutions, such as bar coding and serialization, and cooperation with law enforcement, are likely to have contributed to improved product security from a visibility and criminal issues standpoint.

Healthcare companies are becoming more successful with **regulatory compliance**. This is particularly welcome, because the industry can expect only more scrutiny, regulations, and compliance burdens moving forward. From the European Union's Good Distribution Practices (GDP) to Brazil's strict serialization law, new regulations can be difficult to navigate, but healthcare companies are adapting well to change, with success in addressing regulatory compliance showing a 13 percentage point increase from 2014.

Healthcare companies have achieved success using **logistics and distribution partnerships** as a strategy to address supply chain challenges associated with regulatory compliance, product damage and spoilage, and cost management.

Stable pulse: areas of progress

Product damage and spoilage remains a concern as products become more complex and in-transit monitoring and intervention options are underutilized. Companies are seeing success through partnerships with higher-quality shipping companies and the use of faster shipping service levels with 63 percent reporting success in addressing product damage and spoilage issues, but opportunities for further improvement remain.

Weak pulse: areas needing attention

Cost management is still a substantial supply chain issue, even though the level of concern is declining year-over-year. Healthcare logistics decision makers report rapid business growth, fluctuations in fuel and raw materials costs, increasing regulations, and new market expansion as the biggest challenges to managing supply chain costs.

Contingency planning is an area healthcare and life sciences companies may find hard to justify investments in, based on the limited and unpredictable impact of disruptions to the supply chain. Unplanned events have impacted healthcare supply chains in the last 3-5 years, but a large percentage of supply chain decision makers still do not consider the subject important.



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Success addressing pains in the chain

Healthcare logistics decision makers have improved their success levels in addressing issues across the supply chain in the past year. They continue to struggle with managing logistics, warehousing, and transportation costs.

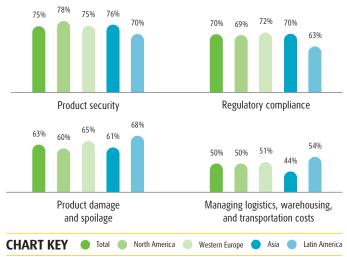
Success with core supply chain issues (global)



When it comes to growing our business, I'd say the most important development in the last five years has been the meshing of supply chain and finance. Now, we can say who owns the product at any point, define its value for customs purposes, and understand which jurisdiction applies at every point.

Manufacturer, Pharmaceuticals

Success with core supply chain issues (by region)

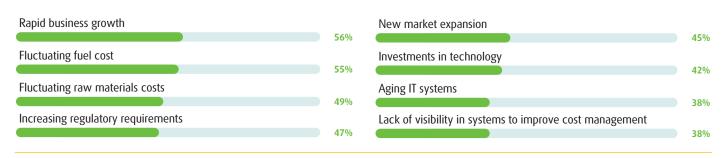


Q. On a scale of 1 to 7 (where "1" is not at all successful and "7" is completely successful), please rate your level of success in addressing the following issues. Answers of 6 and 7 are illustrated.

Cost management challenges, success strategies, and opportunities

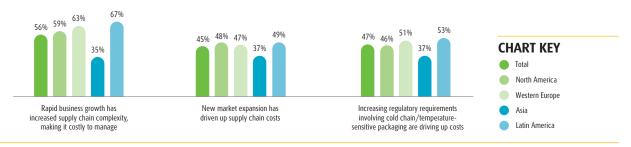
Multiple factors impact cost management, ranging from rapid business growth to fluctuating fuel and raw materials costs to increasing regulatory requirements. For the first time, this year's survey asked about specific areas of opportunity to drive costs out of the supply chain. Optimizing transportation costs, gaining better inventory visibility, and consolidating the total number of transportation providers were the top three opportunities (shown on page 6).

Challenges in managing overall supply chain costs (global)



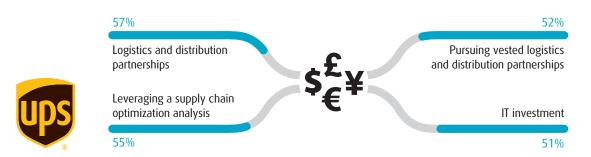
Q. When thinking about managing your overall supply chain costs (defined as logistics, warehousing, and transportation), what are your biggest challenges?

Challenges in managing select supply chain costs (by region)



Q. When thinking about managing your overall supply chain costs (defined as logistics, warehousing, and transportation), what are your biggest challenges?

Strategies for success in cost management (global)



Q. You indicated that you've been successful at addressing "managing costs;" what are the strategies you've employed that have made you successful?



Strategies for success in cost management (by region)

Q. You indicated that you've been successful at addressing "managing costs;" what are the strategies you've employed that have made you successful?



