

## **The H1N1 Issue: Flu Pandemic, Fear Pandemic, or Both?**

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The H1N1 issue has become so prevalent that I thought it appropriate to share some factual perspective. I realize that factual perspective is neither newsworthy nor popular when people are in the midst of a mob mentality of fear but I'm willing to risk unpopularity in order to encourage people to be guided by science, reason, and logic.

As you've heard me say so many times the key to finding the truth is asking the right questions. If we don't ask the right questions we will never get the right answers. Irrational fear usually comes from asking the wrong questions or failing to ask the right ones. As I often point out it is not what we don't know that poses the greatest danger, it is what we think we know that is false. We also must be aware of confounding factors creating self fulfilling prophecies. Sometimes fear is rational, sometimes it is not. Regardless, the most important thing is to ACCURATELY assess the threat and then identify an evidence-based, logical, reasonable, and RATIONAL response or course of action.

**Let's start with the H1N1 flu virus itself.** Clearly this flu virus is a reality and clearly it can lead to illness. The most important question is what kind of illness. The FACT is that the type of illness associated with this virus in over 99.9% of CASES is mild to moderate flu symptoms which include fever, nausea which can include vomiting, and of course general malaise. Not very pleasant to be sure but is this any different than the symptoms associated with the flu viruses that have been the source of the seasonal flu for the past 50 years? No. Although not every seasonal flu virus is associated with vomiting the truth is that vomiting is not considered serious. Seriously uncomfortable - yes, seriously risky in terms of death or severe complications - no.

**But what about the deaths from H1N1?** We all must admit and understand that even the thought of a child dying is enough to send any parent into hysterics. I can't think of anything more frightening. So let me be clear. I am not suggesting that the threat of harm or death to my child or any child is not something to fear. What I am suggesting is that we RATIONALLY assess the threat and then assess our fear level to see if it is appropriate. Good decisions, decisions that minimize threat and maximize safety, are NOT based on irrational fear. Fear is our worst enemy. Logical interpretation of available facts is our best ally.

Here is what we need to know before we can make a decision about an appropriate fear level associated with risk of death from H1N1. First we need to know how many deaths have been caused by H1N1 in any given population. The next question to ask is whether or not those who have died had underlying illnesses that made them more susceptible or more at risk. In other words we need to know how many of the deaths ASSOCIATED with H1N1 are actually CAUSED by H1N1.

To assess the absolute risk of dying from H1N1 we need to divide the number of deaths in any given population by the number of people in that given population. In Canada as of Oct 17, 2009 there had been a total of 1,604 hospitalizations, and 83 deaths associated with H1N1. By the way by this time H1N1 was already being portrayed as a DEADLY PANDEMIC. So, out of a population of approximately 35 MILLION there were 83 deaths. This means your chance of dying of H1N1 up to this point was  $83/35,000,000$  which is one in 421,687. This means the chance of death from H1N1 was 0.0002%.

To date these risks are similar in the United States and throughout the rest of the world.

It is not easy to get exact numbers on the number of deaths that are caused by underlying conditions or secondary bacterial infections but estimates are that these would represent at least 99% of all deaths associated with H1N1. So, if you do not have an underlying illness your chance of dying from H1N1 is 1% of 0.0002%. Not exactly worthy of widespread panic.

The chances of dying in a car accident, airplane accident, a fall, from complications of air pollution, from complications from industrial toxins or from medical treatment are EXPONENTIALLY GREATER. What is the difference? The media and the health authorities are not focusing your attention on these risks. You have more chance of dying in a car accident on your way to get an H1N1 vaccine than dying from H1N1.

Statistically it could be concluded that it is an undue risk to get into a car and get the vaccine! I could not find any published peer-reviewed data to determine whether the H1N1 vaccine is safe or effective. In other words there is no available information that would be required for any other medical intervention that the H1N1 vaccine works or if it is safe. This does not mean it is not safe or effective, it just means we have no data which would be considered scientifically valid to utilize to form our opinions. Even if we assume the vaccine is safe and effective, statistically there is still more risk of death from the car ride to get the vaccine than from dying from H1N1!

So what is going on in my opinion? Well I think some very well intentioned people are allowing fear rather than science and data to guide public policy. I'm not alone in this opinion by the way. Have a read of the following quotes from a recent article published in The British Medical Journal entitled "Calibrated response to emerging infections" [http://www.bmj.com/cgi/content/extract/339/sep03\\_2/b3471](http://www.bmj.com/cgi/content/extract/339/sep03_2/b3471). In fact read this entire article, I think it offers a very good perspective and it is very well referenced.

Pay particular attention to how the health authorities have changed the definition of a flu pandemic!

