



Streamlining Surgical Instrument Use

Operating rooms are one of the **highest energy consumers** in the hospital due to their sterilization, high-powered medical equipment, and HVAC requirements.



Single-use items, sterilization wraps, and discarded instruments result in substantial medical waste.



Manufacturing surgical instruments involves mining metals, energy-intensive processes, and transportation.

1

**GREEN:
EASIEST TO
IMPLEMENT**

2

**AMBER:
MODERATE
DIFFICULTY**

3

**RED:
HARDEST TO
IMPLEMENT**

INVENTORY CHECK

A straightforward audit of existing instruments to identify duplicates, rarely used, or outdated instruments. This can be done using current hospital inventory systems or manually, depending on the facility's capacity, all of which **may be time-consuming initially.**

REGULAR MAINTENANCE

Schedule regular cleaning and maintenance to ensure instruments have a longer lifespan and reduce the need for replacements. This may require **culture change.**

TRAINING SESSIONS

Hold short awareness sessions for surgical staff to emphasize the importance of reusing and proper handling of instruments to prolong their life, which may require **staff buy-in.**

ADOPT STANDARDIZED SETS

Despite individual surgeon preferences, it is beneficial to create standardized sets, which may **require negotiation and agreement among surgical staff.**

INVEST IN QUALITY INSTRUMENTS

Instead of opting for cheaper instruments that may wear out faster, invest in high-quality instruments that last longer. This might mean a **higher upfront cost** but will result in savings in the long run.

INSTRUMENT TRACKING SYSTEMS

Implement new systems to track instrument usage. This can help in identifying patterns and ensuring that instruments are not misplaced, reducing the need for replacements.

REDESIGN SURGICAL PROCEDURES

Some procedures might be modified to use fewer instruments or more multi-functional instruments, but this **requires significant research, training, and acceptance among surgeons.**

ADOPT NEW STERILIZATION TECHNIQUES

While modern sterilization techniques can be more efficient, transitioning from traditional methods can be a **significant undertaking in terms of investment and training.**

CHANGE SUPPLIERS

Switching to eco-friendly suppliers if a hospital's current suppliers are not sustainable can be a **long and challenging process.** It involves re-negotiating contracts, ensuring the quality of new instruments, and potentially adjusting to new tools.

Streamlining surgical instrument usage is not just an operational efficiency measure.

It is a pivotal step towards building a sustainable healthcare system that values patient safety, cost-efficiency, and planetary health. By taking proactive measures in the OR, the medical community can actively contribute to global efforts to address climate change.



BARRIERS TO IMPLEMENTATION

See barriers to each implementation step highlighted in red above

BENEFITS

COST SAVINGS

- Long-term cost savings
- Fostering of surgeon/operating room staff collaboration
- Supporting suppliers and production that is sustainable to effect change in the marketplace



RESOURCES AND REFERENCES:

