

H1N1 INFLUENZA (SWINE FLU) EPIDEMIC IN BANGLADESH

# The menacing intruder!

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The recent outbreak of H1N1 influenza epidemic which is better familiar as swine flu is a respiratory disease of pigs caused by type A influenza virus that causes regular outbreaks in pigs.

The human outbreak has created panic in the people due to some fatality. People are in a fix due to some reasons which include the disease is relatively new, healthcare setup is not completely equipped with adequate resources, medical professionals are not quite skilled handling the disease and so on.

When there was first outbreak of dengue haemorrhagic in Bangladesh, people were so worried similarly. But it is no longer a disease of panic.

To deal with the H1N1 influenza, we need keeping in mind several things. The best way to keep from spreading the virus through coughing or sneezing is to

limit contact with other people as much as possible. Sick people should avoid work place and children should not go to schools. Concerned authority should be reluctant in this regard.

When coughing or sneezing, mouth and nose should be covered with tissue which should be discarded immediately. If tissue is not available, hands are enough which must be washed afterwards. There is serious bad habit spitting and not covering mouth or nose while coughing or sneezing. Use of civic sense and simple courtesy can contribute a great deal here.

Most of the cases are self limiting and personal hygiene is of great value.

People with H1N1 influenza are potentially contagious as long as they are symptomatic with a ceiling of up to seven days following illness onset. Kids, especially younger children, might potentially be contagious for longer periods.

There is a dilemma about



using the masks. Usually three types of masks are used — facemask, surgical mask and N95 mask. The N95 mask is effective in protection of H1N1 virus whereas surgical and facemask have almost no contribution for protection.

But wearing facemask or surgical mask is of no harm. At least it protects others from spreading the disease. Sometimes, experts opt for double layered mask for resource poor settings.

Since the virus easily spread in crowded places,

children are recommended to abstain from their schools where large outbreak occurs. Otherwise, only sick children are recommended to stay home to avoid spreading illness. Children also should not be brought to crowded places unnecessary

like shopping complexes, cinema halls etc.

Treatment is available in Bangladesh now and soon medical professionals will be used to handle H1N1 cases. Suspected cases should stay home and take home management. In case of developing warning signs or complications, individuals should seek emergency medical care in hospitals.

Antiviral drugs (Oseltamivir), which are available in the market can be stored at home for safety purpose, but it should not be readily taken without any clinical judgement or without prescription of physician, as it may develop resistance.

Fatality occurs due to misdiagnosis of the disease and accompanying other serious/chronic medical conditions — not as the disease is virulent too much. Early intervention with medication can cure the disease as usually.

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## Children first and always

For the last few days swine flu is all over the news.

Especially parents are really worried about their children, as children's immunity is unlike a healthy adult. They catch normal flues easily. They also closely mix with each other when they are in school. And once they get infected or start undergoing treatment, sometimes they cannot express their symptoms properly.

Lets see, who are most at risk of swine flu? They are young children, pregnant women, older people, diabetic, chronic (long term) diseased (lung, kidney, liver, heart) people, people who have had drug treatment for their asthma within the past three years, suppressed immune systems (whether caused by disease or treatment) sufferers, chronic neurological disease (like motor neurone disease, Parkinson's disease, multiple sclerosis etc).

The 'Battle Plan' against this flu needs an immediate and a long term strategy. One is containment and the other is mitigation — both are important.

As swine flu is highly infectious and spreads very fast and is also thought to be spread mainly person-to-person through coughing or sneezing of infected people — certainly exercising common sense and practicing good hygiene are the best ways to help keep children safe.

To learn common sense guidelines, concerned authority can close down the schools without delay as an instant approach and meanwhile, improve the awareness programme and overall management (especially build up capacities more in private and public clinics/hospitals that include more lab testing facilities) properly before opening after the Eid and Puja holidays.

Each and every life is precious — think and plan strategically to develop a National Preparedness Programme and manage today's and tomorrow's crises scientifically.

## Do's and Don't's

●Cover your mouth and nose with a tissue when coughing or sneezing. It may prevent those around you from getting sick

●Clean your hands. Washing your hands often will help protect you from germs. Hand washing proved to be the best procedure in prevention of majority of communicable diseases. Clean your hands every time you cough or sneeze. For hand washing, alcohol-based gels and wipes also work well

●Avoid touching your eyes, nose or mouth. Germs are often spread when a person touches something that is contaminated with germs and then touches his or her eyes, nose, or mouth

●Stay home when you are sick—stay home from work, school, and errands when you are sick. You will help prevent others from catching your illness.