"Since the emergence of novel A/H1N1, descriptions of pandemic flu (both its causes and its effect) have changed to such a degree that the difference between seasonal flu and pandemic flu is now unclear. WHO, for example, for years defined pandemics as outbreaks causing "enormous numbers of deaths and illness," but in early May, removed this phrase from the definition."

Changing views of pandemic flu, before and after emergence of influenza A/H1N1 virus:

Aspect	Before A/H1N1	Since A/H1N1
One line summary	WHO 2003-9: "An influenza pandemic occurs when a new influenza virus appears against which the human population has no immunity, resulting in epidemics worldwide with enormous numbers of deaths and illness"	WHO: "An influenza pandemic may occur when a new influenza virus appears against which the human population has no immunity"
Virus and immunity	WHO 2005: "Most people will have no immunity to the pandemic virus"	WHO: "The vulnerability of a population to a pandemic virus is related in part to the level of pre-existing immunity to the virus"
Impact (health, social, economic)	US CDC 1997: "When antigenic shift occurs, the population does not have antibody protection against the virus"	US CDC: "Cross-reactive antibody [to A/H1N1] was detected in 6%-9% of those aged 18-64 years and in 33% of those aged >60 years"
Impact (health, social, economic)	WHO 2005: "Large numbers of deaths will occur . . . WHO has used a relatively conservative estimate - from 2 million to 7.4 million deaths . . . Economic and social disruption will be great"	WHO: "H5N1 has conditioned the public to equate an influenza pandemic with very severe disease and high mortality. Such a disease pattern is by no means inevitable during a pandemic. On the contrary, it is exceptional"
Impact (health, social, economic)	CDC 1997: "The hallmark of pandemic influenza is excess mortality"	CDC: "There are some pandemics that look very much like a bad flu season"
Impact (health, social, economic)	Canada 2006: "An influenza pandemic results if many people around the world become ill and die from such a [new form of influenza] virus"	Canada: "An influenza pandemic does not necessarily cause more severe illness than seasonal influenza"

"But the 2009 pandemic, taken as a whole, bears little resemblance to the forecasted pandemic. Pandemic A/H1N1 virus is not a new subtype but the same subtype as seasonal A/H1N1 that has been circulating since 1977."

"Furthermore, a substantial portion of the population may have immunity. The US Centers for Disease Control and Prevention (CDC) found that 33% of those aged over 60 had cross reactive antibody to novel A/H1N1, which may explain why cases have been

rare in elderly people." *Interestingly a recent report by CBC in Canada indicated that 4 preliminary studies showed that the chance of having immunity to H1N1 is DECREASED if you have regularly been vaccinated for seasonal flu. It will be interesting to see if they pursue this any further and publish the results in a peer-reviewed journal.*

**"On 26 April, with 20 cases and no deaths in the US, the Department of Health and Human Services declared a nationwide public health emergency."**

"The SARS outbreak showed that large numbers of infected people are not necessary to generate concern and fear over disease. The SARS virus is known to have affected only 8096 people globally, but the fear of infection, involuntary quarantine, travel restrictions and subsequent political antagonisms, and at least \$18bn in losses were felt by far more. It was not the virus but the response to it that caused these social and economic harms."

**So what is my conclusion; is the H1N1 issue a flu pandemic, a fear pandemic, or both?**

My conclusion is that at this point it is a pandemic of fear and NOT a flu pandemic. Of course it depends on how you define pandemic! The data available make it clear that we are experiencing an H1N1 seasonal flu BUT that to date this is not associated with significant risk of death or serious illness.

The FACT is that the current level of alarm and fear are NOT supported by data. However, this could change. What we cannot say is that things will not get worse. There is sufficient data to date to strongly suggest that it won't but data can only accurately tell us what has happened not what will happen. Certainly the odds are that H1N1 will pass with the same overblown fear and unacted threat as SARS. Only time and data will tell.

I do have some concerns about the fact that testing for H1N1 has now been virtually all but discontinued. The authorities are now assuming that any case of the flu is H1N1. This means we will NEVER have any valid data about incidence, prevalence, or death rates. All such assessments without actual confirmation of infection are, in scientific terms, invalid. The term they will use is speculative. Sounds better than saying we are guessing.

Another concern is that deaths associated with H1N1, as with all previous seasonal flu viruses, are vastly overestimated. The annual published death rates for flu are NOT from confirmed deaths due to flu and in fact even CDC published stats reveal that most deaths "associated" with the flu are actually not from the flu at all but almost entirely from pneumonia. Less than one percent of deaths reported as associated with seasonal flu are actually caused by seasonal flu and even in these deaths the vast majority occur in people with underlying conditions.

