

# Shining a Light on Patient Safety

## Grant Provides Northern Light A.R. Gould Hospital with New Ultraviolet Machines to Improve Patient Safety



*UV germicidal disinfection lights in a patient room. Photo courtesy of Northern Light AR Gould Hospital.*

Like many hospitals, Northern Light AR Gould Hospital is continually challenged with ensuring the cleanest possible environment in patient care areas for the safety of patients and staff. Hospitals, ambulance services, long-term care facilities, and outpatient medical offices provide care in the same setting for both immunocompromised, at-risk patients, and those who may be actively infectious. Though care areas are cleaned thoroughly between patients by highly qualified staff following state and federal regulations, it is impossible to assure that all infectious germs are 100% removed through manual cleaning.

In 2010, AR Gould Hospital (then The Aroostook Medical Center) purchased the first equipment in Aroostook County that used ultraviolet (UV) light to kill viral, bacterial, and fungal organisms for infection prevention purposes.

At that time, the hospital was contending with *C. diff* infections (infectious diarrhea), and this new equipment led to a significant reduction of such infections. The hospital staff continued to use this one machine for a decade until it broke near the beginning of COVID-19. Because most germs are eliminated with the use of UV lights, staff and the infection prevention team recognized the machine's benefit to their cleaning efforts.

With the introduction of COVID-19, the need to effectively clean rooms became more important than ever. Hospitals and nursing homes experienced difficulties related to staffing shortages that resulted in longer turnover times for patient rooms and ambulances. It was necessary to move patients and residents into new spaces with greater cleaning frequencies, and each move required the same extensive cleaning, ultimately delaying the isolation of individuals and transport of those in greatest need of critical care attention. These conditions also increased the risk of infection to staff assigned to clean and disinfect activities in those spaces.

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Although AR Gould Hospital had a UV machine on-site, one was not enough. The equipment was regularly needed in multiple locations, such as the emergency department, the operating room, and inpatient and outpatient rooms, at overlapping times. Not only was it impossible for the equipment to be everywhere at once, but regularly moving it was also hard on the machine. Additionally, Northern Light Continuing Care did not have access to this technology, placing nursing home residents at increased risk.

“Oftentimes, the Environmental Services staff deep cleans a room, but we still have to leave it unused for an extended period of time, depending on the life of the pathogen that may be lingering in the room,” said Daryl Boucher, RN, vice president of Operations. “The UV machine reduces delays in care and helps prevent transmission of infection. It is one more tool that we use to keep our patients and nursing home residents safe.”

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Thanks to federal funding awarded through a competitive process offered by the Aroostook Public Health Council in partnership with MCD Global Health, the hospital purchased two new portable UV germicidal disinfection lights. These federal funds were dedicated to addressing gaps in the public health system that contributed to health inequities and disparities uncovered by the COVID-19 pandemic.

The new UV lights can be deployed to priority areas such as ambulance bays and patient rooms. One of the units will be placed at the nursing home and training on the new units is already underway.

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