WHY A COUGH IS AN INFECTION CONTROL RISK

Diseases have always had the capacity to stagger medical science with their capacity to infect, multiply and spread.

Smallpox – before its eradication in 1979 – was one of the most feared diseases in the world due to both its rate of infection and 30% mortality rate. Because it was an airborne virus it had the capacity to infect tens of thousands if just a small number of people become infected in a built-up area like a city.

On a less dramatic level it's the same reason why the common cold can burn through an office in the space of a few days. Other airborne diseases spread through coughing include tuberculosis, SARS, and influenza.

Despite the threat airborne diseases pose there was surprisingly little information about how a cough behaves once it is expelled from the body until Pennsylvania State University began their research.

Area of Affect

In 2008 a team of researchers at Pennsylvania State asked a healthy student to stand in a room, surrounded by lenses and mirrors and asked him to cough.

Using a method called schlieren photography, Doctor Gary Settles and Doctor Julian Tang turned the invisible quirk of physiology into a visible picture. The results were striking.

A Cough. Credit Gary Settles/Pennsylvania State University

The image above depicts a cloud of 'turbulent air' moving away from the subject in a widening dispersal field. A cough travels at 18 miles an hour – or 26.4 feet per second. Faster if the cough is particularly severe.

To put it another way, potentially harmful microbes will have reached the other side of the average sized living room in less time than it takes you to recover from the cough in the first place.

That's assuming the room doesn't have air conditioning or a breeze coming from an open door or window. It's also assuming that there is a single, isolated cough which – if the individual has a severe infection – is never the case.

Change the environment from the average living room to a hospital ward or communal space in a care home and it is easy to see how airborne infectious diseases can rapidly spread through facilities with often devastating results.

Infection Control

In a clinical setting it's almost impossible to prevent airborne diseases from being brought in and from spreading. Through their very nature they move around easily, either through air currents or by coming into contact with vectors (people).

As such, making sure you have adequate protection and containment methods in place will significantly decrease the risk of infection.

Unfortunately, it's practically impossible to prevent patients from coughing without covering their mouths. Either the cough comes on too suddenly or they simply don't think proactively about containing the harmful microbes they are carrying.

Why would they? They see it as your role to look after them, not the other way around.

This is why you need to ensure that you have sufficient masks, gloves and tissues to hand in order to both limit exposure and encourage containment.

Furthermore, as harmful microbes can easily settle on surfaces and exposed skin – especially hands – making sure that surfaces and hands are disinfected regularly will prevent those microbes from entering the body via the mouth, nose or eyes.

You can also leverage your pulp macerator to dispose of any maceratable contaminated tissues as part of a disposal cycle of pulp utensils.

We Can Help

Contact DDC Dolphin to find out how our Hygenex range of infection control consumables can help your fight against airborne diseases.

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