Annexure-XX

Clinical Management Protocol
(Novel Influenza A H1N1)

Epidemiology

1.1 The agent

Genetic sequencing shows a new sub type of influenza A (H1N1) virus with segments from four influenza viruses: North American Swine, North American Avian, Human Influenza and Eurasian Swine.

1.2. Host factors

The majority of these cases have occurred in otherwise healthy young adults. 1.3.

Transmission

The transmission is by droplet infection and fomites.

1.4. Incubation period

1-7 days.

1.5 Communicability

From 1 day before to 7 days after the onset of symptoms. If illness persist for more than 7 days, chances of communicability may persist till resolution of illness. Children may spread the virus for a longer period.

There is substantial gap in the epidemiology of the novel virus which got re-assorted from swine, avian and human influenza viruses.

Clinical features

Important clinical features of swine influenza include fever, and upper respiratory symptoms such as cough and sore throat. Head ache, body ache, fatigue diarrhea and vomiting have also been observed.

There is insufficient information to date about clinical complications of this variant of swine origin influenza A (H1N1) virus infection. Clinicians should expect complications

to be similar to seasonal influenza: sinusitis, otitis media, croup, pneumonia, 1

bronchiolitis, status asthamaticus, myocarditis, pericarditis, myositis, rhabdomyolysis, encephalitis, seizures, toxic shock syndrome and secondary bacterial pneumonia with or without sepsis. Individuals at extremes of age and with preexisting medical conditions are at higher risk of complications and exacerbation of the underlying conditions.

The reporting of cases is to be based on the case definition provided at **Annexure-XII ante**.

Investigations

Routine investigations required for evaluation and management of a patient with symptoms as described above will be required. These may include haematological, biochemical, radiological and microbiological tests as necessary.

Confirmation of influenza A(H1N1) swine origin infection is through:

Real time RT PCR or

Isolation of the virus in culture or

Four-fold rise in virus specific neutralizing antibodies.

For confirmation of diagnosis, clinical specimens such as nasopharyngeal swab, throat swab, nasal swab, wash or aspirate, and tracheal aspirate (for intubated patients) are to be obtained. The sample should be collected by a trained physician / microbiologist preferably before administration of the anti-viral drug. Keep specimens at 4°C in viral transport media until transported for testing. The samples should be transported to designated laboratories with in 24 hours. If they cannot be transported then it needs to b stored at -70°C. Paired blood samples at an interval of 14 days for serological testing should also be collected.

Treatment

The guiding principles are:

Early implementation of infection control precautions to minimize nosocomical / household spread of disease

Prompt treatment to prevent severe illness & death.

Early identification and follow up of persons at risk.

4.1 Infrastructure / manpower / material support

Isolation facilities: if dedicated isolation room is not available then patients can be cohorted in a well ventilated isolation ward with beds kept one metre apart.

Manpower: Dedicated doctors, nurses and paramedical workers.

Equipment: Portable X Ray machine, ventilators, large oxygen cylinders, pulse oxymeter

Supplies: Adequate quantities of PPE, disinfectants and medications (Oseltamivir, antibiotics and other medicines)

Standard Operating Procedures

Reinforce standard infection control precautions i.e. all those entering the room must use high efficiency masks, gowns, goggles, gloves, cap and shoe cover.

Restrict number of visitors and provide them with PPE.

Provide antiviral prophylaxis to health care personnel managing the case and ask them to monitor their own health twice a day.

Dispose waste properly by placing it in sealed impermeable bags labeled as Bio- Hazard.

1..2 Oseltamivir Medication

Oseltamivir is the recommended drug both for prophylaxis and treatment.

Dose for treatment is as follows:

By Weight:

For weight <15kg	30 mg BD for 5 days
15-23kg	45 mg BD for 5 days
24-<40kg	60 mg BD for 5 days
>40kg	75 mg BD for 5 days

For infants:

< 3 months	12 mg BD for 5 days
3-5 months	20 mg BD for 5 days
6-11 months	25 mg BD for 5 days

It is also available as syrup (12mg per ml)

If needed dose & duration can be modified as per clinical condition.

Adverse reactions:

Oseltamivir is generally well tolerated, gastrointestinal side effects (transient nausea, vomiting) may increase with increasing doses, particularly above 300 mg/day. Occasionally it may cause bronchitis, insomnia and vertigo. Less commonly angina, pseudo membranous colitis and peritonsillar abscess have also been reported. There have been rare reports of anaphylaxis and skin rashes. In children, most frequently reported side effect is vomiting. Infrequently,

abdominal pain, epistaxis, bronchitis, otitis media, dermatitis and conjunctivitis have also been observed. There is no recommendation for dose reduction in

illness in children and adolescents have been linked to oseltamivir, there is no scientific evidence for a causal relationship.

4.4 Supportive therapy

IV Fluids.

Parentral nutrition.

Oxygen therapy/ ventilatory support.

Antibiotics for secondary infection.

Vasopressors for shock.