



# BEAUMONT HOSPITAL

Beaumont Hospital  
Department of Nephrology and Renal Nursing

**Guideline Name: MANAGEMENT OF HAEMODIALYSIS PATIENTS WITH INFLUENZA LIKE ILLNESS SUSPECTED INFLUENZA A (H1N1)**

**Guideline Number: 22**

**Guideline Version: 22a**

<b>Developed By:</b>	Dr Catherine Browne Consultant Nephrologist (Acting) Veronica Francis Clinical Nurse Manager 3 Haemodialysis Services 
<b>Approved By:</b>	 Catherine Browne Veronica Francis
<b>Date Effective From:</b>	August 2009
<b>Review Date:</b>	August 2011
<b>Superseded Documents:</b>	None



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## **1.0– Guideline Statement**

The aim of this guideline is to provide nursing and medical staff with information and guidelines surrounding the management of haemodialysis patients with symptoms of influenza like illness.

## **2.0– Aim/Purpose of Policy**

To provide guideline for nursing and medical staff assessing, planning, monitoring haemodialysis patients with symptoms of influenza like illness.

## **3.0– Scope of Practice**

This guideline applies to all staff working within the dialysis unit within Beaumont Hospital. It is intended as a guide towards best practice for all members of the multidisciplinary team involved in the management of care of the haemodialysis patients with influenza like illness, treatment and the prevention spread of infection in the unit.

## **4.0- Introduction**

Haemodialysis patients are at increased risk of infection due to their chronic kidney disease, co-morbidities, coupled with the need to attend a hospital environment up to three times per week. Such patients are susceptible to person-to-person transmission of infectious agents, directly or indirectly, via contaminated devices, equipment and supplies, environmental surfaces or the hands of personnel.

Normal services will need to be maintained as long as possible however as more patients and staff are exposed there will be a need to prioritise services where clinically appropriate. This will include the need to co-hort large numbers of infected patients or change shift patterns as the need arises. This will be very challenging. There may also be reduced staff resources to provide the service and staff with haemodialysis training from administration / non clinical posts may be required to be redeployed to the unit. There may also be staff shortages affecting satellite units increasing the demand for services in the main unit. Unavoidable exposure of staff to infected patients who need regular treatment will require redeployment of staff in the

high risk groups (i.e. pregnant staff or those with a chronic medical condition) to non infected patient areas within the unit. Other specialist trained staff such as renal technicians may also be affected and there will be a requirement to seek additional support from commercial providers. Other issues include risks to hospital transport provision, risk to supplies and Carer illness implications for patients who are dependent.

Literature suggests that during an influenza pandemic there will be peaks in demand which may overwhelm capacity for specialised treatments in critical care areas. This will also lead to an increase in demand to provide a haemodialysis service to the three current critical care areas in the hospital as well as any additional critical care beds which may be created as part of the hospitals overall response to the pandemic. There will also be an increased demand for renal unit beds both from the pre-existing chronic renal failure patients under the care of Beaumont Hospital and satellite dialysis units and there may also be an increased referral of acute patients from a wider catchment area.

Prevention includes frequent hand hygiene with soap and water or alcohol rub especially after coughing and sneezing, wear PPE when caring for suspected patients, avoiding unnecessary contact with people who have an influenza infection.

## **5.0- Guideline**

The objectives of this guideline are;

- To highlight the responsibilities and accountability of members of the multidisciplinary team involved in the management of haemodialysis patients
- To raise awareness among both staff and patients
- To ensure patient safety

## **6.0- Definitions**

**Haemodialysis-** is a renal replacement therapy for patients with end stage renal failure (ESRF). It involves the passage of the individual's blood through an extracorporeal circuit; the blood passes through a semi permeable membrane called a dialyser where the waste products and fluid are removed (Sonawane *et al*, 2006).

**Oseltamivir (Tamiflu®)** is an antiviral drug that slows the spread of non-resistant strains of the influenza virus. Oseltamivir is indicated for the prophylaxis and

treatment of uncomplicated acute illness due to influenza infection in patients 1 year and older that are symptomatic for no more than 2 days. Note that oseltamivir is not a substitute for early and annual influenza vaccination.

**H1N1** – Pandemic Influenza A, also known as swine influenza, or swine flu. This is a respiratory disease caused by Type A influenza viruses.

