

# Case Management of Pandemic Influenza

## Facilitator Instructions

1. Allow time for students to offer suggested answers to what should be done in this scenario.
2. Thank students for their suggested answers.
3. Review the suggested answers provided below.
4. Discuss whether student answers were similar to or different from the actual responses and actions taken/planned by human/animal health authorities.

## Instructions

In this exercise, you will be able to practice assessing the severity of a patients' illness and forming advice as to where the patients should be treated.

For this exercise, you will work with your group to complete a case study investigation. Each segment of case study information will be followed by a series of questions. Facilitator or one person in your group should read the information aloud to group members. Then, work as a group to generate possible answers for each question that the group thinks to be most appropriate. Record the answers in the space provided.

## Case Study: VI

**Total time allocated:** 90 minutes

### November 28<sup>th</sup>

Three new patients are in the triage area of a Jagdamba hospital, Indraghat district. All three patients have respiratory symptoms and a fever. There was a family cluster admitted earlier to this hospital which was positive by RT-PCR for H5NI. A number of cases were reported in Indraghat town including two staff nurses of this hospital. Of late there had been 10 deaths among the total 64 cases reported. There are also deaths reported in two neighbouring townships. The viral characterisation reveals it is HxNy. Apart from the outbreak in India who has reported similar outbreak in two neighbouring countries.

The hospital is presently having 16 cases - four of which are on ventilator. There is no space for any further intake. This small hospital's surge capacity also has been overwhelmed.

**Patient Severity: The clinical information on the 3 case patients is listed below.**

Case 1	Case 2	Case 3
22 year old male	8 year old female	15 year old male
3 day history: fever, cough	1 week history: fever, cough, diarrhoea	3 day history: fever, cough, headache
New onset shortness of breath	No shortness of breath	No shortness of breath
Alert and coherent	Drowsy, confused	Alert and coherent
Temp: 39°C Resp: 40/min Heart rate: 136 Blood press: 108/62	Temp: 38.5°C Resp: 30/min Blood press: 90/60	Temp: 38.2°C Resp: 22/min Blood press: 100/70
Bilateral infiltrates	Normal chest x-ray	X-ray pending
Low lymphocytes and leukocytes	Depressed lymphocyte count	Blood count pending
CRB-65 score: 2	CRB-65 score: 3	CRB-65 score: 0

## Questions:

**Question 1. What level of care do you think is required for Case 1?**

*Facilitator answer:* Hospitalisation would be advisable, and access to an ICU is important because this patient has a severely compromised respiratory system (Pneumonitis, high respiratory rate, CURB-2).

**Question 2. What level of care do you think is required for Case 2?**

*Facilitator answer:* Hospitalisation would be advisable, probably in an ICU (due to the patient's altered level of consciousness, high respiratory rates, CURB-3).

**Question 3. What level of care do you think is required for Case 3?**

*Facilitator answer:* Outpatient management would be acceptable for this mildly ill patient.

**Question 4. Which among them may require intubation and mechanical ventilation?**

*Facilitator answer:* Case 2 has high CURB-65 score and will need critical care and assisted ventilation. Case 1 may also need ICU care.

**January 5<sup>th</sup>**

There had been a spurt in the ILI being reported to hospitals in the last one week. The hospitals in Indraghat district are having 100 percent occupancy. Reports have been received of cases being reported in other districts. The limited oseltamivir chemoprophylaxis has not been successful.

**Question 5. As a member of the RRT what would be your recommendation for increasing the hospital surge capacity?**

*Facilitators answer:* Use all available space (floor beds, unoccupied/vacated hospital buildings etc.). Temporary hospitals (conversion of schools/panchayat buildings etc.)

**Question 6. Thirty percent of your physicians in the district are on leave/absent. Those remaining are overworked. You request the neighbouring state. They politely refuse citing the need for them to be also prepared. How can you contribute to managing such a situation?**

*Facilitators answer:* Triage; domiciliary treatment for those not requiring hospital care. May have to use officers in alternate system of medicine for triage/domiciliary care/hospital care.

**Question 7. The state health authorities blame the CMO for not carrying out adequate active surveillance. They instruct him to strengthen surveillance in Indiraghat further. As a member of state RRT what advice you would provide to the health authorities.**

*Facilitator answer:* At this stage, active house-to-house surveillance would not be of help.

**Question 8. The laboratories of ICMR at Kolkata and NICD have received large number of samples not only from Indraghat district, but also from all over India. They are overwhelmed. As a member of the State RRT what advice would you give to the Indraghat district authorities.**

*Facilitator answer:* Since the viral characterisation has been done and novel virus isolated there is no need to test all samples received from Indraghat.

There is widespread, person-to-person transmission of pandemic influenza in the Indraghat and neighbouring districts and thousands of deaths. Fuel and wood are in short supply. There is wide spread panic across the country.

**Question 9. How do you bury or cremate the dead without bringing people together? Discuss culturally appropriate ways to do this.**

*Facilitators answer:* Very few people may be allowed to attend the funeral with personal protection such as three layered surgical mask. Government may pass appropriate orders restricting people from attending public funeral. Government may also consider training the people associated with the cremation/burial work in infection control practices.

**Question 10. There is large scale sickness absenteeism from work. Essential services are suffering not only in Indraghat but in neighbouring districts also. How would you ensure continuity of medical services.**

*Facilitators answer:* Use all available resources including qualified practitioners in alternate system of medicine. Cancel leave of all health personnel. Use the help of organisations such as IRCS, IMA.

**Question 11. A glimmer of hope in the bleak situation emerging is that there is a possibility of a candidate vaccine strain being developed soon. What strategy you would adopt knowing that there are three firms that may be in a position to manufacture vaccine.**

*Facilitators answer:* In any case you may not have sufficient stock to vaccinate all. Frame a realistic vaccination policy. Prioritise the risk groups to be vaccinated (army, health personnel, decision makers, politicians, close contacts etc.). Plan for the logistics including cold chain. Involve the immunisation division to plan logistics and supply chain management. Device systems to record and report vaccine reactions.