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Point-Counterpoint

Avian Influenza: The risk and the need for government policy

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In recent weeks we have all witnessed the destruction of millions of chickens in South-East Asia. This is an attempt to stamp out bird flu (avian influenza). As of 3 February, four people in Thailand and nine in Vietnam are confirmed as having died of bird flu, which is also spreading through Indonesia and China.

The governments of some of these countries have come under heavy criticism for failing to take the correct measures in time to prevent human deaths. Concerned citizens should ask themselves: what would happen if there was a bird flu outbreak here? What measures should the government take to detect it and stop its spread?

If there were an outbreak in Bangladesh, who would be at risk?

It is important to realise that the people at risk from avian influenza are those who have direct contact with chickens or ducks:

*poultry farmers

*people who work in markets where live poultry is sold

*people who own domestic ("backyard") poultry.

The virus is not transmitted by eating cooked chicken meat. As a health issue, this disease primarily concerns the safety of farm workers.

The primary host for the bird flu virus is chickens. The virus is excreted in chicken manure; humans are thought to be infected by inhaling dust from dried manure.

If the virus is not easily transmitted to people, why is it such a big problem?

During the 1997 bird flu outbreak in Hong Kong, 18 people were infected, out of whom six died (33% mortality). As a basis for comparison, we should note that SARS infected about 8,000 people last year out of whom 800 died (only 10% mortality). The fact that bird flu infections in humans causes a high mortality rate is mitigated only by the fact that it does not spread between humans very easily.

The real concern is that if outbreaks are not stamped out in time, the disease may gain the ability to spread quickly between humans. Human flu viruses spread very quickly between humans; they contain genes which allow them to do this. However, if a human happens to be infected with both human flu and bird flu, genes may be exchanged between the two viruses. Such exchange could create a new bird flu virus with the ability to spread rapidly between humans. That could be the start of a new flu pandemic like the 1918 pandemic which killed millions of people.

How could bird flu spread to Bangladesh?

There are three ways in which the virus spreads over long distances.

1. Migratory birds carry it and continuously excrete it over large distances. They can bring the virus to Bangladesh from thousands of miles away.
2. Commercial chicks are smuggled from India to Bangladesh whenever there is an oversupply in India. (It is not legal to import commercial chicks into Bangladesh). If these are from an infected farm in India, they will carry the infection.
3. Poultry breeding companies import parent stock chicks (birds whose offspring are broiler or layer chicks). If any of these come from an infected source, they will spread the infection to Bangladesh.

The government has currently restricted the import of parent stock chicks from all countries which are suspected of harbouring avian influenza. However, it is not enough to restrict imports until the current outbreak in South East Asia is stamped out. Wild birds or smuggled chicks could bring the virus into Bangladesh at any time

What should be the objective of government policy?

The Government must accept that the bird flu virus may at any time spread to Bangladesh; restrictions on imports cannot guarantee safety. Once this has been accepted, the policy objectives are obvious:

1. To develop the capacity to identify an outbreak (in chickens) before the virus spreads to humans
2. To implement a policy which will make it possible to stamp out any outbreak as soon as it is detected.
3. To compensate farmers who will be made to incur huge losses in order to stamp out the outbreak.

How should outbreaks be detected and stamped out?

An outbreak can be detected by testing serum (from chicken blood) for avian influenza antibodies. (Antibodies are proteins produced by the immune system to fight against viruses; different antibodies are produced to fight different viruses). There is an ELISA test kit manufactured (by BioChek in Holland: www.biochek.com) for this purpose.

The government should take the following steps to ensure that outbreaks are quickly detected.

1. A central lab must be established solely for testing of avian influenza. This should be set up with foreign technical expertise as the quality of the testing must be reliable.
2. Whenever a government veterinarian sees high mortality in a poultry flock, he must collect blood samples, separate the serum and send them to the central lab (by courier in a cold pack).
3. If the samples are positive for avian influenza, the following emergency measures must be taken

*All the poultry farms within a 3km radius of the infected farms should be destroyed (killed and buried on-farm).

*All farms within a 10km radius of the infected farm must be tested. If more positive farms are found, the process of destruction (within a 3km radius) and testing (within a 10km radius) must be repeated.

This strategy has successfully stamped out outbreaks of bird flu in Europe.

How can farmers be compensated for their losses?

Whenever a farmer's birds are destroyed to control bird flu, the farmer must be compensated by the government. Otherwise farmers will not co-operate with this policy.

At the very least, the farmer should be compensated for:

- * the purchase price of the chicks
- *the cost of the feed and vaccines which they have consumed.

Stamping out any outbreak will cost crores of Taka. Suppose that bird flu is detected in a particular farm of 2,000 broilers. Within 3 km of the farm suppose there are 40 more farms, with 2,000 broilers each. So to stamp out the outbreak (assuming that only one farm tests positive) one would have to destroy 82,000 broilers. The cost of chicks, feed and vaccination will have been about 60 Taka per broiler. To compensate these 41 farmers, the government would have to pay them about 49 lakh Taka. If more farms within a 10km radius test positive (in which case destruction will have to be done over a larger area) the cost will multiply accordingly.

How can the government pay the enormous compensation cost of controlling an outbreak?

At present about 150 million commercial chicks are sold in Bangladesh every year. The government should put a tax of 1 Taka on each chick. This will raise 150 million Taka every year. This money should be put in an Avian Influenza Fund which should not be used by the government for any purpose other than:

- *running a central avian influenza testing lab

*compensating farmers whose flocks are destroyed in order to stamp out bird flu outbreaks.

Why not simply vaccinate all the chickens in Bangladesh to protect them from bird flu?

The problem with vaccination is that widespread vaccination would make it impossible to detect bird flu in chickens. All vaccinated birds will have avian influenza antibodies (just like infected birds). So if farmers start vaccinating their chickens, the ELISA test will no longer be able to detect bird flu outbreaks. In that case, the public will not even know that an outbreak is taking place until humans start dying of bird flu.

The policy implication is obvious: it should be illegal to vaccinate chickens against bird flu. The EU does in fact have a ban on vaccination of poultry against avian influenza; this policy has proven successful.

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