

ECONOMIC IMPLICATIONS OF PUBLIC HEALTH INTERVENTION: ISSUES IN CULLING AND COMPENSATION POLICY IN CASE OF BIRD FLU

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Abstract

Avian influenza (commonly known as bird flu) refers to influenza caused by viruses adapted to birds. India experienced the first bird flu outbreak in February 2006 in and around the poultry towns of Navapur and Uccal bordering the states of Gujarat and Maharashtra. In order to prevent further spread and bird-to-human transmission of the virus, around 12.68 lakh birds were culled in these areas. As per the government policy the farmers were compensated for their loss in culling the birds. However, field observation has revealed the real plight of the farmers. The major grievance of the affected poultry farmers was that the compensation was grossly inadequate – far below the actual cost of a bird - and did not cover many other costs involved in poultry farming. In fact the farmers suffered heavy losses in their livelihood means. The experience of the farmers with the 2006 bird flu calls for formulating a fair compensation policy that takes into consideration already dead birds, indirect cost, total value of a bird, minimum daily turn-over, period for which farms are sealed, and the differing value of poultry in different areas. It should compensate the farmers for the loss of their livelihood rather than mere loss of birds.

Introduction

Influenza pandemics have historically taken the world by surprise, giving health systems little time to prepare for the abrupt increase in cases and deaths making the situation disruptive (WHO 2005). Avian influenza (commonly known as bird flu) refers to influenza caused by viruses adapted to birds. The highly pathogenic avian influenza virus subtype H5N1 (the only one subtype of avian influenza causing virus) has been causing global concern as a potential pandemic threat. H5N1 has killed millions of poultry birds in a number of countries throughout Asia, Europe and Africa (Martin *et al.* 2006). Since the first H5N1 outbreak occurred in 1987, there have been an increasing number of H5N1 bird-to-human transmissions leading to clinically severe and fatal human infections. Although millions of birds have become infected with the virus since its discovery, 447 human beings have been infected out of which 263 have died (around 60% mortality rate) from the H5N1 in twelve countries (WHO 2005). Tens of millions of birds have died of bird flu and hundreds of millions of birds have been slaughtered and disposed of in order to contain the spread of H5N1.

While much of the focus has been on the potential impacts of bird flu outbreak on humans, little attention has been paid to the economic losses that have already occurred in different parts of the globe (Kumar and Datta 2008). Bird flu outbreaks cause massive economic losses especially among poultry owners and workers through culling operation as well as loss of public confidence in the poultry products and thus decreasing the consumption of chicken and its products. The FAO (Food and Agriculture Organisation) estimates the total economic losses to be beyond US\$20 billion so far. India has a poultry population of nearly 481 million, both commercial (60%) and backyard (40%). It is indicated that migratory birds play a role in the spread of the virus across countries and continents. India lies within the three international flyways of migratory birds¹. The season lasts between September and March every year. India is the fifth largest producer of eggs and ninth largest producer of poultry meat in the world, producing over 34 billion eggs and 6,00,000 tons of poultry meat. Over the past decade the

poultry industry has contributed about US\$229 million to the GNP of India (Kumar and Datta 2008).

India experienced its first bird flu outbreak in February 2006² in and around the poultry towns of Navapur and Uccal bordering the states of Gujarat and Maharashtra. Around 12.68 lakh birds were culled in these areas and poultry farms were ordered to be shut for three months. A second outbreak took place in the state of West Bengal in January 2008 which resulted in the culling of 1.32 lakh birds in 15 days. Additionally, 3.4 lakh eggs and 73 thousand kilos of bird feed were destroyed resulting in a loss of Rs.150 crore to the poultry sector (Chattopadhyay 2008). In the same year, sporadic outbreaks were reported in the states of Tripura and Assam followed by subsequent culling of birds and destruction of materials. The latest outbreak was reported in the state of Sikkim in the beginning of the year 2009. There has been no human case of bird flu reported so far in India.

