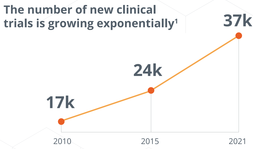
Drug waste reduction:

The next decade's critical challenge for clinical trials

The number of new clinical trials is growing exponentially[1]



Clinical trial materials and supplies market is estimated to reach

$25.9 billion

by 2027, with a CAGR of 6%[2]

The estimated cost of bringing a new drug to market is[3]

$2.6 billion

70% **of clinical supplies are wasted on average**

Reasons include:

- Insufficient use of planning and forecasting solutions
- Trial designs not considering their effect on supply chains
- Long manufacturing processes
- Unexpected events and lack of timely reactions
- Short IMP shelf life

95%

of clinical supply managers face some level of supply risk.

2-4 months

Supply chain bottlenecks can generate 2 to 4 months delays on average.

Factors that will contribute to bottlenecks in the drug supply chain in the next 10 years include:

- Increased expectations for accelerated clinical timelines
- Severe shortage of manufacturing resources
- Increased manufacturing complexity and cost of biologics
- Shorter product shelf lives in innovative treatments

- Increasing global scale of clinical trials
- Increasing complexity of clinical trial designs
- Unplanned protocol updates leading to worst-case demand planning
- Slower recruitments in more specialized indications/ rare-disease treatments

The direct link between clinical trial supply chain and commercialization timelines

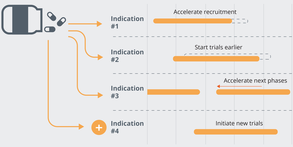
The clock is ticking, and every minute counts when moving new treatments from discovery to commercial launch.

If bottlenecks in IP supply are already one of the main causes of delayed clinical trials (start date, recruitment pace, new indications), we can expect this trend to worsen exponentially in the future as it mirrors the evolution of the industry.

DISCOVERY LAUNCH

By removing waste, bottlenecks are removed from the supply chain. This combined with an efficient reallocating of saved drugs can accelerate timelines while saving money, making it a winning situation for all stakeholders.

Drug waste reduction accelerates clinical trial timelines



Fortunately, purpose-built solutions support decision-making. With true optimization algorithms and risk management capabilities, these can help streamline supply chains, slash budgets and accelerate timelines.

The average waste level can be reduced:*

*Data is derived from N-SIDE optimized trials using a sample of over 1,000 trials across all indications.

The N-SIDE Suite allows sponsors to

Reduce drug waste by **20% to 60%**

Save an average of **30%** on clinical supply costs

Reduce time to market by **2 to 6 months**

Reallocated drugs/budget can **accelerate recruitment** and **allow the initiation of new cohorts or new trials** on new indications

Avoid any **drug shortage** and provide a **100% level of patient service**

Better decisions for your clinical trial

- **Decide better during the trial design phase**
- **Use accurate and robust demand planning that factor in all the complex moving parts of the CT**
- **Optimize supply and manufacturing strategies to reduce drug waste**
- **Monitor and react to any potential risks in real time**
- **Assess the effect of different trial events on drug waste and proactively mitigate their effect**

Waste mitigation and all its associated rewards can be achieved with N-SIDE's clinical supply solutions for the benefit of all stakeholders.

For information visit www.n-side.com

N-SIDE

SOURCES

1. Trends, Charts and Maps. https://clinicaltrials.gov/ct2/resources/trends
2. Clinical Trial Materials and Supplies Market Worth $25.9 Billion by 2027; Growing at a CAGR of 6% from 2019- Exclusive Report by Meticulous Research® https://www.globenewswire.com/en/news-release/2020/06/05/2046285/0/en/Clinical-Trial-Materials-and-Supplies-Market-Worth-25-9-Billion-by-2027-Growing-at-a-CAGR-of-6-from-2019-Exclusive-Report-by-Meticulous-Research.html
3. The pursuit of excellence in new drug development https://www.mckinsey.com/industries/life-sciences/our-insights/the-pursuit-of-excellence-in-new-drug-development