



HEALTHCARE

**A PATIENT'S WELLBEING  
DEPENDS ON THE QUALITY  
OF YOUR SUPPLY CHAIN**

**The leading causes of supply chain failures  
within the healthcare industry**

**INSIGHT INTO ACTION**

  
**Yusen Logistics**



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# INTRODUCTION

The intricate and complex nature of the healthcare industry means that, almost by definition, the causes for stock shortages are vast, complex and hard to isolate – with the leading cause often difficult to distinguish.

The role of the supply chain in protecting patients from unsafe medical products is critical and, according to the World Health Organisation (WHO), should have no weak link. They further emphasise the importance of transport and storage, stating these must demonstrate an unbroken series of steps.

This white paper addresses some of the key causes of product loss due to failures within the transport and storage of pharmaceuticals.

# DEFINING DRUG SHORTAGES

Drug shortages are recognised as a global issue by WHO with research indicating that the problem has been increasingly affecting European countries.

Although there is yet to be a commonly accepted definition of medicine or drug shortages, most researchers tend to encompass four situations in their description which can be summarised by De Weerd and Simeons' below outline:

- 1 Supply is unable to meet demand
- 2 Supply is interrupted
- 3 The medicine is not able to be delivered
- 4 The medicine is unavailable to patients

“IN A LARGE EUROPEAN SURVEY, 21% OF HOSPITAL PHARMACISTS REPORTED EXPERIENCING A SHORTAGE OF MEDICINES EVERY DAY, A FURTHER 45% EVERY WEEK.

ONE IN FIVE PHARMACISTS FELT THAT THEY COULD NOT MANAGE THE SHORTAGE ALL OR MOST OF THE TIME, SUGGESTING THAT MEDICINE SHORTAGES CAUSE PATIENTS TO SUFFER DISRUPTION TO THEIR TREATMENT.”

WORLD HEALTH  
ORGANISATION





# TEMPERATURE DEVIATIONS

Across the pharmaceutical industry, reports suggest over \$15 billion in product losses are due to temperature excursions alone. Furthermore, this figure rockets to a staggering \$35 billion when taking into account the costs associated with replacing those goods and the root cause analysis process.

Research shows that 20% of temperature sensitive products are damaged during transport due to a broken cold chain. What's more, the importance of adhering to strict temperature controls is likely to increase in the coming years with the growth of biologics - which are predicted to reach 50% of the top 100 pharmaceutical product sales by 2022.

The high cost and low volume nature of biologics emphasises the importance of reducing unnecessary product losses through compliance failure, and the control of storage and transportation temperature is a major factor in maintaining the quality and integrity of these intricate products.

# QUALITY FAILURES

Safeguarding patients from compromised pharmaceuticals is, first and foremost, the most important role of a healthcare supply chain. To protect patients from unsafe medical products, WHO state that it is critical that no weak links in the supply chain exist. Yet research shows that approximately 30% of scrapped pharmaceuticals can be attributed to logistics issues alone.

This figure is set to increase as regulatory compliance for healthcare companies continues to advance, both in terms of complexity and intricacy, and these regulations vary across countries and regions. This is coupled with pharmaceutical companies adopting just-in-time inventory strategies that are better suited for biologics and products containing active pharmaceutical ingredients.

By delivering goods only as they are needed in the supply chain, waste is reduced and efficiency increased. However, further pressure is placed on the supply chain, with any delay in the collection or delivery potentially compromising the quality, and thus integrity, of the product.

30% OF SCRAPPED  
PHARMACEUTICALS  
CAN BE  
ATTRIBUTED  
TO LOGISTICS  
ISSUES







# CARGO THEFT

Drugs account for 15% of the estimated \$8 billion to \$12 billion in annual cargo theft across the US, according to the global logistics security services company FreightWatch International. The high value of pharmaceuticals means these are one of the most lucrative targets for organised crime, with one report showing an average value of \$3.7 million per pharma theft incident.