Poultry meat and eggs represent an excellent source of supplementary income and essential nutrients for the poor, particularly for women and children. The economic and potential nutrition losses faced by the poor producers due to the disease outbreaks can be devastating. They face immediate loss of income and assets from the death of infected poultry and culling. Additional income losses occur in the period between an outbreak and re-stocking. Production costs are likely to rise following the introduction of control strategies. Consumer response to bird flu outbreaks has been “immediate” and “dramatic” resulting in additional income losses (Kumar and Datta 2008).

In this paper, we have tried to examine the extent of economic loss and the compensation policy that was adopted by the union and state governments of Maharashtra and Gujarat in 2006 outbreak. By taking a broader time period of about five years, the paper tries to evaluate the policy’s impact on poultry farmers in terms of their perceptions about adequacy of compensation, coping mechanisms for facing the loss and revival strategies, rehabilitation efforts and overall satisfaction levels that have implications for future cooperation levels in such events. The paper takes a reflective look

on the entire bird flu episode and suggests policy implications for such future outbreak. Based on field visits to Navapur, interviews with poultry farm owners, poultry farm association, poultry workers as well as policy makers in various government offices (based on the response to the email sent to all the animal husbandry departments concerned), the paper raises questions about compensation policy being followed and its implications in terms of the incentive for reporting cooperation in case of future outbreaks.

2. Compensation Policy

The WHO (2005) has recommended strategic actions in responding to the Avian Influenza pandemic threat. The FAO and the OIE (World Organisation for Animal Health) have issued detailed recommendations and strategies for Asian countries. This guideline understands that inability to compensate farmers for lost birds may reduce the incentive for reporting outbreaks, particularly in rural areas where the true risk of human exposure resides.

In India, an *action plan of animal husbandry for preparedness, control and containment of Avian Influenza* has been prepared by the Government of India (GOI) in November 2006. The Department of Animal Husbandry document (III.12) does recognise the need for “adequate” and “timely” compensation in case of outbreak (GOI 2006). It also notes that it is “unrealistic” for farmers to “cooperate” in the culling operation if compensation is not adequate. Any expenditure incurred on this can be justified for effective control of the disease. At the same time chances of misuse in case of compensation can’t be ruled out either, and therefore the GOI has made district collectors in charge of this. Under the ASCAD (Assistance to States for the Control of Animal Diseases) scheme, the GOI shares 50 per cent of the expenditure towards compensation. The state governments have to be prepared operationally to ensure the following:

- Funds should be made available at the local level to pay the compensation.
- Compensation should be paid immediately after the birds are killed.

- The system for verifying claims and paying compensation should be decided in advance and notified to responsible agencies.

According to the policy of the GOI department of animal husbandry, poultry owners are responsible to immediately report “unusual” morbidity and mortality in birds to government or nearest veterinary institution. Failure to do so is gross negligence with serious implications for animal and human health. However, there is no poultry farm registration policy in the first place and animal husbandry departments of the states have no data on the exact number of poultry farms in any district. Surprisingly even after the bird flu episode almost five years back, no such registration has been initiated which raises questions about the government’s capability to do effective surveillance in the absence of any baseline data.

In case of outbreak, all poultry products and egg shops in the radius of 10 km. will be immediately closed till further orders. There will also be restriction on movement of farm personnel. The entire stock of deceased and “in-contact” birds on infected premises needs to be destroyed. A correspondence of the joint secretary, GOI to the state chief secretaries referring to the policy of the government regarding compensation proposed rates of Rs.30 for broiler bird, Rs.40 for layer bird, and Rs.10 for chicks younger than 10 weeks. However, as stated here, the state governments are free to fix and pay higher compensation. No compensation is to be paid for dead birds with the intention to encourage early reporting. Para 2.22 of the correspondence states that all birds which are destroyed, irrespective of whether they are showing symptoms of the flu or not, have to be compensated for. It is further suggested that the birds for which compensation is paid are culled in the presence of an officer authorised by the district collector and their number certified by that officer (GOI 2006).