●Practice other good health habits. Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious

●Avoid close contact with people who are sick and suspected. When you are sick, keep your distance from others to protect them from getting sick too.

●Unnecessary migration of people from epidemic and endemic areas to be reduced

●Avoiding using Aspirin to children or teenagers who have flu

## Symptom and management of H1N1 influenza A

For antiviral treatment of novel influenza (H1N1) virus infection, either oseltamivir or zanamivir are recommended which are available in Bangladesh.

Clinical judgment is an important factor in treatment decisions. Persons with suspected novel H1N1 influenza who present with an uncomplicated febrile illness typically do not require treatment unless they are at higher risk for influenza complications.

Worldwide, most patients infected with the pandemic virus continue to experience typical influenza symptoms and fully recover within a week, even without any form of medical treatment. Healthy patients with uncomplicated illness need not be treated with antivirals.

On an individual patient basis, initial treatment decisions should be based on clinical assessment and knowledge about the presence of the virus in the community.

In areas where the virus is circulating widely in the community, clinicians seeing patients with influenza-like illness should assume that the pandemic virus is the cause. Treatment decisions should not wait for laboratory confirmation of H1N1 infection.

This recommendation is supported by reports, from all outbreak sites, that the H1N1 virus rapidly becomes the dominant strain.

**Treat serious cases immediately**  
For patients who initially present with severe illness or whose condition begins to deteriorate, WHO recommends treatment with oseltamivir as soon as possible.

Studies show that early treatment, preferably within 48 hours after symptom onset, is strongly associated with better clinical outcome. For patients with severe or deteriorating illness, treatment should be provided even if started later. Where oseltamivir is unavailable or cannot be used for any reason, zanamivir may be given.

This recommendation applies to all patient groups, including pregnant

### Early symptoms

Symptoms of H1N1 influenza may include all or some of the followings:

- fever
- muscle aches
- lethargy
- coughing and sore throat
- headache
- runny nose
- nausea, vomiting
- lack of appetite

### Danger signs in all patients

Clinicians, patients, and those providing home-based care need to be alert to the danger signs that can signal progression to more severe disease. As progression can be very rapid, medical attention should be sought when any of the following danger signs appear in a person with confirmed or suspected H1N1 infection:

- shortness of breath, either during physical activity or while resting
- difficulty in breathing
- turning blue
- bloody or coloured sputum
- chest pain
- altered mental status
- high fever that persists beyond three days
- low blood pressure

women, and all age groups, including young children and infants.

For patients with underlying medical conditions that increase the risk of more severe disease, WHO recommends treatment with either oseltamivir or zanamivir. These patients should also receive treatment as soon as possible after symptom onset, without waiting for the results of laboratory tests.

At the same time, the presence of underlying medical conditions will not reliably predict all or even most cases of severe illness.

Worldwide, around 40% of severe cases are now occurring in previously healthy children and adults, usually under the age of 50 years. Some of these patients experience a sudden and very rapid deterioration in their clinical condition, usually on day 5 or 6 following the onset of symptoms.

Clinical deterioration is characterised by primary viral pneumonia, which destroys the lung tissue and does not respond to antibiotics, and the failure of multiple organs, including the heart, kidneys, and liver. These patients require management in intensive care units using therapies in addition to antivirals.

Clinicians, patients, and those providing home-based care need to be alert to warning signals that indicate progression to a more severe form of illness, and take urgent action, which should include treatment with oseltamivir.

In cases of severe or deteriorating illness, clinicians may consider using higher doses of oseltamivir, and for a longer duration, than is normally prescribed.

### Antiviral use in children

WHO recommends prompt antiviral treatment for children with severe or deteriorating illness, and those at risk of more severe or complicated illness. This recommendation includes all children under the age of five years, as this age group is at increased risk of more severe illness.

Otherwise healthy children, older than 5 years, need not be given antiviral treatment unless their illness persists or worsens.

### Pregnant women

Oseltamivir and zanamivir are 'Pregnancy Category C' medications, indicating that no clinical studies have been conducted to assess the safety of these medications for pregnant women. Yet pregnancy should not be considered a contraindication to oseltamivir or zanamivir use considering risk/benefit ratio.

