

Gateway Reference Number: 15295

To: Medical Directors of Acute Trusts
Chief Pharmacists of Acute Trusts
A&E Directors
Intensive Care Unit Directors
Critical Care Directors

Date: 14 December 2010

Copy: RCP
RCPCH
RCOG
RCGP
BMA
Royal Pharmaceutical Society
British Thoracic Society
All GPs

Dear Colleague

Treatment guidelines for patients with influenza 2010/2011.

Professor David Salisbury wrote last week on the use of antivirals for individuals suspected to have influenza, particularly in the context of primary care. This can be found at:

http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Dearcolleagueletters/DH_122572

The purpose of this letter is to update you on appropriate guidelines for treatment in secondary care and other settings.

Over the last few days, we have been alerted by the Health Protection Agency (HPA) and other sources that the incidence of severe illness due to influenza infection requiring access to critical care services has increased. At the 7th of December 2010, sixteen confirmed cases in 18-35 year olds are in hospital (all due to H1N1 infection), with a number of probable cases currently under investigation. Many, but not all, of those cases have underlying conditions including pregnancy. Eleven of twelve cases currently receiving ECMO treatment are confirmed or probable swine flu (H1N1) cases. Since the beginning of September, eleven deaths associated with influenza infection have been reported in the UK. Ten cases are associated with A(H1N1) 2009 infection and one with influenza B. Ages ranged from four to 51 years including four cases under 10 years.

Based on the reports from colleagues treating such patients about the similarities of the clinical presentations to last year's A (H1N1) 2009 cases, I recommend that last year's Clinical Management Guidelines should be followed for patients admitted to hospital with symptoms suggestive of H1N1(2009) influenza.

These can be found at <http://www.dh.gov.uk/en/Publichealth/Flu/Swinefluguidance/index.htm>

Please note that infection control guidelines can be found at http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_110899.pdf

These guidelines provide advice on the management of Influenza A H1N1 (2009) in adults, children and pregnant women. An update on the treatment of children has been provided on behalf of the Royal College of Paediatrics & Child Health, which states:

"At present and while influenza activity is above seasonal threshold, all sick children being admitted or considered for admission to hospital with influenza like illness or its complications can be considered for prompt initiation of oseltamivir and concurrent broad spectrum antibiotics. Children in the recognised co-morbid risk groups or with severe disease (HDU/PICU admissions) should start oseltamivir without delay. Antiviral therapy can be stopped if proven to be influenza negative by appropriate investigations i.e. PCR negative nasal swabs/NPA plus PCR negative ETA/BAL if ventilated.

In young children (≤ 5 yrs), particularly infants (< 1 yr old), it is very difficult to distinguish influenza and its complications from other respiratory viral infections and other treatable diseases. Infants should always be reviewed by a health care professional (usually a GP) if presenting in the community or by a suitable experienced clinician if presenting to hospital."

Infants admitted with bronchiolitis may have any one or more respiratory viruses including Influenza A H1N1(2009). A positive near-patient RSV test does not exclude other respiratory pathogens. Clinicians should have a low threshold for starting oseltamivir and antibiotics if there are atypical features, severe or progressive disease whilst awaiting further results.

Attached is a short briefing note (Annex A) on management of influenza-like illness in adults and children admitted to secondary care that you and colleagues may find helpful.

I understand that there are sufficient stocks of antivirals available for ordering, particularly oseltamivir in capsule form. Additional supplies of suspension for paediatric use are expected this week. Hospital chief pharmacists should ensure they have adequate available stocks of oseltamivir and zanamivir.

I want colleagues to make all endeavours to ensure that patients in influenza risk groups, including pregnant women, and health care workers, have received seasonal influenza vaccine which contains appropriate antigens against Influenza A H1N1 (2009) and Influenza B.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Sally C Davies', with a stylized flourish at the end.

PROFESSOR DAME SALLY C DAVIES
Chief Medical Officer (Interim)

Annex A

Management of influenza-like illness in adults and children admitted to secondary care: recommendations for winter 2010-11

Introduction

- H1N1 (2009) influenza virus is one of the viruses circulating during the current influenza season.
- Up to half of adults with influenza-like illness in General practice are likely to be infected with an influenza virus.
- This H1N1 virus continues to cause severe disease in a minority of younger adults and in children.
- There has been a sharp increase in the numbers of patients admitted to intensive care due to H1N1 infection requiring special support for severe hypoxaemia: this has placed increased pressure on critical care services, significantly over and above expected seasonal pressures.
- While half of patients requiring respiratory support have had recognised co-morbidities which increase the risk for severe influenza, half have had no recognised co-morbidities.
- Several pregnant women have already been admitted for advanced respiratory support and have had early deliveries, either to support their treatment, or spontaneously.
- Patients with high BMIs are also represented among the severely ill.

Some key features of pneumonia due to H1N1 influenza infection

- Commonest in adults below age 55 years and in children.
- Also occurs in patients of all ages with co-morbidities which increase the risk for severe influenza.
- Pregnant women are at high risk.
- Bilateral chest X-ray changes are typically present (but can be subtle and non-specific).
- The white blood-cell count is often low or normal.
- Patients are initially alert (unless there is another reason for confusion).

Warning signs of severe H1N1 respiratory illness (predictive of poorer outcome)

- Dyspnoea.
- Requiring oxygen supplementation.
- High heart rate in adults.
- Altered conscious level.
- Raised C-reactive protein > 100 mg/l.

Antiviral therapy in children and adults admitted to hospital

- Treatment with oseltamivir should be started on clinical grounds whilst awaiting test results.
- For pregnant women, the European Medicines Agency advises that either oseltamivir or zanamivir are equally safe; in Britain, the inhaled medicine, zanamivir, has been used because of lower systemic drug levels during inhalation treatment.
- Oseltamivir dosing should follow advice in the national guidelines.
- In severe illness, antiviral treatment may be commenced after more than 48 hours of illness.
- Consideration should be given to extending the duration of antiviral treatment in critically ill children and adults.
- Oseltamivir reaches blood levels effective against H1N1 when given in standard dosage by nasogastric tube, even in severely ill patients in an intensive care setting; for severely ill patients in intensive care, double doses have been used, and combinations of antiviral medicines have been considered.
- Liaise with local infectious diseases specialists, respiratory physicians or clinical virologists if considering a possible need for alternative antiviral treatment.

Note on oseltamivir dosages for children under the age of one year

The European Medicines Agency has recommended appropriate oseltamivir dosages, as follows:

- Newborns up to one month of age: 2 mg/kg twice a day.
- Children over one month and up to 3 months of age: 2.5 mg/kg twice a day.
- Children over 3 months and under one year of age: 3 mg/kg twice a day

Antibiotics for children and adults presenting to secondary care

- Adults and children, with features of influenza complicated by lower respiratory tract signs, severe painful pustular tonsillitis/sore throat, severe painful cervical lymphadenopathy, and significant acute suppurative otitis media, should be offered empiric antibiotic therapy, whether or not they are admitted to hospital.
- Antibiotic treatment should be given according to the usual guidelines for the treatment of community-acquired respiratory infections, exacerbations of chronic obstructive pulmonary disease or community-acquired pneumonia, as appropriate.
- In influenza infection, there is a small additional risk of *Staphylococcus aureus* secondary bacterial infection: for severely ill patients, this can be addressed by using co-amoxiclav, doxycycline or levofloxacin in place of usual first-line treatment.