In India, normally farmers inform the local veterinary authorities about sudden deaths of fowl, who then send samples to the Regional Disease Diagnostic Laboratory (RDDDL) or to the High Security Animal Disease Laboratory (HSADL), Bhopal and National Institute of Virology, Pune for testing. On being tested for HPAI (Highly Pathogenic Avian Influenza) the

department of animal husbandry, dairying and fisheries, GOI, notifies the outbreak in that state to global communities, declares the state as hit by bird flu and instructs the state to start necessary actions as per the action plan of the department. Actions include culling and disposal of birds, destruction of feed and other infected materials along with disinfection of the affected premises. Poultry birds in a radius of 3-5 km. of the suspected area are culled and surveillance is carried out in a radius of 5-10 km. for 90 days. Though this measure is considered to be very effective in the regions where cage system of rearing is practised, its compliance becomes difficult in the case of backyard poultry.

Although compensation is an incentive for farmers to give up their birds for culling, it is observed to have a weak relationship in cases when livelihoods depend on poultry or in the case of valued birds such as those used for cock fights. Besides, compensation covers direct costs like market value of the bird and sometimes the cost related to disposal of dead birds, cleaning and disinfection. Dead birds before culling and indirect market costs are not compensated. Producers of small poultry and those raising backyard poultry for a livelihood are the worst affected due to culling. Also, the value of birds varies from place to place and this is not taken into consideration. For example, poultry producers in Manipur have lost Rs.316 lakh as a result of culling of birds and destruction of materials, but they have received only Rs.99.13 lakh as compensation which is only 31 per cent of the actual value (Srikantiah 2008).

3. Field Observations

In order to understand the ground situation, we made visits to Navapur (where there was an outbreak of bird flu) and talked with poultry farmers. Navapur falls in the state of Maharashtra but is very close to the border of Gujarat and well connected by rail and road. Most of the poultry farm owners are Muslims and many of them live in Gujarat but have farms in Navapur. Typical big farms are about 4-5 acres in size and birds in thousands of numbers are kept in sheds in long rows of channels with net. One of the farm owners told us that poultry birds get nearly all kinds of

sickness that the humans get. They get cold, cough, aches in the joint, respiratory problems etc. And hence, they are to be treated with medicine. As he has been in the business of dealing with birds for more than the last three decades, he knows ‘when a bird is ill’. Some medicines like *tetracycline* or *terramycin* are given to these birds when they are ill. Doses are calculated based broadly on the body weight of birds vis-à-vis humans. Most medicines consumed by humans are given to them. These birds are all carefully vaccinated (about 16 shots), checked and are made to become artificially immune to many diseases. According to the farm owner, normal mortality rate of birds does not exceed five to six per cent. With any disease, the rate however changes. One of the most potent illnesses that strikes the birds is the *Ranikhet* (RD). It affects birds very fast like a contagious disease. A severe *Ranikhet* can wipe out more than 40 to 60 per cent of birds. The virus spreads fast and quarantine too does not help much.

Cost of maintaining (feeding) a layer bird a day comes to around Rs.1.10 to 1.20. When bird flu was declared, initially poultry owners did not know as to what had happened. They had seen *Ranikhet* affecting the birds earlier. Many people thought that it was a strong effect of *Ranikhet* till it was concluded – first by a lab in Pune and then the ‘most authentic lab’ in Bhopal - ‘authentically’ declaring it to be the ‘bird-flu’. After it was declared as bird-flu, the government took over culling operations. They were not only expected to get all birds culled but also all chicken feed was to be destroyed by burning. Farmers were compensated for only the feed that was burnt at the rate of Rs.6 a kg. This was much less than the actual cost of around Rs.8 to 9 a kg. Moreover, even expensive medicines of Rs.2000 a kg. were counted as “feed” and bracketed with Rs. 6 a kg. for compensation, causing huge losses to poultry farmers.

