



**DISASTER  
RECOVERY  
SERVICES**

# **MAINTAINING A SAFER HEALTHCARE ENVIRONMENT WITH INFECTION CONTROL METHODS**

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ATRestoration.com**

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# Introduction

American Technologies, Inc. (ATI) is a nationwide provider of Disaster Recovery Services. This guide and our specially designed healthcare program are designed to assist managers of hospital facilities to operate in a safe and healthy environment in the wake of the COVID-19 pandemic. We are confident that ATI's experience with biohazard decontamination and post-disaster recovery services will help you thrive as we all attempt to return to some degree of normalcy.



# ICRA Barriers

Working closely with your infection preventionist and facilities staff, ATI will identify containment measures and build critical barriers, maintaining negative air pressure using HEPA equipped air filtrations units.

## PRE-FABRICATED PANEL SYSTEM

This versatile system provides a cost effective approach and is easily installed. An ideal containment solution for long term projects, these containment panels are made of stainless steel and are insulated for added noise reduction. Each panel locks to the adjacent panel forming an air tight seal that can be configured as needed.

## COROPLAST PANEL SYSTEM

This simple mounting system makes for fast installation and creates an airtight seal that exceeds ICRA requirements. It is tougher than corrugated fiberboard, lighter than solid extruded plastic, waterproof, weather resistant and stain resistant, making it ideal for temporary walls and partitions.

## CONVENTIONAL FIRE RETARDANT VISQUEEN SYSTEM

This system is suitable for low traffic, non-patient care areas and short term or emergency containment. Fire-resistant, this is an ideal solution to cover electrical equipment. Made from polyethylene, it provides an optimum balance of economy and performance.

## FIRE-RATED DRYWALL BARRIER SYSTEM

Suitable for long-term containment projects, this system can help redirect patient traffic and provide a more permanent barrier solution. The drywall barriers can be insulated to reduce overall noise within the contained space. All drywall barriers can be painted or have fire rated wall protection installed on them in order to meet additional ICRA guidelines.

## DECONTAMINATION CHAMBER (ANTEROOM)

An anteroom is an essential tool for hospital infection control. They serve a vital purpose in a healthcare setting by protecting patients and staff by isolating contaminated air, dust and potentially deadly airborne pathogens. Workers can remove their PPE, shoe covers and work clothes so that it doesn't contaminate the occupied areas.





## MEANS, METHODS AND TECHNOLOGY

Healthcare professionals nationwide trust ATI for infectious disease control. For many years, ATI has maintained embedded staff in hospitals, providing decontamination and isolation support. Our response to the COVID-19 pandemic was not an afterthought, but rather a proficiency based on years of training and experience. Our tools of the trade go far beyond brooms, sponges and mops. Our means and methods for COVID-19 virus disinfection include:

