

Grifols' supply chain strategy offers lessons beyond saline

When the supply of 0.9% sodium chloride faltered, it exposed an uncomfortable truth: the fragility of global pharmaceutical supply chains lies not only in rare biologics or high-tech therapies, but in the cheapest, most basic medicines.

For hospitals, saline is the definition of essential, used to hydrate patients, flush IV lines, and keep operating theatres moving. When Baxter's main US plant went offline in 2024, the American Medical Association warned that a facility producing 1.5 million bags a day being knocked out amounted to "massive supply disruptions."¹ That disruption cascaded across Europe and Asia as US buyers scrambled to secure stock. The shortage highlighted a paradox: the very products treated as commodities are the ones healthcare cannot live without. And it revealed a structural weakness in the way the industry values and undervalues supply chain resilience.

Turning a commodity into strategy

Grifols, a leader in plasma-derived medicines and transfusion medicine, was one of the few companies to step decisively into the gap. Its leadership made a deliberate choice to treat saline as a strategic product rather than a low-margin filler. That shift in mindset is significant. Analysts at Frost & Sullivan have argued that resilience is emerging as a differentiator in

healthcare supply chains, with nearshoring and technology adoption helping companies "enhance flexibility, reduce costs, and strengthen supply chain resilience."²

The company's response combined lean manufacturing techniques with bold logistics. At its FDA-approved facilities in Spain, Grifols redesigned workflows and introduced the SMED system to reduce downtime between runs, alongside the Japanese 5S discipline to reorganise factory floors. These are tools more commonly associated with high-value biologics; applying them to saline signalled a cultural change.

The impact was tangible: production rose 17% year on year. But perhaps more telling was the decision to air-freight saline to the US "a highly unconventional approach for a product as low-margin and high-volume as sodium chloride," the company admitted in its own account. The move was costly, but it demonstrated that healthcare access, not margin, had been prioritised.

When fragility becomes a systemic risk

Supply disruption in saline does not just inconvenience procurement teams.

It forces hospitals into rationing and compromises that can endanger patients. Clinicians reported that conservation measures, such as flushing lines with minimal fluid, risked delaying recognition of catheter misplacement. These are not operational footnotes; they are direct threats to patient safety.

For policymakers and hospital administrators, the saline shortage was a stark lesson in concentration risk. A handful of plants supply much of the global market. When one falters, through weather, logistics, or regulatory action, the system has no buffer. Reuters captured the mood at the height of the disruption, reporting: "A shortage of intravenous saline fluids in the United States is forcing hospitals to defer non-urgent surgeries. Analysts warned that the disruption could last for weeks and spill over into other parts of the healthcare economy, particularly for medical device companies reliant on elective procedures."³

This dynamic is not unique to saline. Euromonitor warned that the pharmaceutical supply chain remained vulnerable to shocks, with reliance on a few manufacturers and regions increasing the risk of shortages in essential drugs.⁴

A US HHS analysis similarly found that generic sterile injectables, including antibiotics, account for a disproportionate share of drug shortages, reflecting the fragility created by thin margins and concentrated production.⁵

Stabilising supply and confidence

Grifols positioned its efforts not just as filling a gap but as restoring confidence. "We provided more than just product availability; we restored trust in the supply chain for one of the world's most vital medical solutions," the company said. That trust matters. For distributors and hospitals alike, confidence in delivery is as critical as the product itself.

By acting visibly and decisively, Grifols also reinforced its reputation. In contrast to concerns about profiteering, the optics of absorbing cost to stabilise supply were powerful.

The Financial Times noted during an earlier saline shortage that "authorities are investigating whether companies aggravated a shortage of the vital medical product to boost profits. The concern, regulators said, was not just about short-term disruption but about preserving the public trust that underpins the entire pharmaceutical supply chain."⁶

Investors are also paying closer attention. Analysts now frame supply chain fragility as a strategic risk rather than a technical glitch. Euromonitor has noted that resilience has become "a strategic priority across industries, with pharmaceutical companies investing in redundancy, visibility, and agility to mitigate systemic risks."⁷

Innovation beyond the molecule

While saline itself is unchanged, Grifols used the crisis to showcase its Fleboflex® packaging technology. The polypropylene bags are free from PVC and plasticisers, reducing compatibility issues with certain drugs and aligning with sustainability targets. Because Grifols manufactures the bags itself from raw film reels to sterilised final product it can scale and adjust rapidly, without dependence on third-party suppliers.



From left to right, Grifols team members: Ricardo Bernabé, Murcia Plant Manager, Mª Àngels Romero, Administration Manager, Oriol Argemí, Senior Director, Marga Viñes, Director, Marta Serra, Quality and Regulatory Manager, Lluç Mercadé, Parets Plant Manager, Estela Llorens, Research and Development Manager.

"Innovation isn't always in the product, it's in how you deliver it when it matters most," the company noted. That phrase captures the essence of this episode: the ability to reframe a commodity as critical, and to apply discipline, design, and investment accordingly.

What industry must learn

The saline shortage will likely be remembered less for its eventual resolution (the FDA declared it over in August 2025) than for what it revealed about systemic weakness. For industry leaders, the key lessons are threefold:

1. Resilience must be priced in. Building spare capacity, maintaining redundant sites, and even considering unconventional logistics are no longer luxuries. They are necessities in a world of climate disruption and geopolitical risk.
2. Commodities deserve strategy. Low-margin products often carry the highest patient impact. Treating them with indifference is a false economy.
3. Trust is a currency. By stepping in, companies like Grifols demonstrated that supply reliability builds reputational equity that can be as valuable as profit in the long run.

Public health experts warned that the saline shortage ultimately shifted the burden onto hospitals and clinicians. As CIDRAP reported, "shortages of IV solutions are expected to continue for months, despite larger allocations, as Hurricane Helene worsened an already fragile supply chain."⁸

For doctors and nurses, that meant conserving fluids, deferring procedures, and managing workarounds that added stress and risk to routine care.

Beyond saline: The next stress test

The saline crisis may be over, but the structural vulnerabilities remain. Antibiotics, oncology injectables, and even paracetamol have all faced shortages in recent years. Each time, governments and health systems vow to build resilience, yet progress has been uneven.

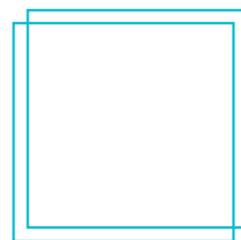
Grifols' case shows what is possible when a company treats resilience as core business rather than crisis response. But it also highlights a question for regulators and policymakers: should resilience be incentivised, mandated, or left to market forces? Some governments are already experimenting with reshoring incentives and strategic stockpiles. Others are considering regulatory frameworks that reward

redundancy. For investors, meanwhile, resilience is becoming part of ESG assessments, with asset managers asking whether companies can withstand shocks, not just deliver quarterly earnings. The saline shortage proved that innovation does not always mean a new molecule. Sometimes it is the ability to deliver a simple product reliably under the most complex conditions. For patients, that reliability is what matters most. For the industry, it may become the standard against which resilience is judged.

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