

Saving Green by Going Green

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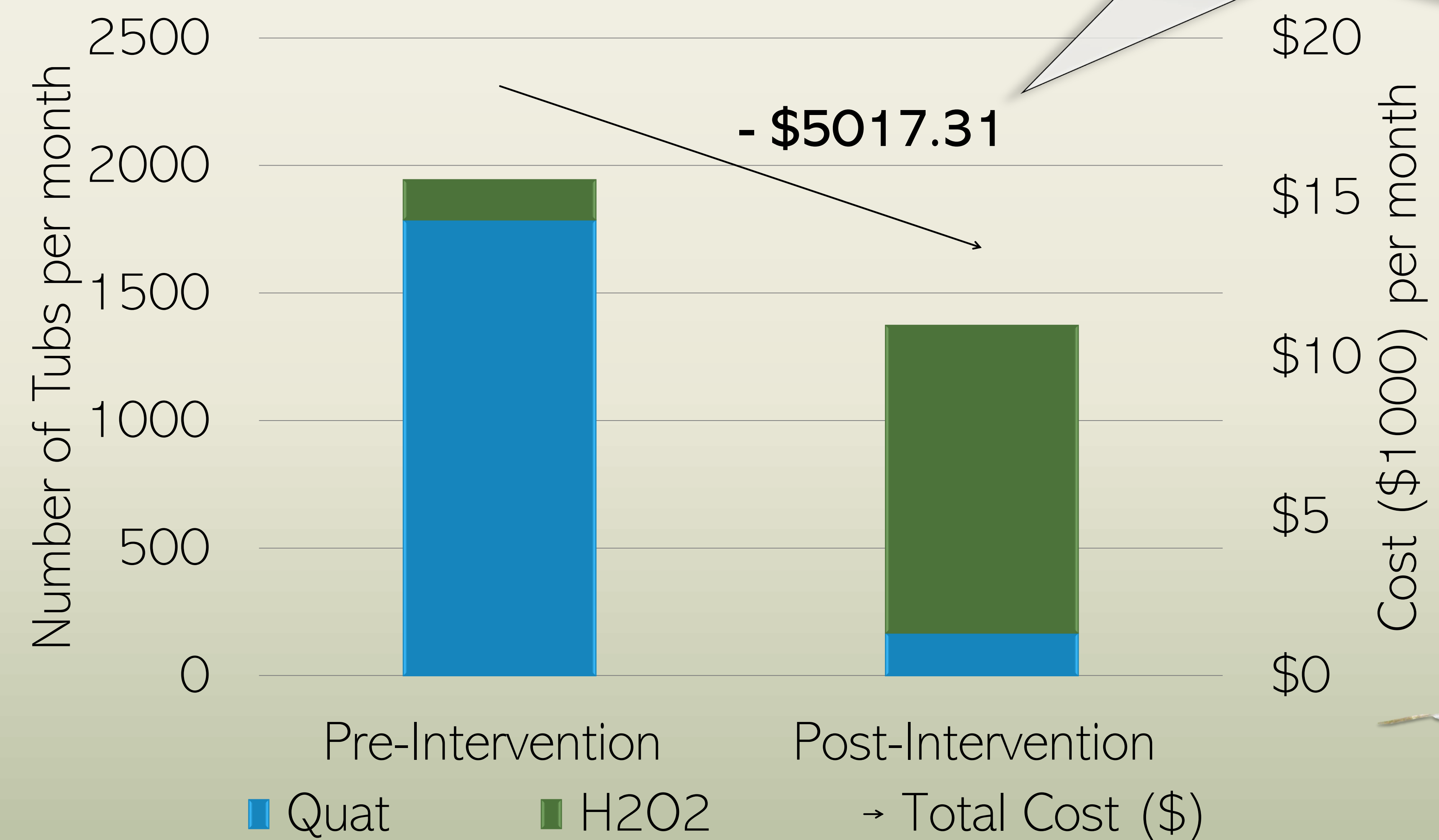
Issue & Project

In the spring of 2019 a multidisciplinary team, explored the potential benefits of adjusting the supply amounts of the low-level disinfectant (LLD) wipes used at our hospital (Rockyview General Hospital, Calgary, AB). The most used LLD was a quaternary ammonium chloride (Quat) wipe. However, the **hydrogen peroxide (H₂O₂) wipe** offered:

- ✓ greater antimicrobial efficacy
- ✓ improved equipment compatibility
- ✓ lower toxicity
- ✓ lower cost per wipe

than the quaternary ammonium chloride counterpart.