- **Ultraviolet Germicidal Irradiation (UVGI):**

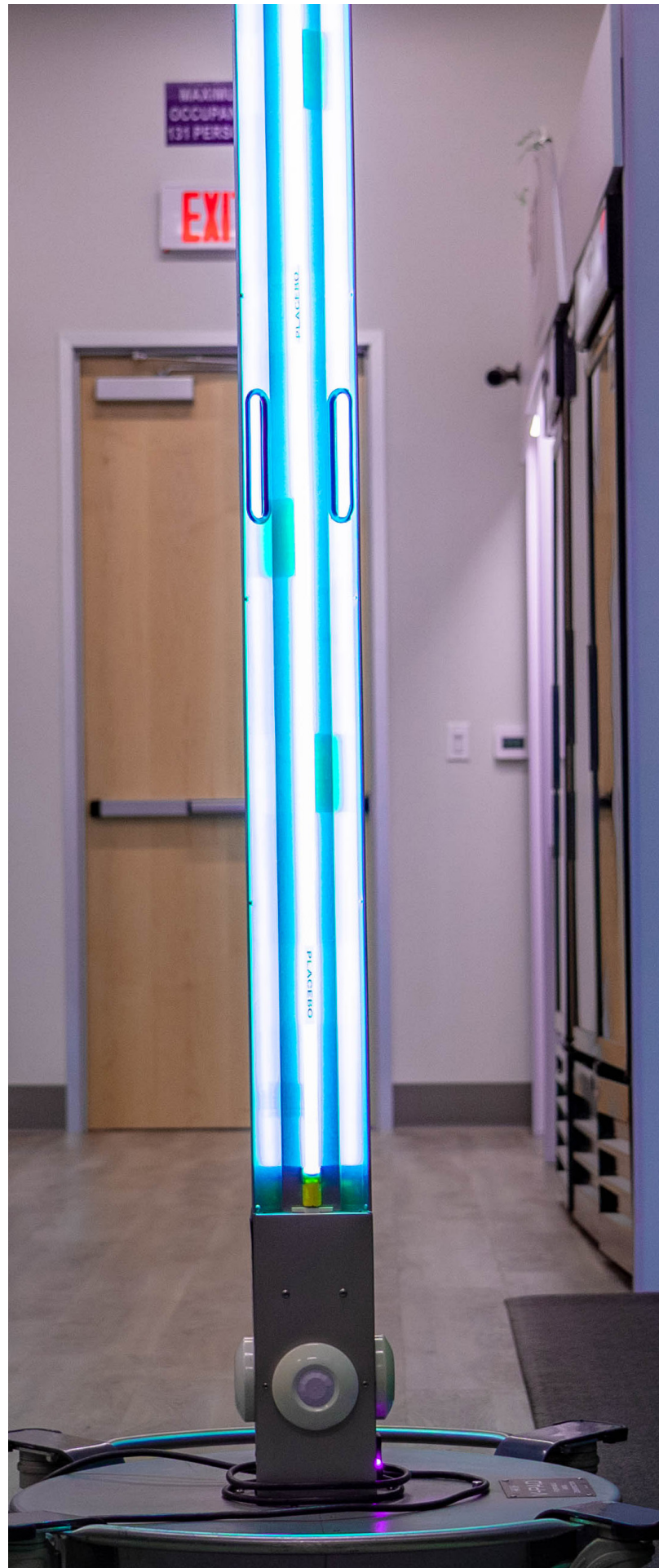
ATI offers as an added-value alternative to achieve surface sanitation and sterilization. The application of UV-C energy to deactivate microorganisms is known as Germicidal Irradiation or UVGI. The UVGI Room Sanitizer unit is specifically designed for disinfection of bacteria, viruses and fungi (mold) on exposed surfaces and can be used in various indoor environments.

Artificial UV-C energy is produced in germicidal ultraviolet lamps, which produce UV radiation by ionizing low-pressure mercury vapor. These lamps are similar to typical fluorescent household lighting fixtures but do not have the phosphorescent coating which imparts the soft white light. Ionized mercury emits a predominantly discreet wavelength of 254nm (nanometer) in the UV-C band, which is an ideal wavelength for destroying the DNA of single-cell organisms.

- **Electrostatic Sprayers:**

Electrostatic spray surface-cleaning is the process of spraying an electrostatically charged mist onto surfaces and objects. Electrostatic spray uses a specialized solution that is combined with air and atomized by an electrode inside the sprayer. Subsequently, the spray contains positively charged particles that are able to aggressively adhere to surfaces and objects.

For the disinfection of indoor environments that require a cost-effective and rapid turnaround, nonthermal fogging is the best application for combating the COVID-19 virus. Additionally, the electrostatic machine requires certain products to be used with the



device and specialized training.

Proper training is required to provide for consistency among disinfection technicians. ATI has had great results with traditional hand fogging using EPA-approved disinfectants. A wide variety of disinfectants can be used in a hand fogger without incompatibility issues.

• **Fogging Machines:**

Ultra-low volume (ULV) fogging machines are cold fogging machines that use large volumes of air at low pressures to transform liquid into droplets that are dispersed into the atmosphere. This type of fogging machine produces tiny droplets with diameters ranging from 1–150  $\mu\text{m}$  (one millionth of a meter). ULV machines are used for applying pesticides, herbicides, fungicides, sterilizers, and disinfectants, among other chemicals.

