

## **Editorial**

### **Swine flu — a new threat to community**

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Viral infections are prevalent for hundreds of years and vaccines are the possible recommended way to prevent spread of viral diseases. The childhood immunization programme addresses the major killers of viral diseases among children. With the double burden of diseases in the community, outbreaks and epidemics call for attention of public and health authorities. The end of twentieth and beginning of twenty-first century marked the epidemic of avian influenza commonly known as bird flu.<sup>1</sup> And now, 2009 is seeing an outbreak of swine flu which has been declared as pandemic phase 6 by the World Health Organization (WHO). Latest update on Monday 6 July 2009 by the WHO gave worldwide figures of 94,512 confirmed cases and 429 deaths.<sup>2</sup>

These epidemics have the influenza virus in common that has a complicated ecology and effect multiple host species and viral genes. Avian flu was caused by the strain H5N1 and now this swine flu is due to H1N1 strain. The annual influenza viral vaccines are efficient in decreasing the burden of respiratory illnesses, but are not capable to combat for these strains.

The first index case of swine flu was detected in Mexico in March 2009 and the first confirmed laboratory case was on 17 April 2009. More than 70 countries have been declared epidemic for swine flu. To this date, 40617 probable cases have been detected

with 263 deaths in the US alone.<sup>3</sup>

Centers for Disease Control and Prevention (CDC) has guided the general public and the health authorities regarding case definition, investigations and treatment of swine flu. The term ILI influenza like illness is described as fever of 100°F or 37.8°C or greater and cough and/or sore throat. The confirmation of the virus is by real time PCR and viral culture. The throat swabs can effectively screen for influenza A and B, but cannot rule out the possibility of infection with swine flu H1N1 virus.<sup>4</sup> High mortality from swine flu is reported to be due to severe respiratory distress and pneumonia.

In the past, epidemics have been countered by mass vaccinations, not by chemoprophylaxis. As vaccine for swine flu is under development, therefore prevention is through hygiene and antiviral therapy. The antiviral medications are claimed to be preventive and therapeutic against influenza virus. But the question is should all be treated and/or given antiviral medicines for prophylaxis. Data suggested that the neuraminidase inhibitors licensed for swine flu treatment and prophylaxis are oral oseltamivir and inhaled zanamivir. Sixty million doses of vaccine are expected to be available by the end of the year, at which point we can expect the epidemic to come to a rapid conclusion. Till that time, it is recommended to keep patients at high risk a priority for treatment, those with

severe disease (hypoxia, hypotension, shock), additional gastrointestinal symptoms, breathlessness, and pregnancy.<sup>5</sup>

The mode of transmission for the flu is through droplets, indicating that proper hygiene, handwashing, face masks and isolation of patients with influenza like illness are some ways to prevent spread of the infection. As with avian flu where it was declared that eating of chicken does not transmit the infection, the same is true for swine flu, eating of pork is not the cause of transmission.<sup>6</sup>

A recent study is predicting that this 2009 swine flu (Influenza A H1N1) pandemic might lead to the emergence of another Avian influenza outbreak arising from H5N1 in endemic Southeast Asian countries.<sup>7</sup>

Pakistan also saw one such epidemic of bird flu earlier, and studies concluded that it is a continuing threat, although swine flu is not yet reported in the country. It is being regarded as an equivalent to disaster and effective planning is required to combat the emerging pandemic.<sup>8</sup> Few studies conducted locally commented on prevention strategies to be hygiene and vaccination.<sup>9,10</sup>

Pakistan is yet not hit by the epidemic of swine flu, but as it is a pandemic now, the threat is persistently present. A news report stated that the airport authorities are vigilant in screening the passengers and are in collaboration with the health authorities.<sup>11</sup>

The need is to educate the general public and the health care professionals regarding swine flu is important. In resource constraint setting, overcrowding, travelling and

urbanization, has compromised the health of the common man. Provision of antiviral medicines and the vaccine should be among the priorities of the health authorities to combat the imminent swine flu epidemic in the country.

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