

# Continuous Microbial Monitoring



Healthcare acquired Infections  
WhisperCare® Monitor  
Analytic Dashboards  
Support

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## Microbial Monitoring of Critical Care Facilities to Improve Patient Outcomes

In healthcare, the effect of the built-environments' microbial composition on patient outcome is poorly understood, especially for critical care facilities. The most benign of microbes are sometimes fatal to patients with compromised immune systems. Simple bread molds like *Rhizopus* and *Mucor* cause fatal infections in critical care facilities. Healthcare acquired infections contribute directly to the increasing cost of healthcare. In fact, a staggering \$33.8 billion dollars is spent on Healthcare acquired infections (HAIs) annually in the United States.

### Cost of a Mold Outbreak in a Hospital Critical Care Facility

#### Mucor outbreak Kills 5 patients

Fees*	Price
Legal	\$3,744,000.00
Settlement	\$3,375,000.00
Microbe Investigation	\$150,000.00
Mold Remediation	\$30,000.00
Lost Lung Transplant	\$1,801,600.00
Expert Consultation	\$234,000.00
Facility Impact	Expense
ICU Closure	\$11,707,124.00
ICU Renovation	\$23,200.00
Patient Impact	Lost Revenues
Lost Patient Revenue	\$4,029,884.00
Lost Heart Transplant	\$1,149,020.00
<b>Total</b>	<b>\$26,243,828.00</b>

\*Legal fees expected to increase significantly as new wrongful death lawsuits filed in 2017.

### Proactive Approach Improves Facility Safety

Tracking microbe concentrations with species and strain level resolution, allows for facility management to respond quickly to the threat of infection.

#### ASSURED BIO LABS SOLUTIONS

Assured Bio offers a service that provides hospital management, facilities and EH&S personnel with state-of-the-art continuous monitoring technology to combat HAIs in critical care facilities. Monitoring is a proactive strategy that decreases mortality and morbidity of the most susceptible hospital patients and significantly reduces cost of care for hospital systems. The solution incorporates Assured's patented microbial capture technology known as Molecular Entrapment. The technology is imbedded in an unobtrusive, small footprint, sampling system that is nearly silent; a request made by a panel of doctors and nurses during the early design stage. But capturing microbes is the tip of the iceberg of our comprehensive monitoring service:

- Data is processed to identify potential microbial threats.
- Clients have web access to our secure system 24/7.
- Data is easy to interpret with our Analytics Dashboards
- Every room/location is tracked over time, providing a historical perspective, and a benchmark for infection control improvement.
- Ph.D. microbiologists and microbial contamination control experts provide support to identify root cause.

# WhisperCare®



The WhisperCare® unit is a small footprint (3 -1/2 "x 3 -1/2 "x 2-1/2") air sampling systems that incorporates advanced electronics to provide a consistent and highly efficiency capture system for airborne microbes, including mold, bacteria and virus (patent pending). The system runs off of a low voltage power supply with a standard 110 wall outlet. It is easily mounted.



The only sampling system that blends high efficacy microbial capture and low decibel output (< 6 DBA) in a NIST calibrated unit.

## Continuous Monitoring Program

Every Healthcare Facility has unique needs and requirements for their facilities. Assured Bio's professionals work with the healthcare facility management to ensure that our clients needs are met. We encourage a collaborative approach when constructing your microbial monitoring program. We have found that having a team of decision makers from the healthcare facility stream-lines setup logistics and increases buy-in among employees and management.

### Recommended Team Members

- ◇ Infection Control/Epidemiology
- ◇ Nursing
- ◇ Environmental Health and Safety
- ◇ Facilities Operations
- ◇ IT
- ◇ Marketing
- ◇ C-suite
- ◇ Procurement

## Sampling Logistics

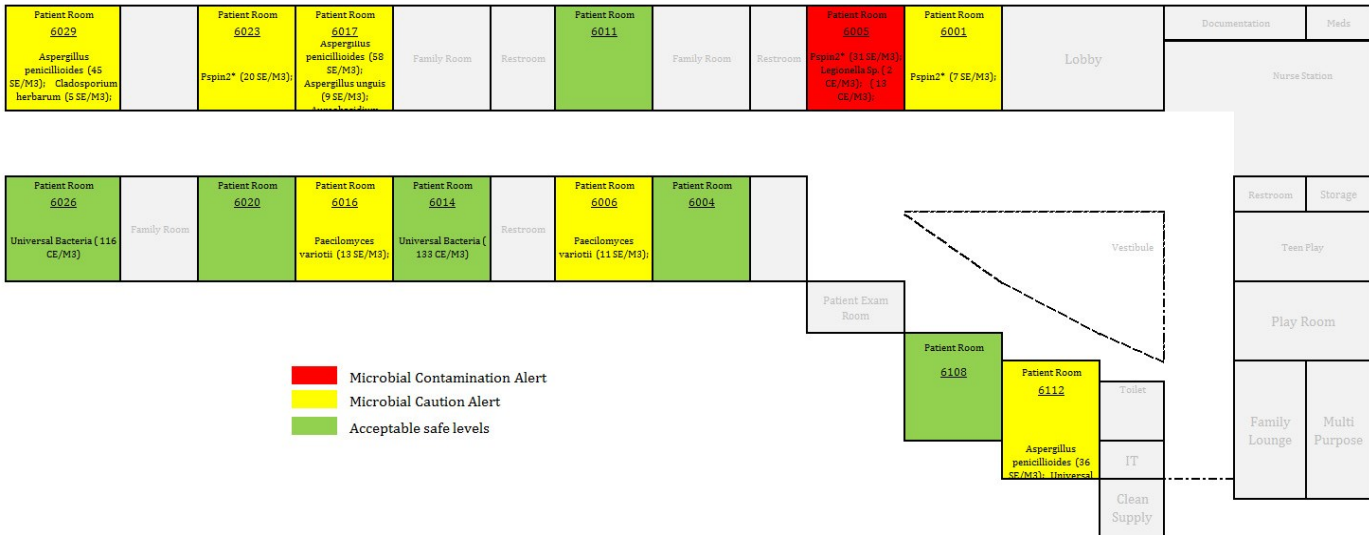
The WhisperCare® system is fitted with two removable sampling cartridges or M-TRAPS. Each M-TRAP® has a unique identifier. M-TRAPS are replaced every seven days. Replacing the cassettes is easy. We encourage hospitals to enlist EH&S personnel to collect , replace and send cassettes to the laboratory. Assured Bio analyzes the cassettes with advanced DNA diagnostics. We identify a core group of problematic microbes and any other microbe species or strains that the facility has requested to be part of their program. Results are delivered via e-mail and through our web based analytics package.



# Medical Center Air Safety Monitoring System

Week

1  
2  
3  
4  
5



## Custom Analytical Dashboards at your Fingertips

Dashboards are designed from floor plans for each facility. The use of floor plans facilitates the flow of information across the various disciplines that manage the equipment, personnel and a multitude of control systems that contribute to the health and safety of patients in critical care facilities. The objective is to improve collaborative responses to ensure contamination is controlled and continuous improvement is achievable.



protection from infection

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