



Media release

Prevention of infectious diseases vital post-flood

Prevention of infectious diseases is vital following sudden flooding disasters, according to an infectious diseases specialist.

Writing in the latest issue of *Emergency Medicine Australasia*, the journal of the Australasian College for Emergency Medicine, Dr Tony Allworth, Director of Infectious Diseases at Royal Brisbane and Women's Hospital, offered advice to the public as well as to emergency workers.

"When unusual flooding events occur, the electronic media can be useful in providing positive messages, such as not wading in contaminated waters, utilizing appropriate footwear and protective garments including heavy duty gloves in the clean-up phase, and the use of masks/respirators in the context of potential aerosolization of floodwaters and detritus.

"This message is doubly important for persons who might be immunocompromised by illness (e.g. diabetic neuropathy) or therapies (e.g. corticosteroids)."

He said diabetics might be at increased risk of soft tissue infections, particularly people with peripheral neuropathy involved in the clean-up phase and who suffer unrecognized injuries.

Many of these wounds are exposed to contamination in water environments.

"Also, although emergency physicians are familiar with the need for personal protective equipment when called to attend pre-hospital scenarios, it is valuable to remind those attending flood incidents that sun protection, insect repellents and face masks with eye protection are still important, together with the more familiar protective clothing and gloves to avoid injury."

Dr Allworth said floods are one of a number of natural disasters that might occur without warning and that require knowledge of an array of infections, both usual and organisms less typically encountered.

Tetanus immunization with or without immunoglobulin is important for clean-up workers, he said, especially in parts of the world with low immunization rates overall – many cases of tetanus were seen after the Asian tsunami of 2004.

In flooding events, animals as well as humans are displaced, resulting in the potential for increased numbers of bite wounds.

Some people caught up in floodwaters and their aftermath will present with a respiratory infection, he said.

"The pathogens responsible depend on local epidemiological factors.

"Tropical zones of Asia and areas of Queensland and the 'Top End' are endemic for melioidosis, an infection caused by *Burkholderia pseudomallei* that might present as an overwhelming multi-lobar pneumonia, a septicemic illness, or as multifocal abscesses.

“Outside this geographical region, however, other gram-negative bacilli might also contribute to respiratory infections.

“These might occur as a consequence of direct aspiration of floodwaters, or as a result of inhalation of aerosolized material during the clean-up phase (as evidenced by the images of high-pressure hoses being used in confined spaces in many flood ravaged areas following the recent emergencies in Queensland and Victoria).”

Dr Allworth said crowding that occurs in emergency shelters and displaced persons camps might result in the spread of viral respiratory pathogens including influenza and, in areas where it is prevalent, tuberculosis.

Gastrointestinal infections, too, are a consideration in the context of flood events.

“They are usually only an issue, however, where sewage systems are compromised or when the availability of fresh water is restricted.

“Outbreaks of salmonellosis are not uncommon and difficulties maintaining food hygiene might contribute to these.”

A variety of unusual infections might present as non-specific febrile illnesses.

“For example, leptospirosis is caused by a spirochete that contaminates rodent urine and might become more prevalent in the aftermath of a flood as people conduct clean-ups and are exposed to a contaminated environment.

“Vector borne illnesses such as dengue fever and malaria are frequently not prevalent during the Impact Phase as the vector habitat has been disturbed. However, their prevalence might rise over subsequent weeks as the breeding cycle is re-established and potentially amplified by the abundant standing water available,” Dr Allworth said.

FURTHER INFORMATION:

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