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Bridging the Gaps: Why India's Medicine Supply Chain Needs Systemic Reset

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More than three-fifths of Indians still lack access to modern medicines, and the shortfall is sharpest for specialty drugs

India makes nearly a fifth of the world's generic medicines, yet a large share of its own patients still cannot get the specific drug they need when they need it. Having spent years building infrastructure to move specialty and critical-care medicines across the country, I have seen this contradiction up close, and I have come to believe it is fixable, but only if we stop treating it as a manufacturing problem and start treating it as a delivery and information problem.

Building on What Already Works

The gap is real and well documented. More than three-fifths of Indians still lack access to modern medicines, and the shortfall is sharpest for specialty drugs like oncology biologics, where a single missed link in the chain can delay a treatment cycle. Patients in smaller towns often travel hundreds of kilometres for medicines that should be a short trip away, not because the drug doesn't exist in the country, but because it never reached them.

Three Things Need to Change

I sit in between, sourcing from the manufacturer on one side and ensuring on-time supply to patients on the other. I have come to see the gap less as a supply shortage and more as a set of design choices made for a different kind of patient. Most of the system was built around high-volume, routine medicines moving through predictable urban demand. Specialty and critical-care drugs do not behave that way, and the infrastructure has not caught up. Three shifts would go a long way toward closing that distance.

Rethinking Cold Chain Design

Most temperature-controlled infrastructure in India is still built around a handful of large hubs. That works for high-volume drugs. It does not work for a cancer patient in a tier-3 town who needs one specific vial by tomorrow morning. The fix is not

more warehouses everywhere; it's smarter, smaller, well-monitored cold storage placed closer to demand, backed by real-time temperature tracking so nobody is guessing whether a shipment held its integrity.

Solving the Visibility Problem

Right now, a doctor or a patient often has no way of knowing whether a medicine is sitting in a warehouse two states away or genuinely out of stock nationwide. That distinction matters enormously, because most of what looks like scarcity is actually a coordination failure. Digital inventory systems that connect pharmacies, distributors, and prescribers in something close to real time would solve more access problems than adding another layer of physical infrastructure ever could.

Shortening the Chain

The third shift concerns the number of hands a medicine passes through before it reaches a patient. Every additional intermediary adds cost, time, and a chance for something to go wrong, and this hits hardest for low-volume, high-value drugs that ordinary distributors have little incentive to stock. Specialty pharmacy models built specifically around these medicines, with direct lines to manufacturers and patients, can shorten that chain meaningfully. This is precisely the kind of category where a purpose-built, technology-led approach outperforms the general-purpose system.

Building on What Already Works

None of this is theoretical. States that have digitised procurement and centralised inventory tracking have already seen supply reliability improve, even while last-mile delivery remains a work in progress. That's the model worth building on: not throwing out the existing system, but layering better data and more deliberate infrastructure on top of it.

The Real Problem Is Design

I don't think this requires a single grand policy fix. It requires the industry, hospitals, regulators, and technology providers to treat last-mile access as a design problem with the same rigour that goes into drug discovery or manufacturing quality. India has already solved the harder problem of making these medicines at scale. Getting them to the person who needs them, on time, wherever they live, is well within our reach too.

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