According to poultry farmers, compensation was only paid for culled birds and burnt feed. No compensation was paid for the already dead birds (which is as per the policy), for destruction of eggs and manure, and for the period (more than a year) during which farms were asked to remain closed. Also, no attempt was made by the government to rehabilitate either small farmers or workers who lost their business and job respectively.³ Almost

half of all the functioning units could never come out of the losses and closed their business. Workers engaged on their farms were forced to find alternative occupation on which no official data are available.

We were told that *desi* birds are kept by the tribals around. Many tribals were and are still working in these farms. The *desi* birds are the most vulnerable to any disease as they are never vaccinated and are also excluded from any surveillance. In fact, some of them can even carry the virus fast and facilitate transmission of the diseases. The 2006 bird flu, according to a poultry owner, might have come from the *desi* birds which started dying a bit earlier (as reported by tribal workers on farm and rearing *desi* birds at home) than the *farm* birds (manufactured, controlled, vaccinated, stall-fed). The *desi* birds are kept by the tribals for their own consumption or for selling to others – including the sale of *desi* eggs. This is what is labelled and known as the ‘backyard’ poultry as opposed to the *farm* poultry.

Another issue was that of the amount of compensation. One of the poultry owners told us: “In the aftermath of bird flu, we were expected to follow the WHO guidelines. We were not averse to doing so. But we felt that compensation being worked out per bird was illogical and ridiculous – Rs.40 a bird. At different stages different birds cost differently owing to differentials in age, and our investment per bird on layer hens, cocks and poultry giving eggs for the hatchery. How can there be a flat price? They expect us to follow the WHO guidelines, but do not compensate in dollars or equivalent amount, or at least a fair amount.”

Government asked poultry owners to go ahead immediately with culling of birds, disposal of existing feed as well as grains stored for making feed. They cooperated immediately – after all an element of ‘human’ transmission was involved in this. Much of the culling operation was carried out during the period between 18 February and 10 March 2006, by which date all culling was over. About this operation a poultry owner said: “Our food grains kept for making chicken feed too had to be destroyed. What did we get – only Rs.6 per kg. as compensation! It is also important that the stock of the birds should have been counted for compensation from the

stock date , that is, 21 January 2006 when the ‘bird fall’ began. This was not the case. Therefore poultry farmers all over Maharashtra lost heavily. Media overplayed the issue and poultry became a taboo – a feared bird. At some places, birds were sold for less than Rs.20 a kg. and eggs touched the lowest price ever. Indeed, the losses of the poultry industry have been in several crores during this period. And we, who have been working for so many decades in the poultry industry and its farming, didn’t see even one case of Avian Influenza actually affecting humans. We doubt whether the present case affects humans at all. The panic doubled – government contributed to the panic – the media enhanced it and the vested interests sustained it.”

Navapur had 80 poultry units before February 2006. Many of them were middle and small sized, and a few very large ones. There were around 15 lakh birds in these units, and in the surrounding 10 sq. km. area there might have been no more than 1.5 lakh *desi* birds reared by the tribals in their hamlets. A large number of the medium and small entrepreneurs had to close down their business. The loss was heavy and most of them sold their poultry – machinery and capital – to others in order to return the loans they had raised from the banks. It is also noteworthy that not a single farm had any sort of insurance which seems to be the general situation in this industry. Farms that were directly hit by the bird flu in terms of very high and fast mortality suffered the most as they didn’t receive any compensation for dead birds. Moreover, most of them had taken bank loans and repayment became very difficult. While public sector banks, following Reserve Bank of India (RBI) guidelines, did give some relief in terms of partial waiver as well as moratorium on remaining payment, private sector banks were harsh on recovery. Some farmers took to new debt to repay old debt.