The chemicals used in this type of machine are more concentrated than the chemicals used in other spraying equipment, which also increases their killing efficiency. Other advantages of ULV misting machines include lower risks of injury due to the fog cloud being nearly invisible, low volumes of carrier chemicals, lower application cost and low noise levels

• **Waste Disposal:**

For Level 3 disinfection (confirmed COVID-19 cases), ATI treats all waste as biohazardous, regulated medical waste in accordance with regulatory requirements.

• **COVID-19 Nerve Center:**

In the early stages of the pandemic, ATI formed a COVID-19 Nerve Center to maximize our support to the communities we serve. This behind-the-scenes team provides an infrastructure to accommodate the incredible demand for labor, products, equipment, technology, continuity planning and information. From social media broadcasts to webinars to COVID-19 guidance documents, ATI is committed to educating and safeguarding the public amid the pandemic and will continue for the duration of the threat. ATI's Nerve Center enables us to respond efficiently and effectively to the needs of our clients.

## EXPERT SPOTLIGHT: ATI'S TEAM SCIENTIST



### DR. RICHARD WADE

Principal Scientist  
Omega Environmental

Dr. Wade has been a consultant for ATI for more than 10 years on all matters involving environmental health issues, including the COVID-19 pandemic.

He has graduate degrees from the University of Michigan and postdoctoral training at Harvard and Oxford universities. Dr. Wade is a renowned expert in the epidemiological sciences, risk planning and environmental health engineering. Leaders worldwide have looked to him when designing their response to the SARS, MERS and Ebola outbreaks.

Risk Management and Corporate Planning (Templeton Business School), Oxford University; Oxford, England

Postdoctoral Training, Executive Training Program in Health Policy and Management, Harvard University, Cambridge, Mass.

Ph.D., Environmental Health Sciences, area of specialization: Environmental Sciences and Engineering, University of Michigan, Ann Arbor

M.P.H., Environmental Health; area of specialization: Environmental Sciences and Engineering, University of Michigan, Ann Arbor

B.S., Biological Sciences, University of New Hampshire, Durham

Postgraduate Training: Environmental health policy (Harvard University), Risk Management and Corporate Planning (Oxford University; Oxford, England), Environmental Engineering, Toxicology, Genetic Engineering, Water and Wastewater Treatment Systems, Food Safety, Engineering Program and Policy Management, Corporate Management, Biofilms and pathogenic microbiology, Industrial Hygiene

# Professional Disinfection

The COVID-19 virus will present health risks for the foreseeable future. It is highly recommended that you schedule periodic COVID-19 virus disinfection services to enhance the effectiveness of your cleaning efforts. ATI's disinfection services offer several advantages:

## RAPID RESPONSE

Once a confirmed case of COVID-19 has been identified, it is imperative that you respond rapidly and decisively with the most effective disinfection measures. ATI's crews are equipped and trained to respond quickly to your call for service.

## FLEXIBILITY

ATI has the manpower and resources to accommodate your COVID-19 disinfection needs 24 hours a day, seven days a week.

## CDC-APPROVED/SUSTAINABLE SOLUTIONS

ATI only uses CDC-approved disinfection products, and our crews are trained in the proper application of these chemicals. Some CDC-approved chemicals, if not applied correctly, can pose significant health and safety risks to the crew and building occupants. Our disinfecting products and application procedures are vetted by scientific health professionals. Further, our CDC-approved products are environmentally friendly and sustainable.

## HEALTH AND SAFETY

ATI is an Essential Service Provider operating within multiple Critical Infrastructure Sectors. As such, ATI is given preferential access by major suppliers to the most effective Personal Protective Equipment (PPE) as required by the most extreme environments. In addition, our crews are instructed to practice the donning of PPE, as well as social distancing and isolation, both to and from the client site. These measures help to ensure the health and safety of our clients' patients and staff.





## Your Facilities—What to Expect

If your hospital's administrative offices were closed for precautionary measures, you may have taken some steps to secure the property including shutting off utilities; removing debris, trash and perishables; securing doors, windows and passive systems; and deep cleaning. Regardless of these prudent measures, several things must be considered before reoccupying your facility after an extended closure:

### WATER/MOISTURE INTRUSION

A leaky roof or plumbing fixture may have contributed to a microbial (mold) issue. Often minor leaks go unnoticed after a building has been closed for a period of time. The remediation of mold can involve demolition, which can also expose asbestos in older buildings. A small, continual leak can become a much larger problem during prolonged closures.

