



SafER Airborne Pathogen Safety System

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Bottom Line Up Front (BLUF):

The SafER Airborne Pathogen Safety System (APSS) is an infectious disease capture and filtration system created to reduce healthcare provider exposure to airborne diseases, including COVID 19 and numerous other pathogens.

Background:

When COVID-19 began spreading globally, many lifesaving respiratory procedures, that have been the standard of care for decades, were abruptly stopped or restricted. In a matter of months, and out of necessity, a team of front-line emergency healthcare personnel, world-class designers and engineers conceived, created, tested in a relevant environment and deployed a system that enabled the safe treatment of life-threatening respiratory conditions.

Game Changing Capability:

The SafER APSS is a portable infectious disease capture and filtration system that adds a scientifically tested and highly effective layer of personal protection against infectious diseases. The system provides protection for healthcare personnel at every point in the healthcare ecosystem including pre-intake transport. The system creates a negative pressure environment at any location that mitigates the risks of not having an available negative pressure room. It is designed to be used during common lifesaving aerosol generating procedures, such as nebulization, positive pressure ventilation, bag valve mask, specimen collection, and other endoscopic procedures. Nebulizers, for instance, convey a 1,000% increased risk to healthcare personnel. Through ultra-filtration, the exhaled breath and its associated pathogenic load are suctioned away and eliminated. Our recently conducted state-of-art computational fluid dynamic validation studies, conducted by a respected third party, show a 99.9% capture or containment of particulate matter or potentially dangerous pathogens. Currently there are no other comparable systems within the global healthcare market space.

Application in a Post-COVID-19 Environment:

While the system is COVID-19 inspired, its potential applications are limitless in mitigating exposure risks to numerous other pathogens that pose danger to the healthcare ecosystem. These pathogens include, but are not limited to, TB, Influenza, Plague, Pulmonary Anthrax, Enteroviruses and Rhino Viruses and other organisms that can be transmitted by droplet or via the aerosol route. The simple to use, cost effective system consists of a purpose made, portable, AC/DC vacuum source with single

patient use ULPA filter, tubing, and face shield. The Safer APSS establishes a new standard of care for protection of healthcare personnel during aerosol generating procedures, enabling lifesaving treatment to patients.

It is the “latex glove” of the 21st century.

