

A new strain of 'Swine' Influenza Type A H1N1 or a change in surveillance?

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The Australian Government recently prioritized a vaccine for community use against a new strain of influenza. This preventative action is notable as there has been little evidence in the community that suggests this influenza strain is more virulent than other new strains which occur regularly. In fact, the World Health Organization (2009) states the majority of people who contract this disease experience the milder form of influenza and recover without requiring treatment (1).

An examination of evidence provided by the Western Australian Health Department regarding deaths to swine influenza Type A H1N1 prompts us to ask if it is possible that a change in the surveillance of influenza in 2009 has resulted in the creation of hysteria over a new strain of influenza?

Influenza is a disease that is caused by many strains of virus. These viruses spread easily and new strains develop regularly (2). A vaccine against influenza will only protect against one to three strains depending on the type of vaccine used (3). For example, the current seasonal influenza vaccine protects against Type A (H1N1), Type A (H3N2) and Type B (3). Influenza Type A H1N1 is a strain that has been covered in influenza vaccines for many years.

The new strain of 'swine' flu is stated to be a recombination of genetic material from human Type A H1N1, a strain of bird flu and 2 strains of pig flu (1). The WHO states 'there are no known instances of humans getting this strain of influenza from pigs and other animals'. It is also stated that this strain is not known to be endemic in pigs (1). Yet this flu has been promoted to the public as 'swine flu' even though it is a strain that has never been found in pigs. The public has been misinformed about this strain of influenza. The term 'swine flu' creates anxiety and fear of a disease that has come from pigs when the official medical term for this new strain is 'Influenza Type A, H1N1, human strain' (1).

The World Health Organisation states that influenza A (H1N1) is a new virus and one to which most people have no or little immunity (1). In a study conducted by the CDC it was shown that individuals between the ages of 18-64 had antibodies present that reacted to the swine flu virus (4). Whilst this doesn't indicate clinical protection it does suggest that some individuals may have immunity from previous exposure to H1N1 (4). There is no reason to assume that the population will have no immunity to this new strain as it may be immunologically similar to previous H1N1 viruses (5).

H1N1 is a strain of influenza that has been covered for many years in the seasonal influenza vaccine. Therefore you would expect that the Australian Health Department would have mortality data for seasonal H1N1 from previous years. This is not the case. The Health Department has stated 'this data has not been collected in previous years or for this year' – even though Type A H1N1 has been one of the most virulent and prevalent strains and regularly covered in the influenza vaccine(3).

In 2009 the Australian Health Department changed the surveillance of influenza in the community (6). The Department of Health suggests the reason there is good data on the mortality associated with influenza H1N1 2009 is because of enhanced surveillance systems that were put in place specifically to monitor the pandemic (6). Prior to 2009 influenza that was notified by GP's and laboratories was not systematically followed up or linked to hospitalization/death data to determine outcomes (6). In addition, post-mortem victims were not routinely tested for sub-types of influenza (6). In previous years deaths were listed as 'influenza' and were not routinely sub-typed for the strain (6). The Australian Health Department also states 'hospitals were less likely to routinely test admitted patients with respiratory viruses, including pneumonia, for influenza, so (in previous years) many cases remained undiagnosed or were assumed to be primary bacterial infections (6).

This year most cases of influenza notified by labs or GP's were followed up to see if the cases were hospitalized or resulted in death. The Australian Health Department was also systematically testing hospitalizations /deaths for H1N1. As a result, the health department is claiming that 90-95% of laboratory proven influenza cases are due to 'swine' H1N1 (6).

It is known that incidence figures for a disease can be inflated by monitoring a disease in a more systematic manner. A more sensitive or systematic test will identify cases that would previously have gone unidentified. However, a greater incidence of a disease does not always indicate greater severity to the population (7). This is the case with a disease such as influenza which has a high incidence in the community but epidemics are known to be mild for the majority of people (8). How can the public be sure that the number of deaths attributed to this new strain of 'swine' H1N1 is different to the number of deaths associated with seasonal H1N1 in previous years if this testing was not being done?

These changes in surveillance mean that even though influenza Type A H1N1 has been prevalent in previous years there is no data on the number of deaths associated with this strain in previous years because it hasn't been monitored. The Health Department also admits that it is unclear to what extent 'Swine' H1N1 infection may have contributed to the deaths it is linked with this year because there are usually several infections present and in most cases underlying medical conditions (6). It is well known that disease diagnosis and cause of death is an inexact science and it is up to the medical practitioner to state the primary cause of death (9). The Health Department has not produced statistics that show the overall death rate for influenza to be significantly worse this year than in previous years (3). The Therapeutic Goods Association states "the experience in Australia of the disease is mild in most cases' (10).

The evidence presented above illustrates how different surveillance methods can enhance the incidence of disease in the community. This leaves the cause of the increase in incidence open to interpretation. For this reason the government should be required to publicize any changes to surveillance practices whenever there is an increase in incidence reporting of a disease. This will ensure that the information the public receives can be interpreted in an open and transparent fashion that will lead to less fear and panic.

In addition, the government admits that the public has been misinformed by calling this strain 'swine flu' but they have stated "they are unable to control how the media reports on the Influenza A (H1N1) virus to the community" (10). Why did the government not correct this information in the media by stating it is not a swine flu and informing the public of its medical name? This is of significant concern when it is observed that fear is used to encourage the public to accept a medical intervention (vaccination) in healthy individuals.

It is extremely important that we have an accurate knowledge of the harm being caused by the use of multiple vaccines in individuals and until this science is complete we need to assess carefully how many vaccines are necessary. A change in surveillance has a significant impact on the incidence of disease in the community and the Public as the main stakeholder in the use of vaccines, cannot make a proper assessment of the need for a vaccine without this information.

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