Another concern is that it is unlikely that we will ever get any data on whether or not those who have been vaccinated have been protected. If one actually reads the primary research studies (not the news or published summaries by health ministries) on the

seasonal flu vaccine what one finds is that the data does not support claims that the regular seasonal flu vaccine significantly decreases the incidence of flu or complications from it. Recently there has been some admission that the vaccines do not prevent the flu and that indeed they only guess correct on which virus to vaccinate against less than 30% of the time. However the health authorities still justify recommending the vaccine by claiming it decreases the severity of flu and complications from it. All I am asking for is to have DATA guide policy not DOGMA.

One of the sources of controversy is that vaccine benefits are often reported as relative risk reductions not absolute risk reductions so when one applies the results in real life one quickly realizes that the actual reduction of risk for those vaccinated vs not vaccinated is not statistically significant. They often report that the flu vaccine reduces hospitalizations or deaths but they report the relative difference between vaccinated vs unvaccinated not the absolute difference. In other words there might be 5000 people in each study group and there may be 4 deaths amongst those unvaccinated and 2 deaths among those vaccinated. This relative difference is reported as a "50% reduction in deaths in those vaccinated vs not vaccinated". Of course what this really means is that if you are vaccinated, and you get the flu, you have a 2 in 5000 chance of death. If you are unvaccinated and you get the flu you have a 4 in 5000 chance of death. An absolute difference of 2 in 5000 - not even remotely significant and certainly not worthy of the national vaccination campaigns and the billions of dollars spent on the vaccines. YES, they do report things this way!!

Some good references on this topic are *Jackson et al., Evidence of bias in estimates of influenza vaccine effectiveness in seniors, International Journal of Epidemiology 2006; 35: 337-344* and *Jefferson, T. Influenza vaccination: policy versus evidence. British Medical Journal 2006; 333: 912-915* and *Jefferson et al. Efficacy and effectiveness of influenza vaccines in elderly people: a systematic review. Lancet 2005; 366: 1165-74* and *Simonsen et al. Mortality benefits of influenza vaccination in elderly people: an ongoing controversy. Lancet Infectious Disease 2007; 7: xxx-xx.*

### **But doesn't it seem like we have more flu and more associated deaths this year?**

Yes it does SEEM that way. However the truth is that although the flu seems to have come early this year it has not come with any greater incidence or seriousness - at least not yet. The real story is that although death rates are not significantly higher than most years there have been some deaths among children and this is just so tragic that it causes great fear and anxiety. HOWEVER, the risk to otherwise healthy children of dying from H1N1 is FAR less than the risk of dying in a car accident. This does not minimize the importance of these tragic losses, it just puts them in perspective in terms of absolute risk.

### **But aren't more kids away from school and adults away from work this year?**

Yes, absolutely. However the frenzy of fear this year has changed things significantly and skewed them toward a self fulfilling prophecy. This year if anyone has even a sniffle they are kept home because we have all been told that we are in the midst of a deadly

pandemic and that it is our moral obligation to stay home. In past years we have always gone to work with the flu because for the most part we can work through it. We can't logically use the number of people away from school or work as an accurate indicator of the severity of this year's flu pandemic. We have to use the data about illness rates, severity, and death rates. When we use this data to form our opinions and policies our fear level will certainly move away from hysteria.

What is ironic is that the health authorities have started vaccinating those people who have been identified as most susceptible to serious complications. They have also stated that we should avoid close contact in order to avoid spread. Now we have those identified as being most susceptible congregating in close contact waiting for the vaccine! Remember these people also had to put themselves at GREAT risk (relative to risk of death from H1N1) by traveling on the road to get to the vaccination site. Obviously the minute risk of death from a car accident is not a rational reason to avoid driving to get the vaccine if you think this is a good strategy. This is a valid use of risk analysis to help you put your fears about death from H1N1 into perspective. Fear and anxiety cause the release of stress hormones that down-regulate your immune system!

**So what should we do; what is a scientific, logical and reasonable strategy?**

1. Be rational, put things in proper perspective and ask the right questions.
2. Be scientific and logical. Get the facts and apply them to your strategy.
3. Don't panic if you or a loved one gets the flu. Keep hydrated, stay home, eat intelligently and REST. If severe complications arise go to your medical doctor or a walk-in clinic.
4. Be preventative. Eating well, exercising, and staying relaxed (Eat Well Move Well Think Well™) are evidence-based ways to optimize your immune defenses, to minimize risk of both becoming ill and of complications, and to maximize your recovery should you become ill.
5. Take Vitamin D - this is absolutely one of the most evidence-based interventions available for reducing incidence and severity of seasonal cold and flu. The data is very very strong.