

EXERCISE MONITORS

THE NEXT SOURCE OF HOSPITAL INFECTION

Exercise monitors like Fitbit, Google Watch or Garmin (just to name a few) are quite popular, as a portable and easy way to track exercise levels and keep a healthy activity level. But in a hospital setting, they may pose as a portable, easy way to allow pathogens to enter a facility.

While all exercise monitors have instructions on cleaning, it's not certain how many monitor-wearers follow the guidelines. Recently, a University of Virginia team of researchers sampled exercise monitors worn by healthcare professionals in a hospital setting to determine levels of possible pathogens. The team used the Hygiena SystemSure Plus™ ATP Sanitation Monitoring system at the University of Virginia University Hospital in a small study, the results of which were published in the American Journal of Infection Control. This is the first time that the system was used to monitor exercise trackers.

Since all living cells contain ATP, a result from an ATP-detecting luminometer like the SystemSure Plus does not specifically detect bacteria. But a high reading, expressed in relative light units (RLUs), does indicate some organic matter that in sanitary settings like a hospital, should not be there. The higher the reading, the higher the risk of bacterial or other pathogens present, and

therefore the higher the risk of hospital acquired infections (HAIs).

Morgan Vorwald and Lisa Letzkus, who serve on the nursing faculty at the university hospital, tested 35 healthcare professionals who were working in eight inpatient units (out of 24) over an eight-day period at the hospital.



Of the 35 samples, only one monitor passed the threshold recommended by Hygiena (the team used the “near patient” area pass level of 25 RLUs). The sole passing level recorded 3 RLUs, while the highest reading reached 1,353 RLUs. The average RLU of everyone’s tested monitor was calculated at 374.9 RLUs. A chart of all the readings can be seen in **Figure 1**.

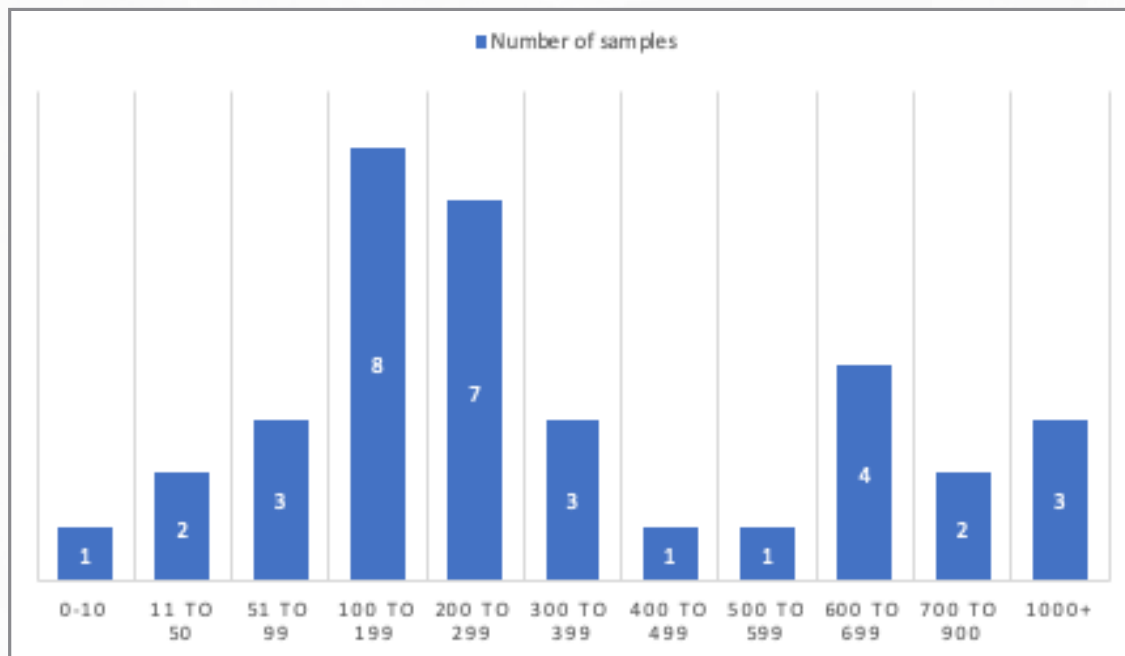


FIGURE 1. Number of samples for range of RLUs (0-1,000+)

Only one reading (the “3” RLU) was recorded as a pass using the “near patient” threshold of 25 RLU. Just three tests were below 50 RLU and six were below 100 RLU.



The researchers used the SystemSure Plus because it was easy and gave rapid results (in 15 seconds). The Hygiena ATP monitoring systems (SystemSure Plus and EnSURE™) are used in

healthcare facilities worldwide for verifying cleaning effectiveness.

Most hospitals (including the University of Virginia) have policies that prohibit wearing of any jewelry below the wrist while in patient rooms and other sensitive areas of a facility. Vorwald’s study, while small, indicated that further research, involving more healthcare professionals and in a hospital-wide test, is needed to fully determine if exercise trackers should be subject to the same rules as jewelry.

In conclusion, fitness trackers have become very popular over the last several years and are valuable for generating real-time data on exercise as a contributor to overall health. However, even though tracker manufacturers do provide cleaning information for their products, this study shows that most of those guidelines are not followed and that the trackers greatly increase the risk of introducing contamination in healthcare and possibly other settings.