

How much does your keyboard really cost?

Compare initial price to operational costs

In 2010, \$8.1 billion was spent and 48,000 lives were lost due to preventable hospital-acquired infections (HAIs). While hospitals face innumerable sources of cross-contamination, computer keyboards, which are frequently touched and usually shared, are a confirmed hotbed of bacteria and viruses in medical settings. Despite this, we often hear from many hospitals around the country that they simply do not have the budget for infection-control keyboards, or that they can only afford products with an initial lower price, such as dishwasher-safe keyboards and keyboard covers.

To shed some light on the true cost of operating these lower-price products, we have compiled a review of the various keyboard solutions available and their associated costs of ownership. As you can see, hospitals that purchase a robust infection-control solution from iKey have a clear, budgetary advantage over those that purchase lower priced products.

Type of Product	Hardware Price	Ease of Cleaning	Cleaning Time	Cleaning Effectiveness	Cleaning Cost	Operating Cost (5 years)
Standard desktop keyboard 	\$15	Very difficult	Moderate	Poor	Moderate	\$3,191
 Keyboard with cover	\$15+\$15 \$30	Easy	Short	Good	Very low	\$2,045
Dishwasher-safe antimicrobial keyboard 	\$50+\$50 (backup) \$100	Very difficult	Very long	Unknown	Very high	\$4,902
 iKey keyboard	\$249	Easy	Short	Excellent	Very low	\$1,769

Want to find out more? Keep reading to learn how we calculated these numbers.

The Breakdown:

How each solution compares over time

Assuming the burdened labor rate in your workplace is \$25 an hour, we have compiled the following estimates for the five-year operating cost of each keyboard type.

Standard desktop keyboard

Method: Wipe down with disinfectant and ultimately dispose of at an arbitrary interval when it's deemed unfit for service.

Cleaning effectiveness: Only marginally better than not cleaning at all. The cracks and crevices harbor pathogenic microbes that can never be truly cleaned on a standard keyboard.

Total Cost of Ownership after 5 years: Variable, but assuming replacement every six months, the hardware cost is \$150. The labor cost of twice daily thorough cleaning and drying all through cracks and spaces for two minutes each time is, \$3,041, bringing the estimated total cost of ownership to \$3,191.



Standard desktop keyboard with cover

Method: Apply the cover, then wipe down with disinfectant, and dispose of cover when deemed unfit for service.

Cleaning effectiveness: Better than an unprotected keyboard, but the seal is not perfect and allows contaminant to enter the keyboard, especially after extended periods of use. The cover can become detached and ineffective if stringent replacement protocols are not in place.

Total Cost of Ownership after 5 years: Variable, but assuming the cover is replaced every six months, the cover cost is \$150. The time spent replacing the covers over five years is approximately 15 minutes, at a labor cost of about \$25. The labor cost of twice daily cleaning for approximately one minute twice daily is \$1,520, which brings the estimated total cost of ownership to \$2,045.



Dishwasher-safe, antimicrobial keyboard

Method: Two options are available: either the same method used for a standard keyboard, or if cleaned as advertised, running through a full dishwasher cycle. What do you use while the keyboard is in the dishwasher?

Cleaning effectiveness: If you believe the marketing, pathogens can't live on the surface of these products because of the silver ion plastic. As one of our customers in the U.K. found out, pathogens mutate and become immune to the silver ion "barrier."

Total Cost of Ownership after 5 years: To have 100 percent availability, you must purchase at least two \$50 keyboards to have coverage while one is in the dishwasher, for a total hardware cost of \$100. Also you would have to purchase at least one dishwasher. For estimating purposes, we will assume a small operation where only one dishwasher is needed, at an installation cost of \$1,000. For each cleaning (feasibly only once a day), at least 5 minutes of labor must be spent drying the keyboard (remember, the dishwasher isn't getting the water under the keys dry), bringing the cost to clean to \$3,802, and the estimated total cost of ownership to \$4,902 (not including the dishwasher).



iKey keyboard

Method: Spray with any hospital-grade disinfectant and wipe to dry. Because the unit can remain plugged into the workstation during the cleaning process, the total cleaning time is one minute.

Cleaning effectiveness: Because iKey rubber keyboards have no crevices to hide bacteria, the effectiveness is far superior to dishwasher, antimicrobial and standard keyboards.

Total Cost of Ownership after 5 years: Twice daily cleaning for one minute each for 5 years has a labor cost of \$1,520. With the hardware cost \$249 for the SB-101, the total cost of ownership is \$1,769.



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