**IFI** – Influenza like illness

## **7.0– Responsibilities**

### **The nurse should:**

- Provide all patients with an information leaflet on the prevention of spread of influenza like illness.
- Increase awareness of patients regarding hand and respiratory hygiene and also cough etiquette.
- Increase awareness of patients with symptoms to contact the unit prior to arriving at the unit.
- Inform patients of the need to change schedule or the need to isolate or co-hort them for treatments.
- Observe, assess all patients prior to dialysis and report any suspected cases to the medical staff in a timely manner
- Isolate or co-hort symptomatic patients according to need.
- Redeploy staff at risk from high risk areas to low risk areas.
- Inform the Clinical Nurse Manager of reduced resources in a timely manner.

### **The medical team should:**

- Screen patients with suspected influenza like illness.
- Assess urgency of dialysis and need to delay, isolate, co-hort dialysis treatments or admit patients
- Liaise with the dialysis team to arrange dialysis therapy
- Liaise with bed management regarding admission if required.
- Prescribe the dose Oseltamivir (Tamiflu®) according to the guideline

## **8.0– Specific risks to renal patients of influenza infection and its complications**

Literature suggests that patients who have an increased risk of complications due to influenza infection are in the following groups:-:

Long stay residential care home residents

Chronic respiratory diseases;

Chronic heart disease;

Chronic kidney disease,

Nephrotic syndrome

Chronic liver disease

Diabetes

Immuno- compromised patients.

## **9.0– Vaccination**

Patient vaccination will take place when a vaccine is available. All patients will be offered it in due course, particularly those with co-morbid conditions.

## **10.0– Specific Staffing issues**

It is suggested that up to 50% of the workforce may require time off work at some stage over the entire period of the pandemic. Absenteeism will be not just due to personal influenza infection, but also to provide care for dependants such as ill relatives, or children or practical difficulties in getting to work. It is noted that at the peak of the pandemic, between 15% and 20% of staff may be absent at any one time. Staff are being requested to contact the occupational health department on the dedicated phone line (01 7974800) if they have symptoms, not to present for duty and to follow the advice of the hospital. Staff are also requested to contact the Clinical Nurse Manager as soon as possible and advise them of their attendance. Flexible or extended working rosters will be needed to cover staff shortages and emergency workload. Staff will be offered vaccination with priority given to those in the High risk group. The Clinical Nurse Manager 3 in consultation with the Unit Clinical Nurse Manager will review all rostered shifts. Any shortages will be filled by the Nursing Bank, External Nurses Agency such as CPL or through overtime. If the reduced staff resources are not filled, staff with haemodialysis training from administration / non clinical posts may be required to be redeployed to the unit. The Clinical Nurse Managers will arrange according to needs of the Unit.

## **11.0– Recommendations for Haemodialysis Unit Planning**

- Check all contact details including mobile phone numbers for all dialysis patients to ensure that all patients are contactable should there be changes in transport arrangements or dialysis schedules.
- Ensure that all patients have the unit phone numbers for contact.
- Increase awareness amongst patients with regard to hand hygiene, the use of tissues covering mouth when coughing and avoiding crowded areas. Give each patient an information leaflet
- Ask all patients or carer to phone the unit to inform staff of any of the following symptoms:
  - Temperature over 38°C/100.4°F and some of the following
  - Dry cough/ Runny nose
  - Sore throat
  - Headache
  - Severe weakness and fatigue
  - Vomiting / diarrhoea
  - Aching muscles and joints
- Advice given to patient dependent on symptoms, need for dialysis. Where possible delay dialysis until 1 -2 days.
- Prevent cross infection by segregation and cohorting of influenza infected patients
- Follow local and national guidelines on the prevention of spread of ILI infection
- Be prepared to have other parts of the renal unit adapted for initial screening of patients i.e. the Waiting Room beside St Martins Room 2.
- Ensure adequate supplies are maintained especially specialist dialysis disposables, personal protective equipment and also specialist personal PPE such as FFP 2 Masks (i.e. “Duck Masks”) Contact either the Suppliers or Supplies Department to ensure timely deliveries and adequate stock.
- Isolate or cohort infected patients separately from uninfected patients wherever possible. This will depend on the numbers and severity of the patient’s condition. Segregate in-patients from out-patients where possible. All

out patients should attend St Martins and all in-patients to St Peters Ward for haemodialysis. This will avoid unnecessary transport of patients through the hospital and to minimise transmission of the virus.

- Contact transport services to keep them updated according to the needs of the patients.
- Plan refresher/induction courses for renal nurses experienced in haemodialysis who may be required an update of skills.
- Cancel routine out-patient visits and unnecessary visiting to the unit.
- If the patient requires admission or any other investigations with in hospital ensure communication regarding any suspected cases to other departments or wards.