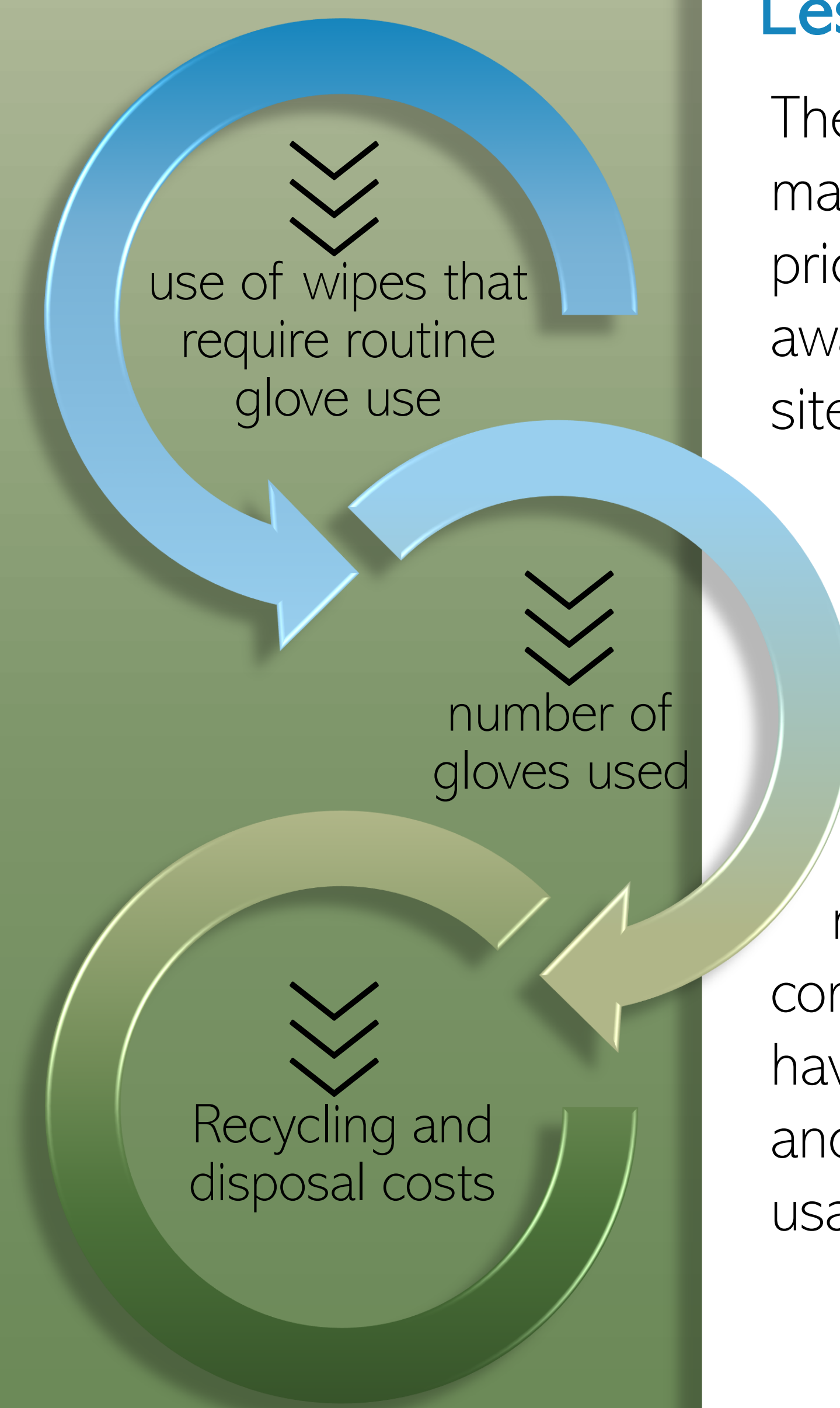
A site-wide changeover was scheduled to increase the usage of hydrogen peroxide wipes and decrease the usage of ammonium chloride and isopropanol wipes, respectively. The warehouse and unit management were notified six weeks in advance. Infection Prevention & Control staff provided education regarding chemical and equipment compatibilities and worked with clinical areas to interpret Manufactures Instructions for Use (MIFU). Clinical areas were encouraged to maintain compliance with CSA standards achieving appropriate levels of disinfection whilst using MIFU approved chemicals (CSA-Z314-18).



Significant financial & environmental benefits from changing to a universal low-level disinfectant wipe.

>\$60,000
annual savings

11,000+
less gloves used
per month



Lessons Learned

The success of this project was maximized by stakeholder engagement prior to the implementation; being aware of contractual obligations; and site preparation. These results indicate that challenging past practice can be worthwhile; resulting in cost savings whilst maintaining compatibility and compliance for disinfecting non-critical equipment. With the current political and cultural movements toward environmentally conscious practice, it is important to have progressive discussions and evaluations regarding chemical usage and subsequent effects.

Results

As anticipated, the site has seen substantial and cascading benefits from this initiative. A six-month retrospective comparison shows an average reduction of 571 wipe tubs per month; resulting in an average cost savings of \$5,071.31 per month. This extrapolates to annual savings of over 6800 tubs and \$60,855, respectively. Hence, the 615-bed hospital sees an **annual cost savings of almost \$100 per bed**. Furthermore, the total number of individual wipes used per month increased by approximately 44% due to the smaller size and higher number of wipes in each hydrogen peroxide tub. Unlike the quaternary ammonium chloride wipe, the hydrogen peroxide wipe has a lower toxicity and does not require routine glove use. Therefore, there has been an **incidental decrease in glove use**. The site is using 44 less boxes per month; resulting in a cost savings of \$472.56 per month over \$5,670 annually). **Other advantages include a decrease in plumbing obstructions, recycling and disposal costs**. The clinical areas have reported good integration and compliance. There have been no adverse events and only a few temporary off-gassing complaints. This analysis does not consider the utilization and cost of the other types of LLD wipes on site.

