QUARANTINABLE DISEASES

The NSW Health Department has distributed to Chief Executive Officers and Regional Directors a document called *Contingency plan for cases of suspected quarantinable diseases including viral haemorrhagic fevers.*

Quarantinable diseases include the viral haemorrhagic fevers (VHF) (Lassa fever, Ebola haemorrhagic fever, Marburg disease, Crimean-Congo haemorrhagic fever, Argentinian haemorrhagic fever, Bolivian haemorrhagic fever), cholera, plague, typhus (epidemic) and yellow fever.

Westmead Hospital has been designated the preferred hospital for referral of patients within NSW with suspected VHFs.

In the development of a plan for the public health reponse and facilities for the clinical care and diagnosis of cases of VHFs in NSW four key elements need to be recognised:

- A changing international perception of the degree of risk to health care workers by aerosol transmission of the viruses. The US Centers for Disease Control (CDC) recommend that levels of biological containment sufficient to restrict aerosol transmission must be used in the laboratory during diagnosis of these cases. Universal precautions must be followed at all times.
- The rarity of patients presenting with VHFs in Australia (the last case was in 1987).
- The clinical presentation may be non-specific (fever, pharyngitis, myalgia, haemorrhagic manifestations) and is likely to be mimicked by a more common condition. It is important to realise that the haemorrhagic manifestations occur late in the disease, and the clinical status is often labile.
- Potential for severe illness requiring intensive care treatment.

Five possible forms of presentation can be envisaged:

1 A case occurring on a ship or international flight en route to Sydney.

2 "False positive" VHF — febrile patient arriving from Africa is thought to have a VHF. S/he is admitted to Westmead Hospital, or any other hospital in NSW. Subsequently another diagnosis is made (e.g. malaria, typhoid, influenza, dengue or bacterial/viral pharyngitis).

3 "True positive" VHF — a moderate febrile illness in a patient returning from Africa recognised as a possible VHF by the doctor of first contact and referred to Westmead Hospital.

4 A visitor to Australia with a moderate febrile illness is referred to any hospital in NSW for investigation, and VHF is recognised as a likely diagnosis, usually after exclusion of malaria and dengue. Improvement may lead to discharge before definitive diagnosis. Failure to improve or deterioration would lead to transfer to Westmead Hospital.

5 Severely ill febrile patient with unsuspected VHF in a hospital, or suspected when too ill to transfer to Westmead.

The most likely presentation is the second. Thin/thick films for malaria may provide a diagnosis but dual infections have been recorded.

Presentations 3 and 4 (acute suspected VHF) have not yet been experienced in Australia. With increasing travel a frequency of one case every 5-10 years could be envisaged. It is notable that fewer than 20 cases of VHF have been diagnosed in the USA and the whole of Europe in the past 15 years. One case of Ebola haemorrhagic fever occurred in a laboratory worker who pricked his thumb while handling infected specimens. The most common VHF is Lassa fever, usually from West Africa, which may resolve spontaneously or require treatment with Ribavirin. According to the CDC guidelines an isolation suite is not required, simply a single room with anteroom and preferably separate ventilation.

Presentation 5 may require a single room in the intensive care unit. The likely frequency of this event is <1 in 10-20 years. Existing single rooms in the intensive care unit of major teaching hospitals could be used if they were modified. Duration of stay in the intensive care unit would depend on severity of illness, timing of diagnosis and response to antiviral agents (Ribavirin).

IMPLICATIONS FOR NSW HOSPITALS

The Chief Health Officer has written to Chief Executive Officers and Regional Directors requesting that hospitals devise a local contingency plan for the management of patients with VHFs. Active involvement of infection control, nursing, laboratory and public health staff is encouraged.

All NSW hospitals should consider that a case of VHF could present as an inpatient or be referred to the Accident and Emergency Department by a medical practitioner. Each hospital is therefore required to have in place a contingency plan for the treatment and referral of patients with suspected VHFs.

Planning of health resources for a very rare, but contagious and potentially fatal, disease, is very difficult, especially as advances in infection control, diagnosis and anti-viral treatment are to be expected in the next 10 years before such a case may occur. Whole structures of hospitals, including intensive care units, may be changed before one potential case emerges. It is important to plan for cases which might occur in the next month but realise that nothing may happen for five years. In these situations modifications of rooms, either low or high dependency, should be the mimimum required to comply with the CDC guidelines without impairing the normal day-to-day functioning of those rooms.

The **minimum** requirement is an area that can be sealed off, with an adjoining anteroom. **Ideally**, an area that can be sealed off, with an adjoining anteroom and a separate degowning room on the exit side of the patient's room, needs to be identified in each hospital. There should be no movement from the patient's room to the anteroom (a clean area). Contingency plans for transfer of patients to Westmead Hospital need to be devised. But it must be realised that patients with suspected VHFs present a diagnostic dilemma, and are clinically labile, so immediate transfer may not always be possible.