Risk Scores for Emergency Medicine

CHADS\textsubscript{2} score (Thromboembolic risk in AF)
- Congestive cardiac failure (+1)
- Hypertension (+1)
- Age >75 (+1)
- Diabetes (+1)
- Stroke/TIA previously (+2)

0 None/Aspirin; 1 Aspirin/Warfarin; 2+ Warfarin

CHADS-VASC (Thromboembolic risk in AF)
- Congestive cardiac failure (+1)
- Hypertension (+1)
- Age >75 (+2)
- Diabetes (+1)
- Stroke/TIA previously (+2)
- Vascular disease (+1)
- Age 65-74 )+1)
- Sex Category – female (+1)

0 None/Aspirin; 1 Aspirin/Warfarin; 2+ Warfarin

Rockall (Upper Gi bleed)
- Age
  - <60 (0)
  - 60-79 (+1)
  - >80 (+2)
- Shock
  - None (0)
  - Pulse >100 and SBP>100 (+1)
  - SBP<100 (+2)
- Co-morbidity
  - No major (0)
  - IHD, CHF, other major (+2)
  - Renal failure, liver failure, metastatic cancer (+3)
- Diagnosis
  - Mallory Weiss tear (0)
  - All other (+1)
  - GI Malignancy (+2)
- Evidence bleeding
  - None (0)
  - Blood, adherent clot, spurting vessel (+2)

0-2 good prognosis; >8 high mortality
Glasgow-Blatchford (Upper GI bleed)

- **Urea**
  - 6.5-8.0 (+2)
  - 8-10 (+3)
  - 10-25 (+4)
  - >25 (+6)
- **Hb (Men)**
  - 12-13 (+1)
  - 10-12 (+3)
  - <10 (+6)
- **Hb (Women)**
  - 10-12 (+1)
  - <10 (+6)
- **SBP**
  - 100-109
  - 90-99 (+2)
  - <90
- **Pulse >100**
- **Melaena**
- **Syncope (+2)**
- **Hepatic disease (+2)**
- **Heart failure (+2)**

Low risk if 0. High probability of intervention if ≥6

**ROSIER (Likelihood of stroke)**

- **Facial weakness** +1
- **Arm weakness** +1
- **Leg weakness** +1
- **Speech disturbance** +1
- **Visual field defect** +1
- **Syncope** -1
- **Seizure** -1

Stroke unlikely if score ≤0; will not detect posterior circulation events
**ABCD2 (Stroke risk after TIA)**

- Age ≥60 1
- BP systolic >140/diastolic >90 1
- Clinical features:
  - Speech disturbance 1
  - Unilateral weakness 2
- Duration:
  - 0-59 minutes 1
  - ≥60 minutes 2
- Diabetes 1

Score ≥4 increased risk of early CVA

**TIMI (Risk after ACS)**

- Age >65
- 3+ risk factors (FH <50; HTN; Cholesterol; DM; smoker)
- Known CAD with stenosis >50%
- Aspirin use in last 7 days
- Recent angina (>2/day)
- Elevated biomarker
- ST segment deviation >0.5mm

**Wells (DVT)**

- Active cancer (Treatment within 6/12 or palliative care) 1
- Paralysis, paresis, or POP of leg 1
- Bedridden >3 days or surgery within 12/52 1
- Localised tenderness along deep venous sytem 1
- Entire leg swelling 1
- Calf swelling >3 cm compared to asymptomatic leg 1
- Pitting oedema greater in symptomatic leg 1
- Dilated superficial veins (non-varicose) 1
- Previous documented DVT 1
- Other diagnosis more likely than DVT -2

2-9 likely; -2-1 unlikely (Older versions had <1, 1-2, >2)
Wells (PE)

- Clinical signs/symptoms of DVT 3
- Alternative diagnosis less likely than PE 3
- HR >100 1.5
- Immobilisation >3 days or surgery within 4/52 1.5
- Previous DVT/PE 1.5
- Haemoptysis 1
- Active cancer (Treatment within 6/12 or palliative care) 1

0-4 unlikely; >4 likely

Modified SAD PERSONS (Suicide risk)

S: Male sex (1)
A: Age <19 or >45 (1)
D: Depression/hopelessness (2)
P: Previous attempt or psychiatric care (1)
E: Excessive alcohol or drug use (1)
R: Rational thinking loss (organic or psychotic) (2)
S: Single, widowed, or divorced (1)
O: Organised or serious attempt (2)
N: No social support (1)
S: Stated future attempt (or ambivalent) (2)

Score 0-5 may be safe to discharge; 6-8 probably needs psychiatric review; >8 likely to need admission.

