

Hand Hygiene: Do Our Sanitizers Measure Up?

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Hand Hygiene Practices

Importance

Missed opportunities for hand hygiene increases the risk of infection in the healthcare environment. This makes hand hygiene an important patient and healthcare worker safety practice, and the most important factor in reducing hospital acquired infections.

It is necessary to reduce barriers that prevent health care workers from performing hand hygiene appropriately. This includes providing access to adequate supplies, handwashing sinks and functional and full hand sanitizer dispensers (HSD) that dispense the proper amount of product.

Leapfrog Standards

The Leapfrog Group is an organization that provides hospital survey data to ensure best practices for patient safety are being performed. The Leapfrog Hospital Safety Grade includes hand hygiene standards created from guidelines set forth by the World Health Organization and a hand hygiene expert panel.

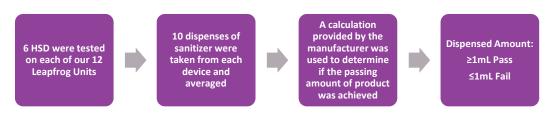


The infrastructure domain of the Leapfrog survey includes audits to determine if the appropriate amount of hand sanitizer is dispensed. An appropriate amount accounts for density of the foam products, and should dispense >1mL of sanitizer, or should take at least 15 seconds of hand rubbing to dry.

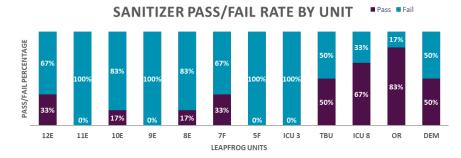
Hand Hygiene Infrastructure Focus

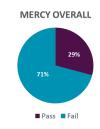
Methods

Infection Prevention collaborated with the Environmental Services (EVS) Department to perform a random sampling of HSD on our 12 Leapfrog required units within the organization.



Results





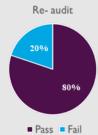
Only 29% of sanitizers tested passed and dispensed >1 mL!

More than 70% of HSD were not dispensing the appropriate amount of hand sanitizer. There were varying degrees of unit pass rate. Ranging from 83% of sanitizers in the Operating Room (OR) passing, to zero passing in four inpatient units. After consulting our EVS team, we discovered that some of the dispensers had a regulator mechanism that dispensed less hand sanitizer. Additionally, on closer investigation, we found that not all failing sanitizers had a regulator mechanism in place.

Implications for Practice

Results

- The HSD manufacturer provided replacement regulators
- EVS department exchanged regulators on one unit
- A re-audit showed that the new regulator ensured the Leapfrog passing amount was dispensed



Implications



Regulator Mechanism

- Insufficient amounts of sanitizer does not ensure total removal of microorganisms and hinders effective hand hygiene
- Most of our HSD delivered an insufficient amount of the product on our initial audit
- Working with EVS and our supplier, we exchanged regulators and saw improved results

References

- AllegranziB, PittetD. Role of hand hygiene in healthcare-associated infection prevention. J Hosp Infect. 2009 Dec;73(4):305-15. doi: 10.1016/j.jhin.2009.04.019. Epub2009 Aug 31. PMID: 19720430.
- Gould DJ, MoralejoD, DreyN, Chudleigh JH, TaljaardM. Interventions to improve hand hygiene compliance in patient care. Cochrane Database Syst Rev. 2017 Sep 1;9(9):CD005186. doi: 10.1002/14651858.CD005186.pub4. PMID: 28862335; PMCID: PMC6483670.
- Stadler RN, Tschudin-Sutter S. What is new with hand hygiene? CurrOpinInfect Dis. 2020 Aug;33(4):327-332. doi: 10.1097/OCO.000000000000000554. PMID: 32657970.