



# DEALING WITH WATER DAMAGE

## Tools, techniques to protect patients when flooding occurs

By Elizabeth Lamb

**F**looding is a concern that's top of mind for many facility managers, most of whom are already stretched thin trying to keep up with routine maintenance and repairs. While some flooding can be forecasted, such as that from snowmelt, it can also happen at a moment's notice from burst pipes. Of course, this is troublesome in any environment but flooding in healthcare facilities poses unique challenges and calls for expert solutions.

### PRIORITIZE PATIENT SAFETY

It's easy to see flooding solely as a facilities problem. After all, when it occurs, maintenance teams must dry the building, remove damaged materials and renovate affected areas. And this is certainly part of the picture.

However, in healthcare facilities, the primary concern is protecting patients.

Flooding poses a number of risks to patients and mould is at the top of the list. Capable of growing in 24 to 72 hours after flooding, mould can quickly become a major threat to immunocompromised patients and those struggling with respiratory illnesses. To protect patients, the first order of business is to remove them from the affected areas. Remediation teams can then pivot to focusing on the facilities. They must stop fungal growth when possible, contain mould once it has grown and eliminate it from affected areas.

### STOPPING MOULD GROWTH

Mould thrives on moisture and when flooding occurs, moisture is in no short supply. The

moment flooding starts, the clock is ticking. To prevent mould growth, the building must be dried to eliminate the moisture needed for it to grow. To do this, contractors use air movers to get moisture off surfaces and into the air. They then use dehumidifiers to capture the moisture in the air.

While this process is effective for drying a building, if harmful particulates are in the air, the air movers can blow these throughout the building. This is a risk that healthcare facilities can't take. So, before drying the building, healthcare facilities must begin by containing the affected area.

### CONTAINING THE AFFECTED AREA

In the past, contractors would erect drywall walls to contain flooded areas. However,

## EMERGENCY PREPAREDNESS & RESPONSE

depending on the scope of the flooding, these walls can take two to three days to build, giving mould plenty of time to grow. Further, these walls are not reusable, they're labour intensive to construct and require stud frames, and they must be painted. Because of this, they're less cost-effective and can lead to further mould growth.

Instead of using drywall, contractors are increasingly turning to modular containment walls. By comparison, they're easier to set up, lighter, reusable and impermeable to water. For these reasons, CSA standards now include them as a permissible option.

### ELIMINATING MOULD

Once contractors put containment walls in place, they'll need to negatively pressurize the containment area. Negative air machines or portable air scrubbers are the tools of choice for this task. These devices prevent contaminated air from leaking into adjacent areas by ensuring airflow is directed into the contained area rather than away from it.

If mould has grown inside the affected area, teams will often have to remove damaged drywall and other materials.

Simply knocking mould off the surface isn't enough. The mould will continue to grow, naked to the visible eye, creating further problems down the road.

When removing these materials, mould spores and other harmful particulates can enter the air. To clean the air, contractors turn to HEPA portable air scrubbers, which remove 99.97 per cent of particulates from the air. These machines draw air in, run it through filters and then exhaust the filtered air outside the building through ductwork that fits seamlessly with the modular containment walls.

### FROM THEORY TO PRACTICE

It's one thing to think about how to manage flood damage theoretically. Dealing with it in real life is another matter entirely.

Recently, at one of Northern Health Region's locations in Manitoba, 70,000 gallons of water poured into an operating room overnight when a pipe burst. The facility brought in a team of restoration and remediation experts to handle the situation. They installed 100 linear feet of modular containment walls. Then, they used nega-

tive air machines to create negative pressure in the contained area. Finally, they filtered and exhausted the air while teams worked to dry and replace materials in the affected area.

### PREPARE FOR THE WORST

In healthcare facilities, flood damage is a constant concern. Despite the best efforts of maintenance teams, flooding cannot always be prevented. Accordingly, teams must have a plan for how to quickly, effectively and safely respond to flood damage. Additionally, they must have the right tools for the job, empowering them to protect patients, restore the building and allow the healthcare facility to continue caring for patients. ■

Elizabeth Lamb is the national healthcare and construction manager at Abatement Technologies. Abatement Technologies is a leader in the design and manufacture of powerful abatement products. Since its founding in 1985, tens of thousands of environmental abatement and HVAC contractors, commercial building owners, facility managers and hospital infection control specialists have trusted the company's products.

## A Leaky Roof Lets In More Than Just Rain



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