Figure 1. Protocol for anticoagulant associated ICH

DOACs, Direct oral anticoagulants; HASU, Hyper-acute stroke unit; ICH, intracranial haemorrhage; NHNN, National Hospital for Neurology & Neurosurgery; Octaplex, PCC; T-call, thrombolysis call; UCLH, University College London Hospital;

<table>
<thead>
<tr>
<th>UCLH HASU protocol for anticoagulant associated ICH</th>
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### 1. Anticoagulation associated ICH is an emergency
- Rapid recognition – always ask about anticoagulants with acute stroke symptoms regardless of onset time.
- Urgent scanning – go straight to CT if safe to do so.
- Treatment must be given before any critical transfer to NHNN. Infusion can be continued during transfer.

#### Anticoagulants
- Vit K antagonists: Warfarin, Synthrome
- DOACs: Apixaban, Rivaroxaban, Edoxaban
- Dobutrex: antifibrinolytic – see below

### 2. Give Vitamin K & Octaplex for ICH with Warfarin/Synthrome
1. Check point-of-care INR using Roche CoaguChek device (plus lab INR for audit only).
2. Give Vitamin K 10 mg IV stat (in Thrombolysis Nurse bag).
3. Dose Octaplex based on patient weight and point-of-care INR (see table below).
4. Prescribe Octaplex on A&E prescription chart.
5. Collect Octaplex from HASU fridge.
6. Draw up Octaplex and administer over 15 minutes regardless of dose administered.

#### DOACs

<table>
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<tr>
<th>INR</th>
<th>0-1.2</th>
<th>1.3-3.9</th>
<th>4.0-6.0</th>
<th>&gt; 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>50kg</td>
<td>2000a</td>
<td>3000a</td>
<td>3000a</td>
<td>3000a</td>
</tr>
<tr>
<td>60-90kg</td>
<td>1500a</td>
<td>2000a</td>
<td>3000a</td>
<td>3000a</td>
</tr>
<tr>
<td>&gt;90kg</td>
<td>1000a</td>
<td>1500a</td>
<td>2000a</td>
<td>3000a</td>
</tr>
</tbody>
</table>

#### Clinically unstable requiring ambulance support and INR >1.2
- 3000a
- 5000a
- 3000a

### 3. T-Call Nurse to record and re-order HASU stock of Octaplex
- Fill out the tracing forms in infused boxes with patient details, label, date/time, and batch label from vial.
- Place tracing forms in the blood product tracing boxes in A&E or HASU.
- Return any unused boxes to HASU fridge.
- Phone blood transfusion to inform them of use of HASU Octaplex.
- Transfusion will be sent counter with new stock, who will also take unused stock back.
- Record details and times in Door To Needle audit.

### 4. T-Call SpR to inform Haematology and recheck INR after treatment
- Ensure haematology SpR informed of case after Octaplex given – on call SpR (bleep 7050); via switch out-of-hours.
- Repeat INR 30 min and 6h after end of infusion of Octaplex (laboratory INR, not point-of-care).
- If repeat INR > 1.2, seek haematology advice on further management.
- Consider future anticoagulation requirements in high risk cases.

### 5. ICH on DOACs (Apixaban, Dabigatran, Rivaroxaban, Edoxaban)
- Contact haematology on call registrar (bleep 7050); via switch out-of-hours; for Dabigatran antidote and advice for all other DOACs.
- Send urgent coagulation screen, thrombin time (Dabigatran only) and anti-Xa assay (Apixaban, Rivaroxaban, Edoxaban).