

Report Summary

Çetin & Sönmez Study Findings

Cost Analysis of Disposable and Reusable Surgical Drapes Used in Turgut Ozal Medicine Center

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Executive Summary

Key finding: The study found reusable surgical drapes were less costly than disposable surgical drapes and estimated 33.74% annual savings for the hospital budget when reusable surgical drapes/gowns were used.

Çetin and Sönmez evaluated the unit costs of reusable and disposable surgical drape sets at Inonu University Turgut Ozal Medical Center in Malatya, Turkey. Their cost comparison accounted for purchase and waste-disposal costs for disposable drapes, while reusable drape costs included sewing, sterilization, washing, labor, and waste disposal. The authors concluded that reusable surgical drapes were cheaper than disposable alternatives and could contribute positively to the hospital budget.

Study Snapshot

Category	Details
Citation	Çetin Y, Sönmez A. "Cost analysis of disposable/reusable surgical drapes used in Turgut Ozal Medicine Center." Annals of Medical Research. 2021;28(10):1858–1862.
Study objective	Calculate the unit cost of reusable and disposable surgical drape sets and estimate their impact on the general hospital budget.
Setting	Inonu University Turgut Ozal Medical Center, Malatya, Turkey.
Sample evaluated	500 surgical drape packages; each package contained 7 drapes, 6 towels, and 4 gowns. The packages were divided evenly between reusable and disposable sets.
Cost categories	Disposable: purchase and waste disposal. Reusable: sewing, sterilization, washing, labor, and waste disposal.
Primary result	Reusable surgical drapes were found to be cheaper than disposable drapes, with estimated annual savings of 33.74% for the hospital budget.

Principal Findings

- **Reusable drapes had the lower total cost.** After tallying the relevant cost components for each product type, the authors found reusable surgical drape sets were cheaper than disposable sets.
- **Estimated annual hospital savings were material.** The study estimated that use of reusable surgical drapes could reduce overall annual hospital budget costs by 33.74% for the evaluated textile use case.
- **The analysis went beyond purchase price.** By including laundering, sterilization, labor, sewing, and disposal costs, the authors evaluated operational costs rather than relying only on acquisition price.
- **Budget contribution was the stated conclusion.** The authors concluded that reusable gowns and drapes could contribute to the hospital budget by reducing costs relative to disposable alternatives.

Interpretation for Healthcare Textile Cost Discussions

The Çetin & Sönmez study is useful as a hospital-level cost-analysis citation because it compares reusable and disposable surgical textiles using actual categories of hospital expense. Its value is in demonstrating that reusable textiles can remain less expensive even after the ongoing costs of processing, labor, and disposal are counted.

The study is also best framed as a single-facility analysis rather than a universal national cost estimate. Costs for labor, utilities, sterilization, laundry operations, purchasing contracts, waste handling, and utilization volume can vary by hospital and region. Still, the paper supports the proposition that reusable healthcare textiles can offer measurable budget savings when evaluated on a fully loaded cost basis.

Cost Elements Considered

Cost Element	Disposable Surgical Drapes	Reusable Surgical Drapes
Initial product cost	Purchase unit cost included	Procurement/tailoring or sewing-related cost included
Use-cycle processing	Not applicable after use	Washing and sterilization costs included
Labor	Not separately emphasized in abstract	Labor cost included
Waste management	Waste disposal cost included	Waste disposal cost included
Overall result	Higher annual cost in the study setting	Lower annual cost; 33.74% annual savings estimated

Suggested Citation Language

A 2021 cost analysis by Çetin and Sönmez of surgical drape packages used at Turgut Ozal Medicine Center found reusable surgical drapes to be cheaper than disposable drapes, estimating 33.74% annual hospital budget savings when reusable gowns and drapes were used. The analysis included purchase and waste-disposal costs for disposable drapes and sewing, sterilization, washing, labor, and disposal costs for reusable drapes.

Limitations and Cautions

- The study reflects one hospital system in Turkey and should not be treated as a universal cost estimate for all U.S. hospitals.
- Reported savings depend on local purchasing prices, laundry and sterilization infrastructure, labor costs, waste-disposal fees, utilization rates, and textile lifespan.
- The study focuses on cost analysis; broader purchasing decisions may also consider infection prevention requirements, barrier performance, staff preferences, supply resilience, and environmental impact.

Reference

Çetin Y, Sönmez A. Cost analysis of disposable/reusable surgical drapes used in Turgut Ozal Medicine Center. *Annals of Medical Research*. 2021;28(10):1858–1862. Available at: <https://annalsmedres.org/index.php/aomr/article/view/3940>