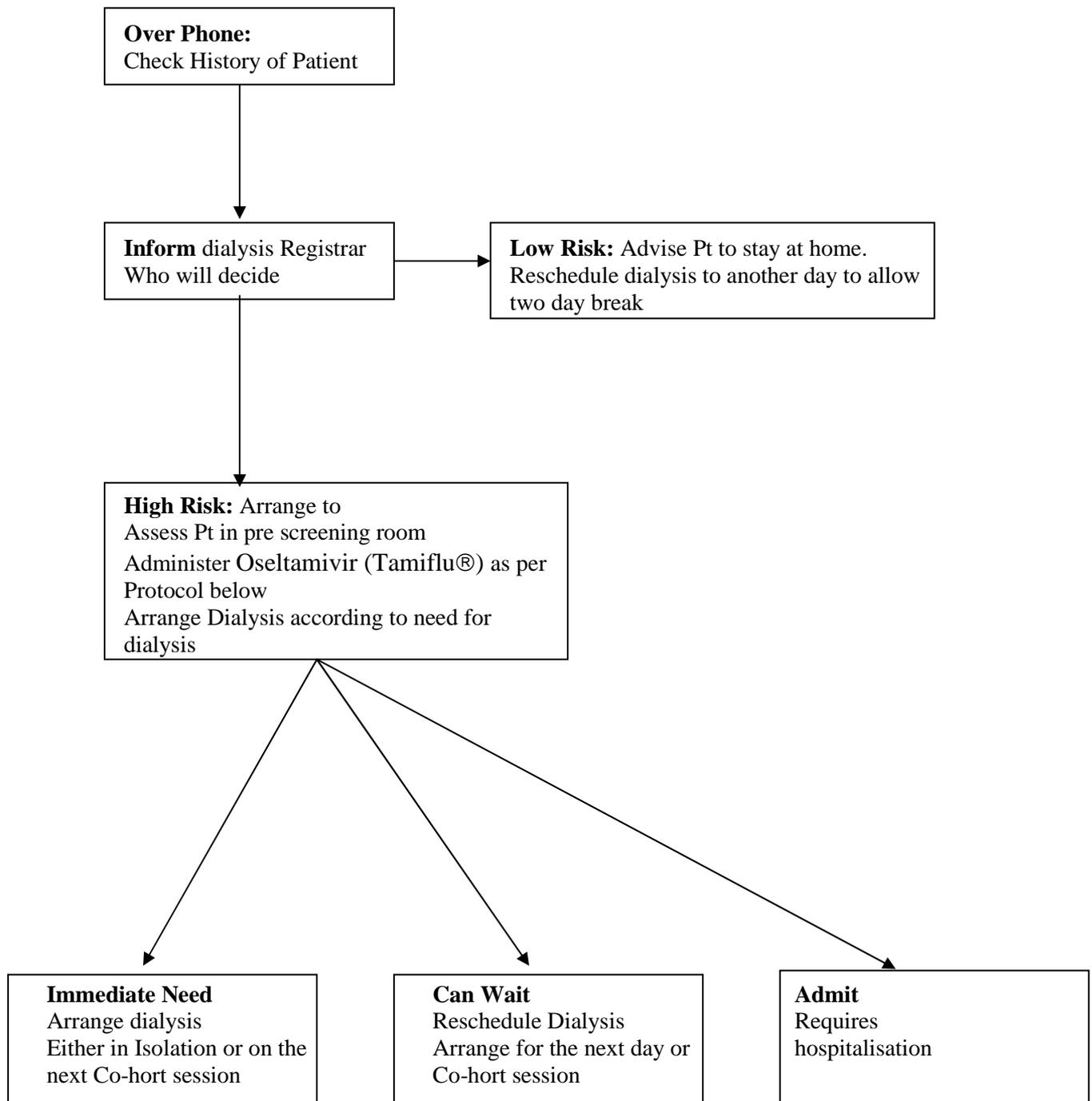
## **12.0- Management of Haemodialysis Patients suspected H1N1**

- Advise all Patients to wash their hands before entering and on leaving the unit
- All patients should use disposable tissues and they are disposed of appropriately.
- Advise patients with symptoms to phone the unit prior to dialysis.
- Inform patients that their schedule maybe changed according to need. Reassure patients that they will receive dialysis as required.
- Patients who are coughing should be provided with appropriate masks
- Ensure the dialysis station and all patient equipment is cleaned after use as per the hospital guidelines. Particular attention should be given to frequently touched surfaces such as bedside locker, bed table etc.
- All high risk areas should be cleaned with the appropriate disinfectant as per the hospital's "Standard Operating Procedure For Environmental Decontamination where H1N1 Virus exists"
- Ensure all Staff wash their hands on entering and leaving the unit and before and after each patient contact
- All staff to adhere to and practice both contact and standard precautions.
- All staff wear the appropriate (PPE) personal protective equipment
- Isolate or co-hort according to numbers. If possible arrange at the last shift where numbers are small. Room 2 can be used to co-hort patients.