Within Europe, the EU has estimated cargo theft at an estimated €8.2 billion annually. Further research suggests that €33.5 million of this is attributed to pharmaceutical thefts. However, the true extent of this figure is difficult to determine, with many cargo thefts unreported and only the product value being reflected.

What's more, with reports showing that stolen pharmaceuticals often re-enter the legal market, the extent of the effects of theft in the industry remains largely unknown. Without the strict environmental controls that safeguard the pharmaceutical structures and compositions, the integrity can no longer be guaranteed and this risk is passed on, unknowingly, to the end-patient.

PHARMACEUTICALS  
ACCOUNT FOR 15%  
OF THE ESTIMATED  
\$8 BILLION TO \$12  
BILLION IN ANNUAL  
CARGO THEFT ACROSS  
THE US

IN THE EU, AN  
ESTIMATED €33.5  
MILLION IS ATTRIBUTED  
TO PHARMACEUTICAL  
THEFT

RESEARCH SHOWS STOLEN  
DRUGS ALMOST ALWAYS  
RE-ENTER THE LEGAL  
MARKET, PUTTING  
PATIENTS' WELLBEING  
AT SERIOUS RISK



A photograph of two healthcare professionals in a clinical setting. In the foreground, a man with a beard and mustache, wearing a blue surgical cap and blue scrubs, looks off to the side with a serious expression. Behind him, another person wearing a blue surgical cap, glasses, and a light blue face mask is partially visible. The background is slightly blurred, showing what appears to be a medical or laboratory environment.

# SMARTER LOGISTICS

Ensuring international compliancy within the supply chain is just one step towards smarter logistics.

Across the pharmaceutical industry, it is estimated that 25% of vaccines reach their destination degraded because of incorrect shipping.

Minimising compliance failures is essential to prevent unnecessary stock shortages. Key performance indicators (KPIs) are vital for smart logistic supply chains, and should be constantly monitored, reviewed and improved.

These will highlight any areas of vulnerability and help implement strategies to strengthen and mitigate risks to product integrity.

The role that logistics plays within the healthcare supply chain is vital to safeguard product integrity, protect patients and prevent unnecessary product losses.

It is a role that is likely to become further emphasised as drug shortages increasingly affect European countries, and as the growth of biologics adds tighter time, temperature and environmental restrictions and compliancy regulations on the supply chain.



# KPI FOR HEALTHCARE LOGISTICS

Logistics requirements are critical to maintaining and preserving the integrity of pharmaceuticals.

KPIs surrounding exceptional quality control, superior security measures and accurate delivery times to mitigate product losses are crucial within the healthcare vertical.

At Yusen Logistics, we have demonstrated our strength in this field by achieving an industry leading performance of 99.9% of our shipments having no temperature deviations, 99.5% being delivered on time and in full, and 99.99% having no potential freight claims – all made possible through improved planning and monitoring of our customers' supply chains.

AN AVERAGE  
PHARMACEUTICAL  
ORGANISATION SPENDS  
6% OF ITS REVENUE  
ON LOGISTICS  
REQUIREMENTS

COMPARED TO 5% FOR  
THE RETAIL INDUSTRY  
AND JUST 2% FOR  
ELECTRONICS

## AT A GLANCE

99.9%

of our shipments  
have no temperature  
deviations

99.5%

of our deliveries  
are completed on  
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99.99%

of our shipments  
have no potential  
freight claims



## MEET THE AUTHOR



**Frank Packman**  
General Manager – Healthcare

Frank works in partnership with healthcare companies to find bespoke pharmaceutical supply chain solutions that deliver a quality, flexible, and secure service. With a wealth of experience, Frank has moved across the logistics world, gaining expertise in warehousing and international road, ocean and air freight – primarily within the healthcare, automotive and aerospace industries.

He now works closely with Yusen's European GDP end-to-end Healthcare supply chain solutions, honing control tower management packages to ensure crucial medicines reach their destination in the right condition, at the right time.

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# GET IN TOUCH

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