

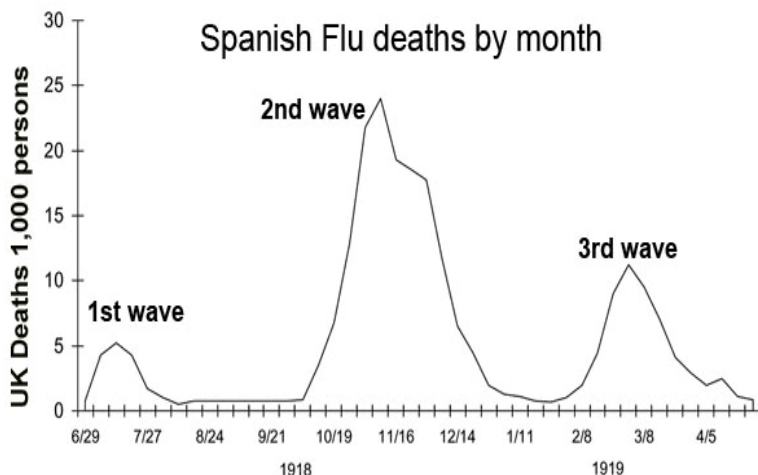


One of the most subtle, yet most dangerous symptoms of the recent H1N1 flu outbreak is Flu Fatigue. Flu Fatigue is weariness brought on by media hype fed through a 24-hour news cycle that is constantly seeking its next crisis. Flu fatigue results in a built-up immunity to care about future epidemics and a general malaise regarding pandemic preparedness.

Assuming that this most recent outbreak is over and should be forgotten is dangerous. History has shown that pandemic diseases are likely to quietly die-down, only to emerge more virulent than ever a few months later. This phenomenon is known as the 'second wave'.

## Second Wave

The three major pandemics over the past 100 years have shared a common epidemiology. The Spanish Flu (1918), Asian Flu (1957) and the Hong Kong Flu (1968) each began as mild illnesses in the springtime. Each of the three pandemics emerged in the autumn as much more virulent killers.<sup>1,2</sup>



*Will the recent H1N1 shift into a more deadly strain this Fall? Pandemic experts such as the [World Health Organization's Director General](#) Margaret Chan are preparing for the worst. "We hope the virus fizzles out, because if it doesn't we are heading for a big outbreak. I'm not predicting the pandemic will blow up, but if I miss it and we don't prepare, I fail. I'd rather over-prepare than not prepare."<sup>3</sup>*

## Age of Pandemics

Epidemiologist and Chairman of the [National Biosurveillance Advisory Subcommittee Lawrence Brilliant](#) says we're heading into an 'Age of Pandemics'. "The 2009 swine flu will not be the last and may not be the worst pandemic that we will face in the coming years. Indeed, we might be entering an Age of Pandemics. In our lifetimes, or our children's lifetimes, we will face a broad array of dangerous emerging 21st-century diseases, man-made or natural, brand-new or old, newly resistant to our current vaccines and antiviral drugs. You can bet on it."<sup>4</sup>

Betting on the outcome of a particular epidemic is risky. But amidst the uncertainty, experts agree that humanity will face a deadly pandemic in the future. Hospitals, and especially Emergency Departments, will be inundated by the sick and their families. The time to prepare is now, and several measures must be integrated to provide the maximum protection against transmission of pandemic disease.

## Clearing the air

Increasingly, scientists are unraveling the secrets of viral disease transmission. New research has determined that air plays an important role in how we 'catch' respiratory diseases.<sup>5,6,7</sup> Exhaustive studies following the SARS outbreak in 2003 indicate that this virus was airborne and that it is likely to have spread via a ventilation system within an apartment building.<sup>8,9</sup>

Recognizing the role air plays in disease transmission, architects, engineers, hospital administrators and building managers are looking to VIGILAIR<sup>®</sup> technology to reduce airborne pathogens.