- Restrict movement of staff and visitor between both infected and non infected areas.
- Restrict unnecessary movement of patients or staff from St Martins Ward to other clinical areas within the hospital.
- All in-patients will be dialysed in St Peters Ward depending on patient numbers and need either in the non Hep B isolation room or co-horted on a shift in the 4 bedded unit.
- Isolate / Cohort as follows:
  - **1-2 cases** Isolate if possible in two bedded isolation room in St Peters Ward or move to last shift.
  - **Up to 8 Cases in any one day:** arrange to Co-hort in St Martins Room 2 on one shift.
  - **Up to 16 Cases in any one day:** arrange to Co-hort in St Martins Room 2 two shifts(i.e. eight patients per shift)
  - **Up to 32 Cases in any one day:** use St Martins Room 2 and arrange to co-hort patients on three shifts.
- Redeploy all staff at risk e.g. Pregnant or with chronic medical conditions.
- Vaccinate patients when the vaccine is available.
- Encourage staff to be vaccinated via the Occupational Health Department.
- If patients arrive to the unit with symptoms of Influenza like Illness (ILI), assess in the designated assessment room i.e. the waiting room adjacent to St Martins Room 2.
- Precautions should be kept in place for 7 days after the onset of symptoms or At least 24 hours after symptoms have resolved (which ever is longer)

## 13.0-MANAGEMENT OF PATIENTS INFLUENZA LIKE ILLNESS

Advise all patients / carers to phone the unit if the patient experiences any ILI symptoms



## 14.0- Use of Oseltamivir (Tamiflu) in Patients with Renal Impairment

Creatinine clearance	Recommended treatment dose (5 days)	Recommended prophylactic dose (10 days)
> 30 ml/min	75mg twice a day	75mg once a day
10 – 30 ml/min	75mg once a day	75mg every second day
< 10 ml/min (not on dialysis)	75mg as a single dose	30mg once a week (2 doses)
<b>Haemodialysis</b> <b>High-flux</b>	75mg three times a week after each dialysis session	75mg three times a week after each dialysis session
<b>Low-flux</b>	30mg three times a week after each dialysis session	30mg three times a week after each dialysis session
<b>Peritoneal Dialysis</b>	30mg once a week (1 dose)	30mg once a week (2 doses)

**NB. For patients in the Critical Care setting, many units are now prescribing double the usual dose.**

Creatinine clearance	Recommended treatment dose (5 days)
> 30 ml/min	150mg twice a day
10 – 30 ml/min Including patients on CAVH / CVVH / CAVHD / CVVHD	75mg twice a day

**Oseltamivir (Tamiflu®)** 75mg or 30mg as capsules

Capsules should be taken with food if possible to reduce gastrointestinal side effects

Oseltamivir will accumulate in the serum due to its high degree of renal excretion but

it is generally a well tolerated drug, minimising the risk of complications

Renal patients on immunosuppressive agents should be prescribed Oseltamivir

according to this guidance

There is no evidence to indicate that Tacrolimus, Ciclosporin or Mycophenolate levels are affected by Oseltamivir.

## **15.0 - Distribution**

A copy of the guideline will be circulated to relevant areas by the Divisional Nurse Manager. The Clinical Nurse Manager in each area is responsible to ensure all staff access and read the guideline. The guideline will be available on the Beaumont intranet in the nursing policy page.

## **16.0- Filing**

A copy will be filled in the policy and procedure book folder in each unit. The master copy will be filed in the Divisional Nurse Managers office.

## **17.0-Review**

This guideline will be reviewed in two years April 2011.

## **18.0- Recommended Reading**

HHS Pandemic Influenza Plan, U.S. Department of Health and Human Services  
November 2005

Novel H1N1 Flu (Swine Flu) and You, CDC Centers for Disease Control and  
Prevention Information June 30, 2009

Briefing and guidance for adult renal units in the UK during an influenza pandemic  
Renal Association Clinical Affairs Board Updated 8<sup>th</sup> July 2009

National Pandemic Influenza Plan Ireland, Health Service Executive | Department of  
Health and Children Version 1 January 2007

World Health Organization [www.who.int/en/](http://www.who.int/en/)

HSE Health Protection Surveillance Centre [www.hpsc.ie](http://www.hpsc.ie)

## **19.0- Appendix 1 - Patient Information Leaflet**

## **Beaumont Hospital Renal Unit**

### **Patient Information Leaflet- Influenza A (H1N1) Virus**

#### **What is Influenza A H1N1 virus?**

Novel H1N1 (also called “swine flu”) is a new influenza virus causing illness in people. This new virus was first detected in people in the Mexico in April 2009. This virus is spreading from person-to-person worldwide, probably in much the same way that regular seasonal influenza viruses spread.

