ORDERING BLOOD TESTS GUIDELINES

There needs to be a balance between clinically useful information that can be obtained from blood testing against pain for the neonate and iatrogenic anaemia from multiple sampling and consequent risks of blood transfusion. The decision to order a blood test on a baby should be made on an individual basis having regard to that particular baby’s clinical condition.

In the past practice has generally erred on the side of oversampling to assure results are available for a round. Current recommendations are a reversal of this process so that if doubt exists a decision about ordering a test can be considered on the round. Remember the test can always be ordered later but the blood can never be put back.

1. Where possible decisions for the following day’s blood tests should be decided on the ward round, forms completed including date for tests to be done and left at the baby’s cot side.

2. New admissions after the round to have the forms for the following day completed by the admitting team.

3. Any baby whose clinical condition changes and warrants blood sampling before the morning round should have forms completed appropriately. Always ask a more senior member of staff if you are uncertain whether the baby needs a blood test.

4. Electrolytes and bicarbonate obtained from the blood gas machine are accurate if the sample is of good quality. The accuracy of the result from the formal lab or the gas machine is heavily dependant on the quality of the sample. A haemolysed sample will give an inaccurate result from the formal lab or the gas machine. A good quality sample measured within a few minutes of sampling from the gas machine will generally give more accurate results for bicarbonate, potassium and glucose than those produced 30-60 minutes later in the laboratory.
   - If Urea and Creatinine (U&E) are required they can be ordered alone from the main lab (0.2ml). Formal U&E’s should only be sent to the main lab if the gas machine samples seem aberrant or you do not have a gas machine sample available.
   - Formal U&E’s require 0.2ml on top of the 0.2ml that gave the gas machine sample.

5. Blood glucose should be tested with the blood gas machine.

6. Plasma osmolality requires 0.1ml of blood and may not give you more information than you can get from the sodium, glucose and urea.

7. Antibiotic levels - monitor as per drug manual protocols.

8. Use TCM monitoring wherever possible to minimise the number of blood gases taken.
### Neontology Clinical Guidelines

**Ordering blood tests**

<table>
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<tr>
<th></th>
<th>Admission</th>
<th>Physiologically unstable</th>
<th>Stable &lt;32/1250gm or ongoing resp support</th>
<th>Feeder &amp; Grower</th>
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</thead>
<tbody>
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<td>L3</td>
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### Haematology

**FBC for Hb.**
- ✔ ± 7 – 10 days
  - *monitor Hb on blood gas formal if transfusion considered*
  - 10 – 14 days
  - 10 – 14 days

**FBC for platelet**
- ✔ ± individualise

**Gp DAT (Coombs)**
- ✔

**X match**
- <28/1000gm

### Biochemistry

**Blood gas**
- individualise
- individualise
- Every 2 – 3 days
- weekly

**Glucose (monitor on blood gas)**
- ✔ ✔ Daily with gas
  - With gas
  - With gas

**Na (monitor on blood gas)**
- At 8 – 12 hours
  - Daily
  - With gas
  - With gas

**Urea / Creatinine**
- Alternate days if on TPN

**Bilirubin**
- Daily for first few days
  - <28|1000gm, else only if jaundiced

**LFT, PO₄, CA**
- At 1 month if EBM/PDHM

*GP DAT (Coombs) check at delivery on RH negative mothers and on all babies requiring phototherapy.*