To a logistics provider, I'd say we will need to know what you see ahead, and where you are steering your ship, not just to better serve us, but also for your other healthcare clients all over the world.

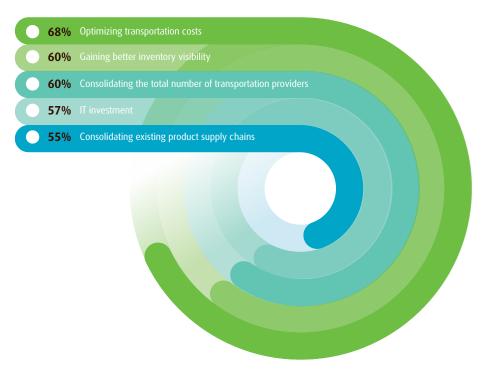
Provider, Hospital Network

Areas of opportunity for driving costs out of the supply chain (global)

Q. When thinking about these same challenges you face, what is the biggest area of opportunity you see to drive cost out of your supply chain?

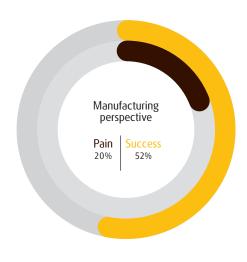
We need visibility all the way, but our transportation partner isn't optimized. They use another company to complete local deliveries, and so we lose traceability after our products have been handed off for the last mile. It's not ideal.

Manufacturer, Medical Devices



Regulatory compliance around the world Regulatory compliance remains an important focus in the healthcare industry and poses challenges from manufacturing, transportation, distribution, personnel, and IT perspectives. For the first time, this year's survey asked about specific regulations around the world and their impacts on the supply chain.

Levels of pain and success dealing with regulations from different perspectives (global)



- Q. When thinking of how your company addresses regulations, please rate your level of pain on a scale of 1 to 7 (where "1" is not at all painful and "7" is extremely painful) in each of the following aspects:
- Q. On a scale of 1 to 7 (where "1" is not at all successful and "7" is completely successful), how successful do you feel your company has been at addressing these aspects? Answers of 6 and 7 are illustrated.



Complying with regulations is paramount. The product has to meet our own specs, and also the specs of the ministry of health in the destination country. It's an everyday concern for us.

Manufacturer, Pharmaceuticals

International regulations that cause the most pain (global)



European Union Good Distribution Practice

39%



Brazil Serialization



Pain

13%

43%

43%

Pain

15%

China Medical Device **Good Supply Practice**

19%

U.S. Drug Supply Chain Security Act

16%



European Union Medical Devices Directives and Requirements

24%



Korea Medical Device and In Vitro Diagnostics Practice

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Q. When thinking about regulatory compliance issues, what are the international regulations that cause you the most pain?

Regional perspectives



In Western Europe, 71 percent have a GDP compliance agreement, and say they think that transportation practice reflects the agreement at least in part.









Western Europe respondents ranked China, Russia, Brazil, and the U.S. as the most difficult countries in which to do business.







Latin America respondents ranked China, Brazil, and the U.S. as the most difficult countries in which to do business.

- Q. Do you have a GDP-compliant transportation quality agreement with your third party logistics provider, and is it being fully implemented?
- Q. Which three countries are the most difficult for your company to do business with?

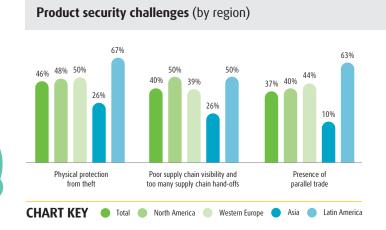


Product security challenges and successes

Healthcare logistics decision makers have made great strides in product security. Executives cite IT investments such as bar coding and serialization, and cooperation with law enforcement among the top reasons for success. The biggest remaining challenges with product security are physical protection from theft and poor supply chain visibility/too many supply chain hand-offs.

Physical protection from theft Poor supply chain visibility and too many supply chain hand-offs Presence of parallel trade, i.e., 'Gray Market'

Product security challenges (global)



Q. When thinking about product security, what are your biggest challenges?

Product security successes

Q. You indicated that you've been successful at addressing product security. What strategies have made you successful?



IT investment: bar coding, serialization, etc.	67%
Cooperation with law enforcement	41%
Visible authentication: visible holographs, security inks, etc.	38%

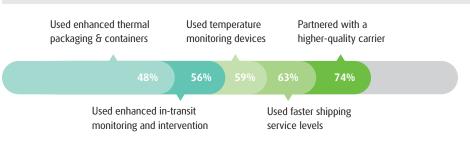
First of all, transparency has to be critical. We have to know at any given point in time where the product is and under what conditions it is currently, either stored or moving.

Manufacturer, Pharmaceuticals

Product damage and spoilage

More healthcare companies are reporting success in addressing product damage and spoilage versus last year. Top reasons for success cited are partnering with higher-quality carriers, using faster shipping service levels, and using temperature-monitoring devices.