#### **How does novel H1N1 virus spread?**

Spread of novel H1N1 virus is thought to occur in the same way that seasonal flu spreads. Flu viruses are spread mainly from person to person through coughing or sneezing by people with influenza. Sometimes people may become infected by touching a contaminated surface or object – with flu viruses on it and then touching their mouth or nose with contaminated hands.

#### **What are the signs and symptoms of this virus in people?**

The symptoms of novel H1N1 flu virus in people include sudden onset of fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills and fatigue. A significant number of people who have been infected with this virus also have reported diarrhoea and vomiting.

- Temperature > 38°C/100.4°F
- Cough
- Sore throat
- Runny nose
- Headache
- Severe weakness and fatigue
- Aching muscles and joints
- Vomiting/diarrhoea

### **What can I do to protect myself from getting sick?**

There is no vaccine available right now to protect against novel H1N1 virus. However, a novel H1N1 vaccine is currently in production and may be ready in the autumn. As always, a vaccine will be available to protect against seasonal influenza. There are everyday actions that can help prevent the spread of germs that cause illnesses like influenza.

### **Take these everyday steps to protect your health:**

- Cover your nose and mouth with a disposable tissue when you cough or sneeze. Use the tissue only once and throw the tissue in the bin after you use it.
- Wash your hands often with soap and water, especially after you cough or sneeze. Alcohol-based hand cleaners are also effective.
- For dialysis patients coming into the hospital for dialysis, it is important to **wash your hands with soap and water or alcohol hand gel before** you enter the dialysis unit **and wash your hands as above on leaving the unit**
- Avoid touching your eyes, nose or mouth. Germs spread this way.
- Clean hard surfaces such as kitchen worktops, door handles etc. with a household cleaner as the virus can live on these surfaces
- Try to avoid close contact with sick people.
- Avoid large crowds if possible
- If you are sick with a flu-like illness, contact your doctor by telephone
- For **Dialysis Patients** if you are sick with a flu-like illness **contact your dialysis unit** as soon as possible **before** travelling for dialysis.

The phone numbers are:

St Peters Dialysis: 01 809 2723

St Martins Room 1: 01 809 2730/ 8092731 or

St Martins Room 2: 01 809 2757/ 809 3341

### **When should facemasks be worn?**

The sick person should wear a mask to reduce the risk of passing on the infection to others. Caregivers should wear a mask while in the same room as the sick person to reduce the risk of getting an infection. There is no recommendation for the general public to wear masks unless they are caring for someone who is ill.

### **What should I do if I get sick?**

If you live in areas where people have been identified with novel H1N1 flu and become ill with influenza-like symptoms, including fever, body aches, runny or stuffy nose, sore throat, nausea, or vomiting or diarrhoea, you should contact your doctor in the hospital. If you are a dialysis patient and think you may have the flu virus, you

should telephone the dialysis unit **before** coming to dialysis so we can advise you. We will arrange to assess you and we may need to rearrange your dialysis treatment time.

**Are there medicines to treat novel H1N1 infection?**

Yes. Tamiflu (oseltamivir) can be used for the treatment and in some circumstances the prevention of infection with novel H1N1 flu virus. This will be assessed by your doctor. It is an antiviral drug that fights against the flu by keeping flu viruses from reproducing in your body. If you get sick, antiviral drugs can make your illness milder and make you feel better faster. They may also prevent serious flu complications. If you are a **dialysis patient** and you need treatment with Tamiflu **we will prescribe the Tamiflu** for you as dialysis patients **need a different dose** from other patients.

**In adults, emergency warning signs that need urgent medical attention include:**

- Difficulty breathing or shortness of breath
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion, altered level of consciousness
- Severe or persistent vomiting
- Severe dehydration
- Flu-like symptoms improve but then return with fever and worse cough

For further information please refer to [www.swineflu.ie](http://www.swineflu.ie), or you can ring the HSE automated helpline on 1800 94 11 00. Alternatively you can contact nursing or medical staff in the renal department with any concerns.