### AIR QUALITY

According to the ASHRAE Epidemic Task Force, "Ventilation and filtration provided by heating, ventilating and air-conditioning (HVAC) systems can reduce the airborne concentration of SARS-CoV-2 and thus the risk of transmission through the air. Unconditioned spaces can cause thermal stress to people that may be directly life threatening and that may also lower resistance to infection." For these reasons, it is important that your HVAC is adequately maintained and is functioning efficiently before reentry. Further, if your HVAC and associated ductwork have not been cleaned recently, it is recommended to do so before reopening the facility. ATI will conduct a site-specific risk assessment of the HVAC air-distribution equipment, ducts, plenums and system components to determine appropriate methods, tools and engineering controls required for performance of the work.

ATI specializes in environmentally friendly, advanced techniques in air duct cleaning with contact vacuuming and source removal in air purification processes. This includes the use of High Efficiency Particulate Air (HEPA) vacuums, mobile containment cubes, and constructing critical barriers, maintaining negative air pressure using HEPA equipped air filtration units. ATI's source removal methods are designed to extract contaminants from within the HVAC system and safely remove contaminants from the facility.







## COVID-19 CONTAMINATION

If you are certain that your building has been vacant for more than one week, the chance of COVID-19 contamination is highly unlikely. However, the longer your facility has remained closed, the more you should consider a deep cleaning before habitation. This is especially true if a deep cleaning was not performed before closing your facility. We also recommend periodic COVID-19-related cleaning and disinfection once your facility is up and running.



## ATI'S HEALTHCARE PROGRAM

ATI is trusted by Healthcare professionals nationwide to deal effectively with biohazard decontamination, including the COVID-19 virus. As the largest family-owned Disaster Recovery Firm in the U.S., our healthcare program is designed to support you while you continue to provide quality patient care. Our program includes:



### HEALTHCARE FACILITY EVALUATION

Our process includes a comprehensive Infection Control Risk Assessment of your hospital. Based on our findings, ATI will work with your Infection Prevention Practitioner/Third-Party Industrial Hygienist to provide guidance and make recommendations to protect your patients and staff from viral infection.



### ICRA BARRIERS

After identifying the Critical and Non-Critical areas and taking risk factors into consideration, ATI will recommend the type of critical barrier system to construct with tight seals and negative air pressure.

- Pre-fabricated Panel System
- Coroplast Panel System
- Conventional Fire Retardant Visqueen System
- Fire-rated Drywall Barrier System
- Decontamination Chamber (Anteroom)



### PERIODIC COVID-19 VIRUS DISINFECTION

Based on the occupancy and use of your facility, and at the suggestion of both the CDC and OSHA, ATI will recommend a precautionary disinfection schedule related to the COVID-19 virus.



### 24/7 CALL CENTER

For your convenience, ATI's Call Center is available 24 hours a day, 7 days a week, to assist with your emergencies and disasters.

## CONTACT US

PHONE | (800) 400-9353

ONLINE CHAT | [ATIRESTORATION.COM](https://www.atirestoration.com)

**LIFE, REBUILT  
WITH CARE.**



## ATI Cares

As the nation's largest family-owned Disaster Recovery Firm, we respect the human story behind every catastrophe and every loss. During the COVID-19 crisis, our crews have worked tirelessly to help hospitals maintain a healthy state while operating. The safety of our communities has been, and will always be, our number-one priority. Until there is a vaccine, ATI will continue to do its part.

We will continue to provide more guidance and recommendations as new ideas and practices emerge—that's part of our ongoing commitment to helping our clients prepare for what's next. In the meantime, contact us to learn more about our specially designed healthcare program and how we can help your hospital during this crucial period of protecting patient and staff health.





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## ATI RESPONDS TO CATASTROPHES NATIONWIDE

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Dallas	Phoenix	Sonoma
Denver	Riverside	Tampa
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