Reasons for success with product damage and spoilage



Q. You indicated that you've been successful at addressing product damage and spoilage. What are the strategies that have made you successful?

Latin America respondents in particular noted success due to faster shipping.

About two-thirds of respondents said they have internal initiatives to verify control room temperature requirements are met.

Reasons for success with product damage and spoilage (by region)

We have a sharper focus on monitoring our supply chain and actively managing suppliers, making sure they're meeting temperature requirements and doing everything possible to protect the product.

Manufacturer, Medical Devices



Q. You indicated that you've been successful at addressing product damage and spoilage. What are the strategies that have made you successful?

Supply chain and contingency planning (global)

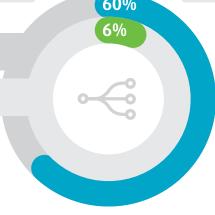
Contingency planning and the healthcare supply chain

Only 60 percent of healthcare logistics decision makers rank contingency planning as important. Lower levels of concern are likely based on the limited and unpredictable impact of disruptions to the supply chain.



greater importance on contingencies than do medical device manufacturers.

Q. On a scale of 1 to 7 (where "1" is not at all important and "7" is extremely important), how much importance does your company place on contingency planning? Answers of 6 and 7 illustrated.



Q. Thinking about unplanned events that have affected your supply chain (such as natural disasters or civil unrest) in the last 3-5 years, what percentage of your supply chain was impacted?

We understand the need for contingency planning, but we don't treat it seriously. So you lose a container full of product off a ship in a storm. How can you model for that?

Manufacturer, Medical Supplies



Findings from qualitative study

The qualitative study was carried out in North America only, and featured in-depth interviews with C-suite executives from the healthcare industry with particular understanding of supply chains.

Increasing complexities may bring change for greater efficiency

- Emerging supply chain complexities include more temperature-sensitive products, track-and-trace regulations, declining reimbursements, and faster delivery requirements while ensuring product quality and accuracy.
- Some clearly see the value in inventory management, e.g., IV fluids and implantable medical devices.
- Manufacturers and providers are looking to virtual inventories and just-in-time delivery for greater efficiency.

Data refers to North America only.



Automation is coming to our ordering systems. Inventory is now replenished automatically, as it is used up, so that product turns over and doesn't age. We're going to see more of this in the industry.

Provider, Hospital Network

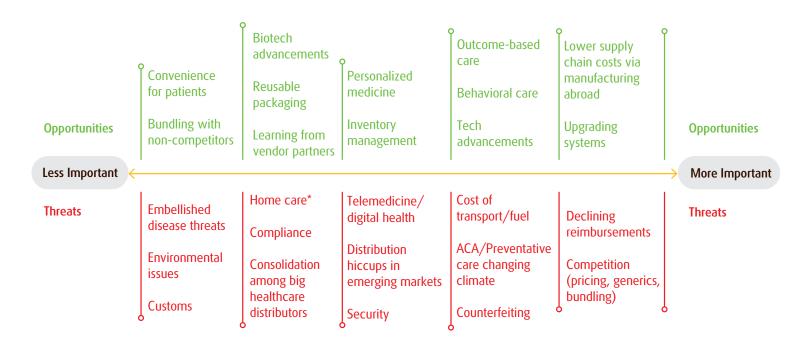
Findings from qualitative study (continued)

The qualitative study provided an indicator of some trends affecting the North America healthcare industry, and also revealed many of the opportunities and threats facing healthcare companies.

Trends influencing the industry in North America



Opportunities and threats facing the industry in North America



^{*} Home care is a threat to some providers but an opportunity to others, depending on a provider's existing business model.



Healthcare and life sciences logistics decision makers are realizing considerable supply chain improvement in key areas such as product security and adapting to regulatory changes. More than half of executives who experienced success in these areas stated they leveraged third-party logistics providers and supply chain analysis to drive their accomplishments.

Products continue to become more complex and in many cases require special handling. Healthcare decision makers are recognizing the importance of selecting higher-quality carriers, faster shipping speed, and in-transit intervention capabilities needed to drive success in mitigating product damage and spoilage.

While healthcare supply chains have made gains, cost management is still a major pain point. In order to address this, healthcare logisticians see the most opportunity in optimizing their transportation costs and gaining better inventory visibility. Meanwhile, even as unplanned events have impacted healthcare supply chains over the past several years, a large percentage of supply chain decision makers still do not consider contingency planning important.

One constant remains: As more innovative, sophisticated products enter the global market, the stakes will only get higher for healthcare companies to ensure growing consumer demands are met with innovative, sophisticated supply chains.





For more information on UPS healthcare-dedicated logistics, go to ups.com/healthcare.