



Hospital Surface Disinfectant Study

PART 1 OF 2: STUDY OVERVIEW & HIGHLIGHTS¹

November, 2014

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Results Summarized by Jennifer Sweeney, MBA

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ABSTRACT

In November 2014, Maurice Croteau, CEH, HEM, conducted a study in a well-known hospital in Phoenix, Arizona to test the effectiveness of two different disinfectants. The objective was to determine whether ProKure V™, a chlorine dioxide-based disinfectant, would outperform the hospital's current quaternary ammonium-based disinfectant. The results showed that ProKure V™ significantly outperformed the hospital's disinfectant and dramatically reduced microbe counts.

Background

One out of every 25 patients who are admitted to a hospital will fall victim to an infection they pick up while there, according to the U.S. Centers for Disease Control and Prevention. These infections can be serious, even life-threatening, and incredibly costly. Recent studies have estimated that as many as half of these infections could be prevented if hospitals are being properly disinfected.

Disinfectants Tested

The two disinfectants evaluated in this study were:

- The hospital's current one-step disinfectant cleaner (a widely used quaternary ammonium-based product whose brand name has been withheld for confidentiality purposes; hereafter referred to as "Quat X").
- ProKure V, an EPA registered, hospital-grade disinfectant, deodorizer, and sterilizer.

The hospital's current disinfectant has a 10-minute kill time; Independent laboratory tests show that ProKure V starts killing in 10 seconds and killed the murine norovirus (a surrogate for human norovirus in virucidal efficacy evaluations) in 30 seconds.

Hospital Areas Surveyed & Process Used

- Two main areas of the hospital were surveyed: operating rooms and patient rooms in the Intensive Care Unit (ICU).
- All rooms being surveyed were terminally cleaned—using the standard cleaning protocol—with either the hospital's disinfectant or ProKure V.
- After being cleaned, high touch areas in each room (such as bed rails, door knobs, etc.,) were swabbed and cultured to determine the amount of microbes still present.

Key Findings

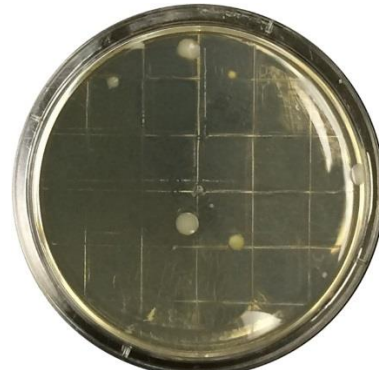
This study demonstrated that ProKure V, a chlorine dioxide-based disinfectant, was much more effective at disinfecting microbe-dense areas in a hospital than a quat-based disinfectant.

ProKure V yielded impressive and superior results, significantly outperforming Quat X and drastically reducing microbe counts. A staggering 96% of culture plates from the rooms cleaned with ProKure V showed lower levels of microbes than the plates from the rooms cleaned with Quat X.

PLATE A
Surface Cleaned with Quat X



PLATE B
Surface Cleaned with ProKure™ V



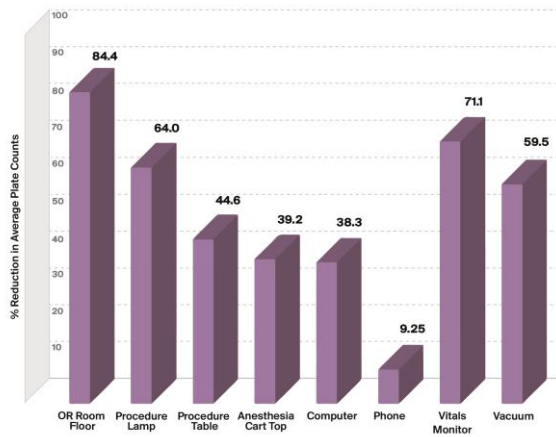
To the right are the pictures of the plates from cultures of ICU patient room bedrails.

Plate A is from a surface cleaned with Quat X. Plate B is from a surface cleaned with ProKure V.

¹ For additional, more-detailed information about the study, see the full report entitled "Hospital Surface Disinfection Study – Part 2 of 2: Full Report."

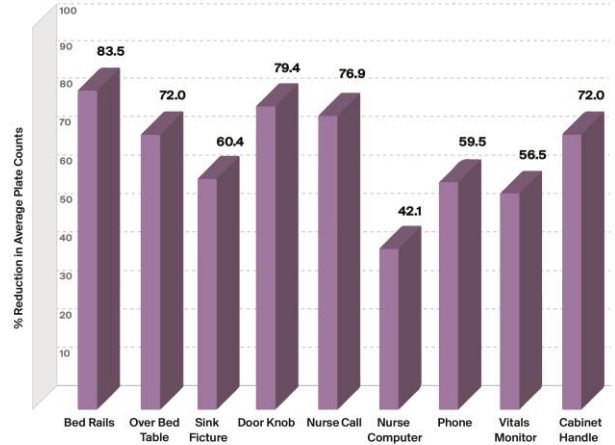
Operating Room

Reduced Microbial Counts with ProKure V



Patient Room

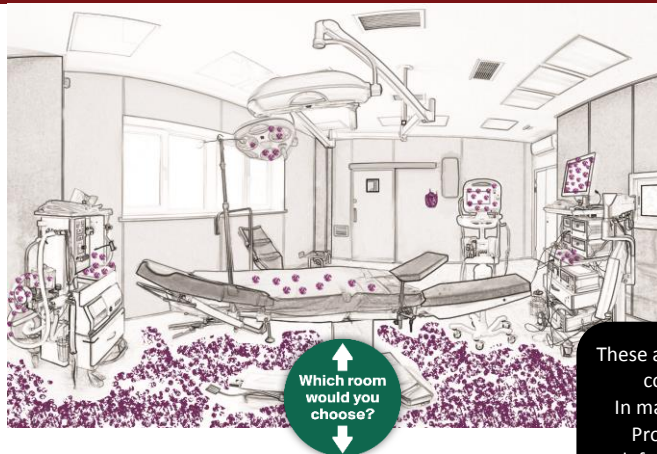
Reduced Microbial Counts with ProKure V



The graphs above display the decrease (shown as a percentage) in microbial counts on surfaces cleaned with ProKure V versus Quat X.

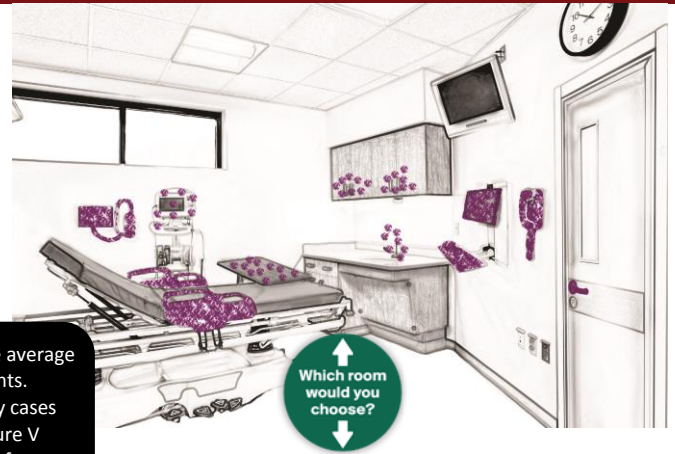
Operating Room

Post Disinfection with Quat X



ICU Patient Room

Post Disinfection with Quat X



These are average counts. In many cases ProKure V left surfaces microbe-free after only one use.

Operating Room

Post Disinfection with ProKure™ V



ICU Patient Room

Post Disinfection with ProKure™ V

