

# RETHINKING SURGICAL TEXTILES IN THE NHS:

## From Consumable to Clinical Infrastructure

In NHS Trusts, surgical gowns and drapes are rarely the focus of strategic discussions.

Operating theatres are among the most resource-intensive environments in acute care. Yet gowns and drapes are often treated as consumables – line items in procurement schedules, managed through unit price comparisons and stock levels. However, textile systems sit at the intersection of some of the system's most pressing priorities: cost control, net zero delivery, infection prevention, and supply resilience.

As financial pressures increase and environmental targets tighten, the real question now is whether surgical textiles are being evaluated at the right strategic level – viewed not simply as consumables, but as managed clinical infrastructure. Few other product categories touch cost, carbon, compliance and continuity of supply simultaneously.

### Looking Beyond Unit Price

Procurement decisions have historically focused on purchase price per item and, in high volume categories, unit price becomes an understandable proxy for value. However, this approach does not

always capture total system cost. Disposable textiles carry additional considerations beyond initial purchase costs:

- Ongoing repurchasing commitments
- Storage, stock management and logistics requirements
- Clinical waste management and incineration costs
- Exposure to global supply volatility

Reusable surgical textile systems operate differently. They are typically structured around:

- Managed inventory/stock models
- Validated multi-cycle performance (often up to 75 uses)
- Repair and replacement programmes
- Domestic reprocessing capability
- Predictable cost-per-use analysis

When textiles are evaluated on a cost-per-procedure basis rather than price per item, the financial comparison often becomes more nuanced than straightforward unit price.

This is not about price alone. It is about total system value.

## Aligning with NHS Net Zero Commitments

Through NHS England, the NHS has committed to becoming the world's first net zero healthcare system. This places increased focus on high-volume product categories, with operating theatres remaining among the most carbon-intensive environments in acute care.

Disposable textiles can contribute significantly to waste volumes and Scope 3 emissions associated with manufacturing, transportation, and disposal. Life Cycle Assessment studies indicate that reusable surgical gowns and drapes can reduce:

- Carbon emissions per use
- Solid waste generation
- Raw material consumption

Environmental performance is further strengthened when textiles are processed within dedicated facilities designed for:

- Energy efficiency and monitoring
- Heat recovery systems
- Controlled water management
- Validated decontamination cycles

If surgical textiles represent one of the highest-volume product categories in operating theatres, they present a measurable lever for environmental improvement – particularly for Trusts aligning procurement with sustainability strategies.

The question is: can net zero ambitions be achieved without considering the true impact of reusable vs disposable textile systems?

## Clinical Performance and Compliance

Patient safety and infection prevention remain paramount.

Modern reusable surgical textiles are engineered to meet EN 13795 performance requirements for barrier systems, including:

- Microbial penetration (wet and dry)
- Hydrostatic pressure resistance
- Tensile strength
- Linting and particle control

Crucially, these performance characteristics are validated across multiple reprocessing cycles.

Dedicated processing facilities support compliance through:

- Segregated clean and dirty workflows
- HTM 01-01 aligned decontamination procedures
- Batch traceability (RFID)
- Documented inspection and quality assurance protocols

This closed-loop model provides visibility across the product lifecycle, which can support governance, audit and risk management processes.

The discussion has moved beyond whether reusable systems can meet standards. The more relevant consideration now is how performance is assessed across the full lifecycle – and how visibility, traceability and assurance are maintained.

## Strengthening Supply Resilience

Recent global supply disruptions exposed vulnerabilities in extended international supply chains for essential healthcare products.

A reusable textile model supported by UK-based processing infrastructure can help mitigate:

- Allocation risk
- Sudden price escalation
- Quality variability across suppliers

Managed domestic capability can help reduce exposure to sudden supply shocks. In an era where resilience has become a strategic priority, textile systems therefore warrant closer examination.

## A Systems-Based Approach

The conversation around surgical textiles is evolving.

Rather than framing reusable and disposable systems as a binary choice, many NHS organisations are beginning to evaluate textiles through a broader systems lens – considering financial impact, environmental performance, regulatory compliance and operational resilience together.

Surgical textiles may not command strategic attention by default, but they intersect with several of the NHS's most pressing priorities.

As Trusts continue to balance cost control, sustainability commitments and patient safety, textile systems offer a tangible opportunity for integrated, system-level improvement. If that is the case, are they being discussed at an appropriate strategic level?