Installed within a building's Heating Ventilation and Air Conditioning (HVAC) system, VIGILAIR<sup>®</sup> technology incorporates [Ultraviolet Germicidal Irradiation \(UVGI\)](#) and filtration to inactivate and remove pathogens within the HVAC air stream. UVGI damages the DNA/RNA of viruses, bacteria and fungi, preventing the microorganisms from reproducing and becoming infectious.

By disinfecting the air as it passes through the HVAC system, VIGILAIR<sup>®</sup> significantly reduces the amount of infectious microorganisms that are circulated throughout the building. Multiple hospital studies verify VIGILAIR<sup>®</sup> drastically reduces microbial contamination resulting in reduced infection rates.

VIGILAIR Systems, Inc. is the only UVGI manufacturer that has performed UVGI irradiation tests with live infectious agents including Anthrax, [Avian flu \(H5N1\)](#) and the [SARS virus](#). The VIGILAIR<sup>®</sup> Biodefense system is the only UVGI technology to earn the Department of Homeland Security's 'designation' as a [Qualified Anti-terror Technology](#).

## Fighting Flu Fatigue

Complacency can be costly--the time to make pandemic preparations is now. While no single measure can prevent disease transmission, VIGILAIR<sup>®</sup> is a technology that is proven to significantly reduce airborne pathogens. VIGILAIR<sup>®</sup> can play an important role in your comprehensive pandemic preparations. More information on pandemic preparations can be found at [www.VIGILAIRsystems.com](http://www.VIGILAIRsystems.com).

## References

1. *Pandemics and Pandemic Threats since 1900*. PandemicFlu.gov. Retrieved May 6, 2009 from <http://www.pandemicflu.gov/general/historicaloverview.html>
  2. .Hellerman, C. April 30, 2009. *Scientists dig for lessons from past pandemics*. CNNHeath.com. Retrieved May 6, 2009 from <http://www.cnn.com/2009/HEALTH/04/30/swine.flu.1918.lessons/index.html>
  3. Jack, A.. May 3, 2009. *Chan hits back at WHO critics*. Financial Times. Retrieved May 6, 2009 from [http://www.ft.com/cms/s/0/e6260d9a-37d4-11de-9211-00144feabdc0.dwp\\_uuid=819fc44c-33e2-11de-9eea-00144feabdc0.html?nclick\\_check=1](http://www.ft.com/cms/s/0/e6260d9a-37d4-11de-9211-00144feabdc0.dwp_uuid=819fc44c-33e2-11de-9eea-00144feabdc0.html?nclick_check=1)
  4. Brilliant, L. May 2, 2009. *The Age of Pandemics*. The Wall Street Journal. Retrieved May 6, 2009 from <http://online.wsj.com/article/SB124121965740478983.html>
  5. Li Y, et al. *Role of ventilation in airborne transmission of infectious agents in the built environment—a multidisciplinary systematic review*. Indoor Air 2007; 17: 2-18.
  6. Tellier, R. *Review of aerosol transmission of influenza A virus*. Emerging Infectious Diseases 2006; 12: 1657-1662.
  7. Beggs, CB. *The airborne transmission of infection in hospital buildings: fact or fiction?* Indoor and Built Environment 2003; 12: 9-18.
  8. Li, Y, et al. Multi-zone modeling of probable SARS virus transmission by airflow between flats in Block E, Amoy Gardens. Indoor Air 2004; 15: 96-111
  9. Yu, I. *Evidence of airborne transmission of the severe acute respiratory syndrome virus*. New England Journal of Medicine 2004; 350, 1731–1739
- Flu Chart- Taubenberger, J, Morens, D. *1918 Influenza: the Mother of All Pandemics*. Emerging Infect Dis. Volume 12, Number 1, January 2006. Retrieved from <http://www.cdc.gov/ncidod/eid/vol12no01/05-0979-G1.htm>



VIGILAIR Systems Inc.  
888.401.8770  
4097 Beach Ridge Rd.  
N.Tonawanda, NY 14120  
USA