Source: WHO



## Some facts ...

●Swine flu is a misnomer and should not be used to describe the current H1N1 outbreak in the human population. The proper name is H1N1 Influenza A. The World Health Organisation (WHO) has stopped using the term swine flu to avoid confusion over the danger posed by pigs

●People with H1N1 influenza virus infection should be considered potentially contagious as long as they are symptomatic and possible for up to 7 days following illness onset. Children, especially younger children, might potentially be contagious for longer periods

●Close contact is defined as within about 6 feet of an ill person who is a confirmed or suspected case of influenza A (H1N1) virus infection

during the case's infectious period.

●Influenza virus is destroyed by heat (167-212°F (75-100°C)). So the H1N1 virus does not spread through cooked food, not even through pork

●Several chemical germicides, including chlorine, hydrogen peroxide, detergents (soap), iodine-based antiseptics and alcohols are effective against human influenza viruses if used in proper concentration for a sufficient length of time

●The overwhelming majority of cases have been mild and self-limiting, with no need for treatment

●Cases of severe or fatal infections have been largely, but not exclusively, confined to people with underlying chronic conditions. Fatality in worldwide-only 1%

## Pay attention to pandemic, not panic

DR MD RAJIB HOSSAIN

The novel H1N1 influenza A virus spreads four times faster than other viruses and creates much panic all over the world. The rising number of cases every day and increase in death rate in some countries made it a serious concern. But experts in influenza and infectious disease are still saying the exact level of danger from the virus is still far from certain.

In most cases, the disease manifestation is just regular influenza. It is something that happens every year. It is self limiting and most people recover soon without any medication. H1N1 is a major concern for people with chronic diseases like diabetes, cancer and also for children and extreme aged.

The scientists who study outbreaks say that A(H1N1) is not the deadliest strain out



there. The case-fatality (the percentage of people who got the disease and did not survive) is still very low. While case fatality for severe acute respiratory syndrome (SARS)

reached more than 15 percent, bird flu reached higher to 60 percent, but it is only about 1 percent worldwide with a maximum fatality in Mexico is about 10 percent.

Moreover, we have drugs (Oseltamivir and Zanamivir) in our hand now to fight in the initial phase that we did not have in the previous large flu outbreaks.

Although there are positive reasons not to panic, we should be concerned deeply with the risk and potential danger of H1N1 that may occur in near future. If we track back to Spanish influenza, we see that it began as a mild strain, and then turned horrifically virulent, killing 20 million to 100 million people in 1918-19.

The risk could be reduced or eliminated by exercising personal control like hygiene practice. It is worth remembering that worry itself is a risk, a stress that can undermine health and happiness. We need not to be panicked but always have to take these things seriously.

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## Recommendations for facemask/respirator use to reduce transmission

Information on the effectiveness of facemasks and respirators for decreasing the risk of influenza infection in community settings is extremely limited. In the absence of clear scientific data, the interim recommendations below have been developed on the basis of public health judgment, the historical use of facemasks and respirators in other settings for preventing transmission of influenza and other respiratory viruses and on current information on the spread and severity of the novel swine flu virus.

Facemasks help stop droplets from being spread by the person wearing them. They also keep splashes or sprays from reaching the mouth and nose of the person wearing the facemask. They are not designed to protect against breathing in very small particle aerosols that may contain viruses. Facemasks should be used once and then thrown away in the trash.

A respirator or N95 is designed to protect the person by filtering out virus-containing small particle aerosols that can be generated by an infected person, but compared with a facemask it is harder to breathe through a respirator for long periods of time. Respirators are not recommended for children or

people who have facial hair.

Following is the CDC interim recommendations for facemask and respirator use for home, community, and occupational settings for non-ill persons to prevent infection with novel H1N1.

For non-high risk persons, facemask/respirator is not recommended. Persons at increased risk of severe illness from influenza, facemask/respirator is not recommended in community where there is not crowded setting. If the community setting is crowded then first try to avoid the setting. If it is unavoidable then consider facemask or respirator.

The caregivers who are in non-high risk group to person with influenza-like illness as well as other family members do not need to wear facemask/respirator. If caregiver is in high risk group, facemask/respirator is then needed only.

Healthcare professionals caring for persons with known, probable or suspected novel H1N1 or influenza-like illness need to wear respirator.

If the virus is circulating in community even then facemask/respirator is not recommended usually but could be considered under certain circumstances where there is great risk of transmitting the virus.