We met a farm owner who underwent depression and faced other mental health issues because of bank recovery pressures. He said: “I am in this business since the last 30 years and my farm has a capacity of 42,000 birds. I had taken a loan of Rs.80,00,000 from a public sector bank. The business was good and, since I was very regular in repayment, I was approached by an aggressive private sector bank with an irresistible loan transfer offer and I became their client. In less than a year, bird flu came

killing all my birds and my farm was sealed for one year. I didn't have an income of even one rupee and the bank started its recovery pressure, ignoring the RBI relaxation advisory. Soon the pressure became too much for me to handle and I went into depression. Every phone call from the bank created panic in my mind and I consulted a psychiatrist who kept me on medication. I also tried selling the farm but even that wouldn't be sufficient for loan repayment. My son was in middle east and had to come back to handle the family. We were desperate for some income and tried cattle farming, but all that was insufficient for loan repayment. We are only surviving with the help of the 12,000 five month old birds donated by the Venkateshwara Hatcheries.”

All the poultry units of Navapur remained closed for around 11 months – from February 2006 to January 2007. There were huge losses in money/ employment, and all those in the chain from farming to retail selling of birds, chicks and broilers got affected. Many in the trade were completely wiped out. Only the big units could come back and some diversified into other businesses while continuing with the business of poultry. On an average, each poultry farm was employing 10-12 people. They all lost their employment and income. There was no plan of rehabilitating any one of them – the proprietors or the workers or those who slipped out from the chain. The government did not do anything towards rehabilitating them. It was only the chief executive officer of the Venkateshwara Hatcheries in Pune who came forward. A poultry owner received birds worth Rs.30 lakh from them. This poultry owner further said: “It is interesting that till 2006 the government didn't really bother about the birds and their diseases. It's we who in our own interest monitored and saved our birds. Suddenly 2006 helped create a fear psychosis. In a period of just about 15 days (from 20 February to around 10 March 2006), Navapur area alone faced a loss of Rs.20 crore. And even now the attitude and actions are of fire fighting nature – when disease comes, strike heavily to cull and control. Why doesn't the government educate people about the disease and its spreading pattern? Why doesn't it undertake regular surveillance in the areas where indigenous birds are reared which are prone to getting inflected with such diseases and then transmit them to others? And in compensation, why is a flat price fixed? For example, the cost of a 72 week old bird is different from that of a 17 week bird, because the amounts of investment made in them are different. This is plain 'stupid' – a political gimmick geared

towards appeasing vested interests. And ours is a climate of temperate and hot seasons, which does not sustain such diseases. The heat in April-May kills the germs and virus of these diseases.”

Commenting on the government attitude and management of the entire situation the poultry owner continued: “In the absence of a rehabilitation plan, the people have lost much. And the guys coming from an ‘ill-informed’ bureaucracy thought that everything was loaded with contamination and virus. We were instructed that the bird droppings needed to be cleared very fast as these were the most dangerous. They said we couldn’t allow any labourer to pull it through spade etc. It’s difficult to get these out. One way they tried to clean was diluting the bird excreta and then sucking it out through pipes. Also JCB machines were brought, which could not be operated for lack of space around the poultry farm. Finally, on our insistence they allowed us to get it cleaned by people. But the workers were to use the PP (polypropylene) dresses – looking like those worn by astronauts. Workers wore them for the photographs of the media and then without wearing them cleared out the excreta. They are too hot to be worn during such work. These PP dresses, which should not cost more than Rs.100 a piece, were reported to be bought at the cost of Rs.700. Who was gaining from this! None of these workers (who already have had immunity to the disease in this tribal belt) got affected by the Avian flu. In fact hardly anyone got even a common ‘flu-cold’. Why was there such panic? Within 10 days more than 10,000 metric tons of bird droppings were removed in Navapur. At normal times we get Rs.1100 per metric ton of these droppings sold as manure for tomato, grape and sugarcane fields. We lost that money too. Was there really a scientific basis for the emergency action? There were several delegations. A high-ranking official from Delhi made a comment: “Are all these a conspiracy/ handiwork of the ISI and Pakistani agents?” It was an uncalled for and stupid remark. Will any poultry farmer do this to himself? We are all Muslims and frequently seen as the ‘other’ – the suspects.”

