

Haematology

A Laboratory services

Laboratory services are likely to be seriously curtailed* in the event of an influenza pandemic, as up to 50% of the technical and scientific staff may be ill for a number of weeks. This would have three major impacts on the ability of all clinical services to function effectively. These are, in descending order of importance:

1 Supply of blood

Blood banks will not be able to cross-match blood for elective surgery apart from some cancer cases which could not be delayed (semi-emergency) and some obstetric cases. With these exceptions the service could only support emergency surgery and acute severe blood loss. In the latter case it may be necessary to restrict the amount of blood cross-matched to a maximum of 6 units plus a dose of NovoSeven to aid haemostasis. This approach may only be required if hospital stock levels fall below 40% of normal levels. Similar restrictions would apply to the provision of platelet concentrates and plasma products.

Blood donations would also decrease, but perhaps by only 25% because donors are from a younger age group. The National Blood Service (NBS) has looked at shortage of blood supply in relation to vCJD and produced guidance issued by the Chief Medical Officer (CMO) through the 'Gateway'.† The principles are the same whatever the cause of the shortage of blood but in this case there would be the additional problem of shortage of NBS staff to process what blood was available. The weblink to this guidance is given below.† It contains recommendations on the decision-making process which all hospitals would find useful.

2 'Routine' analytical service

Labs will need to stop all so-called routine tests, such as ESRs and coagulation screens, which are often requested when there is no clinical indication. They will need to concentrate on the management of the emergency and acutely ill patient as in the transfusion labs. This will require greater scrutiny of requests to exclude the non-urgent, which will require liaison with key clinical user groups to agree criteria for acceptance or rejection of a request, as is well established in surgical maximum blood ordering menus.

All advanced techniques, such as haematinic assays, flow cytometry and ELISA/PCR-based tests, may need to be suspended in order to sustain the emergency service. Some agreement would be needed with GPs about their access to lab tests as their workload can exceed 50% of routine tests in many district general hospitals.

*Major reductions in lab workload have been managed in the past 30 years during strikes by biomedical scientists but there is no reliable evidence on how this was achieved overall nationally, or on the effects on quality and outcomes of care.

†National Blood Service guidance on shortage of blood supply (in relation to vCJD):
http://bloodnet/hospitals/library/pdf/ESD_PCS_HL_001_01.pdf.

3 Anticoagulant monitoring

The interval between tests for patients who have 'stable' control of the international normalised ratio (INR) could be lengthened according to the duration of the pandemic. The elective initiation of prophylactic warfarin may need to be suspended. It is unlikely that self-monitoring could be increased in time to reduce the workload further.

B Clinical services

In the event of pandemic flu, clinical haematology would move to a largely outpatient or day-case basis and only those patients who need intensive inpatient support would be admitted to hospital.

Outpatients and day cases

There is a mixture of non-urgent and more acute attendance and the former could be reduced. The investigation of numerical abnormalities of blood counts, routine follow-up of early stages of myeloproliferative and lymphoproliferative disorders and the investigation of potential thrombophilia could all be postponed. Therapeutic apheresis of dubious value could be suspended. The interval between transfusions for patients with chronic marrow failure could be increased. Non-urgent chemotherapy could be postponed.

Inpatient care

It may be possible to delay some elective chemotherapy which would normally require inpatient support. Some cases for semi-elective stem cell transplants could be delayed as could joint replacement and other elective surgery for haemophiliacs.

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