

SafER Portable Respiratory Isolation Systems Provide a Critical Layer of Protection for Battling the Resurgence of Measles Outbreaks

Measles is an acute viral respiratory illness and is considered one of the most contagious of all infectious diseases. The virus can be spread through airborne particles when the infected person breathes, coughs, or sneezes.

The measles virus can remain infectious in the air for up to two hours after an infected person leaves an area, and a person can be contagious for up to four days before symptoms develop and up to four days after symptoms disappear.



Symptoms include high fever, persistent cough, runny nose and sore throat. Measles presents a rash of flat red spots on the face that spread to neck, trunk, arms, legs and then feet.

Babies and young children are especially vulnerable to complications from measles. Severe complications can include pneumonia, hospitalization, pregnancy complications, encephalitis, and even death.

Global mortality and morbidity rates have significantly decreased due to vaccination, but still remain a concern in areas with low vaccination coverage.

Before widespread vaccination, measles caused an estimated 2.6 million deaths per year worldwide. Currently, the mortality rate in developed countries is much lower, typically around 0.1-0.2%, but it is still a risk, particularly for very young children, the elderly, and people with compromised immune systems.

In low-income countries with poor healthcare access, the mortality rate can be much higher (up to 10% or more), especially when complications like pneumonia, dehydration, or malnutrition are involved. Morbidity issues are also of significant concern as measles can cause severe complications.

Due to the efficacy of the measles, mumps and rubella vaccine (MMR) introduced in the United States in 1968, measles was declared eliminated in the year 2000.



With an increasing number of Americans opting out of the MMR vaccine, new cases of measles outbreaks are emerging in U.S. regions. Measles is once again a serious threat to the health of the U.S. population.

Because of the extremely contagious nature of the virus, it is of utmost importance that front-line medical workers and hospital staff treating potentially infected patients are protected. The risk of infection for other patients in a crowded hospital waiting room, and for hospital staff is significant.

SafER Medical, LLC has a solution, a way to contain and prevent the spread of airborne particles and protect others from acquiring measles.

SafER Medical's portable negative pressure system (PNPS) is quickly becoming the new gold standard for treating patients with acute respiratory illness and isolating the infection to the patient, while protecting emergency medical workers who are treating them.



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SafER portable systems are now an important and quick-to-deploy solution for battling the spread and impact of new respiratory disease outbreaks, such as the current measles resurgence.

The SafER PNPS system is a lightweight, portable vacuum with an AC/DC battery for transport, and a plug in power cord for stationary use. The Respiratory Shield is fitted to the patient creating a negative pressure bubble around them, allowing for control at the source.



The easy to carry, six-pound PNPS allows for several patients to be treated at once, even simultaneously. This frees up limited space or 'real estate' in hospitals that deal with overcrowding or under-staffing issues, especially during flu season or during an unexpected outbreak of an infection like measles.

The risk of spreading infection in a crowded waiting room will no longer be an issue, because practitioners and EMS workers can provide treatments to respiratory patients anywhere from the patient's home, during transport, in the emergency room, or other areas of the hospital. SafER stays on the patient from intake throughout their treatment, isolating the infection to patient and preventing spread of infection.

At a one-time purchase price of about \$5000, SafER PNPS provides an affordable and agile solution that can be quickly deployed virtually anywhere on the front lines to combat the spread of respiratory illness. For hospitals and medical care organizations that have already adopted SafER portable systems as a part of their ongoing operations, the ability to redeploy them in response to unexpected respiratory outbreaks is now a key element in rapid-response plans.

In the interest of public health, SafER also stands ready to provide rapid-ship prioritization for hospitals and organizations that are facing emergent outbreaks, such as many are now experiencing with measles.

SafER delivers long term value through cost effective infection control, reduced staff absences due to illness, enhanced and more timely patient outcomes. This reduces the risk of exposure for workers in high risk situations and helps maintain operational continuity.

A standard negative pressure room exchanges air 12 times an hour, SafER exchanges air 3.8 times a second, and CFD analysis shows SafER has 99% effectiveness in removing exhaled particles from the environment.



As the global medical community has learned over recent years, the ability to quickly isolate and contain the spread of respiratory diseases can make a major difference between a localized outbreak and a widespread or even global crisis.

SafER portable systems have now become a key element for containing local respiratory disease outbreaks and preventing widespread infection along with debilitating complications or unnecessary loss of millions of lives.

For more information on SafER capabilities or to discuss rapid-deployment opportunities, contact Carl Baker at cbaker@safermedicalproducts.com