Distribution of Tami flu (a well known drug for treating respiratory infections) presented another case of the gulf between the officials and the locals in their perception and handling of health hazards. Labourers, who were given Tami flu tablets for possible respiratory infections, threw them

away as soon as the officials left, because there was nothing wrong with their health. The Tami flu was simply a waste of money – might have been a gain for some people in the pharmaceutical chain of industries. We were also told by poultry farm owners that the figures of backyard poultry culling were exaggerated as there was vested interest in inflating them for compensation and pocketing a huge margin by taking thumb impression of illiterate tribals and paying them only a fraction of the amount. One of the veterinary doctors who was part of the culling operation team shared some interesting information that captures the tension between the official policy and ground realities. “We had orders to cull all birds in the surrounding area and we made every effort to do so in the interest of public health. We went to all poultry farms, backyard poultry, homes as well as roadsides and did the checking. When we went to one home spotting a parrot in a cage, the owner suddenly freed the parrot and it fled away. He said: ‘sorry I can’t see him dying in front of my eyes’. One person with his wife was walking bare feet with a few birds alive on his bicycle. He was probably on his way to sell the birds so that he could get some money. We stopped him with the assurance that he would be compensated, and immediately he culled all his birds. While doing the documentation for compensation, we realised that the person was actually from the bordering state and it wasn’t possible to pay him as we were staff of another state. We asked him to come to the office the next day, and he was already nervous and tense. He did come to the office but without some required documents and hence it wasn’t possible for us to transfer his case to the bordering state. He had to leave the office without any compensation with tears in his eyes.”

4. Policy Implications

Poultry farmers’ association has made several representations to the government – from the secretary to the chief minister level – initially requesting for more compensation and later for a comprehensive rehabilitation package. A “khandesh package” was announced by the Maharashtra state government before the bird flu episode in 2004.⁴ Within the scope of this broad package, a provision could have been made to rehabilitate the poultry farmers at the time of bird flu or soon after that. This is perhaps still a possibility. Expression of unhappiness and frustration was clearly evident

while talking with the poultry farmers which doesn't augur well for the need for cooperation in case of future episodes. Poultry farm registration policy with regular surveillance mechanism is also long overdue.

There is a need for formulating a fair yet flexible compensation policy keeping in mind the interests of the poultry owners, especially in the future. Compensation policy should take into consideration already dead birds, indirect cost, total value of a bird, minimum daily turn-over, period for which farms are required to be sealed, and the differing value of poultry in different states/areas. It should also be fair towards the poultry farmers who have lost their daily means of living. It should not only focus on payment of compensation but also offer alternative occupation to people, thus compensating them for the loss of their livelihood rather than mere loss of birds. In the years to come, bird flu can have wide-ranging impact on the livelihood, trade, food safety, public health and international tourism. The challenge is to maintain balance between protecting poultry and humans from the disease and at the same time also protecting the livelihoods of people involved in producing, processing and selling poultry. Since a significant proportion of poultry owners are small holders, any major outbreak can leave a lasting impact on their livelihoods.

Notes

- 1 Government often celebrates the arrival of migratory birds in order to boost tourism.
- 2 It was officially notified on 18 February 2006.
- 3 However, farmers were appreciative of the role played by private firms like Venkateshwara Hatcheries, Pune in helping, rehabilitating and reviving poultry business on the Navapur belt by giving new birds to the farmers.
- 4 The Maharashtra state government has allocated its announced "khandesh package" fund to Jalgaon, Dhule, and Nandurbar districts. The proposed budgetary allocation of Rs.287.96 crore includes Rs.202 crore for farming and irrigation projects, Rs.20 crore for road development, Rs.15 crore for water supply

and Rs.20 crore for urban development. The budget proposes a hefty sum of Rs.17 crore to Nandurbar district for improving its state and district connectivity roads (Jalgaon News 2004).

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