CASE STUDY

Case Study Fighting Bioaerosols and building safer Long Term Care Facilities

Implementing Lit Thinking's Visium Far-UVC light fixtures reduces microbial load in long term care.

OVERVIEW

Shenango on the Green, located in New Wilmington, Penn., provides a peaceful and comfortable senior living environment. With a mission as a Continuing Care Retirement Community to provide residents with the best person-centered experience.

Long term care facility staff and senior residents face infection risks from bioaerosols. Shenango on the Green sought a solution to reduce risk of aerosolized microbes to staff and residents in the communal areas of resident interactions.

The senior living community offers many common areas, with large cafeterias, therapy rooms, and several other shared spaces alongside a functioning home for people at multiple stages of their life. These spaces are open to the residents and faculty for over 12 hours a day with minimal down time.

THE CHALLENGE

Traditional terminal cleaning methods and current ventilation systems leave gaps in sanitation allowing germs to accumulate on high-touch surfaces as well as circulate in the air. In long term care, the main culprits are the bioaerosols generated by staff and residents. With the addition of Far-UVC air treatment, bioaerosols can be inactivated and lead to lower risk interactions for staff and residents.

OUR SOLUTION

Visium Far-UVC

10 of Lit Thinking's Visium devices were installed in communal areas like the therapy room, shower room, and the cafeteria that actively serve residents. Visium devices, which operate silently with nearly zero visible light, were installed recessed into the ceiling (comparable to a standard can light fixture) for seamless integration within the space.

KEY FEATURES

24/7 — Continuous air and surface sanitization all day and night while activated

222 — Far-UVC is proven to reduce pathogens safely in occupied spaces

CERTIFIED 8802 UV Germicidal Products

CERTIFIED 2998 Zero Ozone Emissions

CARB CERTIFIED Meets California Ozone Emission Limits

*Diffused optics only

Third-Party Test Results

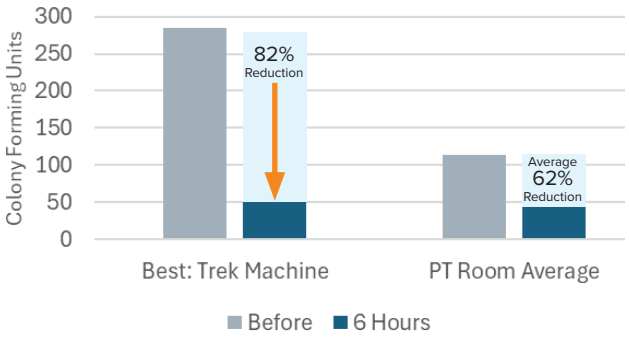
Sampling taken of high touch surfaces at Shenango on the Green with Visium turned off and then on for six hours demonstrate the reduction of bacterial bioburden throughout resident living facility.

Seven locations in the therapy room and cafeteria had their surfaces swabbed for comparison and quantification by an independent test lab, US Micro Solutions. Visium had been used in the facility for a month ahead of sampling, demonstrating that a new, lower surface bioburden level has been established.

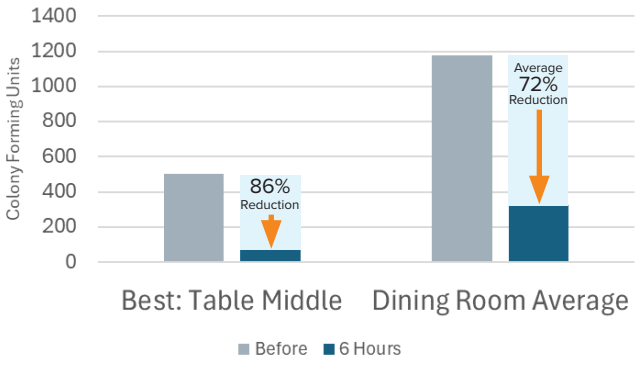
Results showed that Visium reduced the bacterial abundance on high touch surfaces in the PT room by an average reduction of 62%. In the dining room, bacterial abundance reduced by an average was 72%.

Comparable in size to a traditional canned light, Visium fixtures are inconspicuous. Each unit produces < 1 lumen of visible light and operates without any noise - providing all the benefit without any distraction.

PT Room
Change in Surface Bacteria Counts With Visium Use



Dining Room
Change in Surface Bacteria Counts With Visium Use



Contact & Next Steps

Ready to learn how Visium can transform your spaces?
Find information about Visium and its applications at LitThinking.com.

Outcome

Visium seamlessly integrated into the Shenango on the Green facilities and their established hygiene plans, providing continuous sanitization verified by biological sampling.

- ✓ Samples collected from the Shenango facility were independently analyzed and demonstrated bacterial reduction with consistent Visium use
- ✓ Up to 86% reduction of colony forming unites (CFUs), even with active use of the space
- ✓ Visium reduced the amount of known bioaerosol bacteria, reducing risk to staff and residents
- ✓ Visium maintained superior cleanliness compared to the no-Far-UVC control

"UV air purification is a highly valuable tool in skilled nursing facilities, particularly when integrated into a multi-layered approach to air quality and infection prevention. Its ability to reduce airborne pathogens can directly impact resident safety, reduce outbreaks, and enhance the overall healthcare environment."

Stacy Kolbe
Nursing Home Administrator

Conclusion

Shenango on the Green is committed to seeking greener, eco-friendly solutions to safeguard their staff, and residents.

Unwilling to compromise on cleaning efficiency, Visium was able to meet and exceed their expectations to improve air quality and surface sanitation without disrupting daily living.

With consistent Visium use, the amount of colony forming units on the surfaces of the rooms were kept lower compared to without Far-UVC. Shenango on the Green and the Visium installations reflect an additional safeguard for residents and staff, lowering the risks of bioaerosols and seasonal illnesses.

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