AMTS

- Date
- Time of day
- Age
- Date of birth
- Current location
- Memorise ‘42 West Street’
- WWII date (start or end)
- Recognise two objects
- Current Monarch
- Recall address
- Count 20 down
**CURB-65 (Mortality in pneumonia)**

- Confusion
- Urea >7mmol/L
- RR>30
- BP <90 sys/60 dias
- Age ≥65

0-1 low risk; 2 moderate (short inpatient or close review); 3+ severe

Also increased risk if:
- Multiple segments
- SpO2 <92% or pO2 <9.0 on air
- Apyrexial
- WCC <4 or >20
- CRP>50
- Positive blood culture

**Alvarado (Likelihood of appendicitis)**

- RLQ tenderness (+2)
- Rebound tenderness (+1)
- Temp >37.3°C (+1)
- Migration of pain to RLQ (+1)
- Anorexia (+1)
- Nausea/vomiting (+1)
- WCC>10 (+2)
- Neutrophilia (+1)

<3-4 appendicitis unlikely; ≥7 appendicitis likely

**Glasgow (Pancreatitis)**

- Age>55
- WCC>15x10⁹/L
- Glucose >10mmol/L
- Urea >16mmol/L
- pO₂ <7.9kPa
- CA⁰₂ >2mmol/L
- Albumin <32g/L
- LDH >600U/L
- AST >100U/L

≥3 in first 48 hours indicates severe disease
Ranson score (Pancreatitis)

(On admission, non-gallstone):
- Age >55
- WCC >16
- Glucose >10
- LDH >350
- AST >250

(On admission, gallstone):
- Age >70
- WCC >18
- Glucose >12.2
- LDH >400
- AST >250

Mortality: 0-2% 3-4 15% 5 40%

Paddington Alcohol Test
- How often do you drink alcohol:
  - Never – test ends
  - More often – advise against daily drinking
  - Daily – may be dependant
- What is the most you will drink in a day?
  - If >twice daily limit, PAT +ve
- Do you feel your attendance is related to alcohol?
  - Yes – PAT +ve

Modified Centor score (Likelihood of streptococcal pharyngitis)
- Age <15 (+1)
- Age ≥45 (-1)
- Absence of cough (+1)
- Pyrexia (+1)
- Enlarged/tender cervical LN (+1)
- Exudate/swelling of tonsils (+1)

-1-1: Unlikely strep pharyngitis; 4-5 probable – treat empirically. 2-3 possible – consider testing and treat if positive
Westley Croup Score
- Chest wall retractions
  - None (0)
  - Mild (+1)
  - Moderate (+2)
  - Severe (+3)
- Stridor
  - None (0)
  - When agitated (+1)
  - At rest (+2)
- Cyanosis
  - None (0)
  - When agitated (+4)
  - At rest (+5)
- Level of consciousness
  - Normal (0)
  - Disoriented (+5)
- Air entry
  - Normal (0)
  - Reduced (+1)
  - Markedly reduced (+2)

0-2 mild; 3-5 moderate; 6+ severe

Hunt and Hess (Subarachnoid haemorrhage)
- Grade 1: Asymptomatic, mild headache, slight nuchal rigidity
- Grade 2: Moderate to severe headache, nuchal rigidity, no neurological deficit other than cranial nerve palsy
- Grade 3: Drowsiness/confusion, mild focal neurological deficit
- Grade 4: Stupor, moderate-severe hemiparesis
- Grade 5: Coma, decerebrate posturing

Glasgow Meningococcal Septicaemia Prognostic Score
- Hypotension (<75 if under 4, <85 if older) (+3)
- Skin/rectal temperature difference >3°C (+3)
- Base deficit (Capillary) >8mmol (+1)
- GCS <8 or drop of >3 in one hour (+3)
- Lack of meningism (+2)
- Parental opinion of deterioration in last hour (+2)
- Widespread ecchymoses or extending lesions (+1)
**Baux Score (Burn mortality)**

Baux score = Age (years) + TBSA burned (%)  
Revised Baux score (R-Baux) = Age + TBSA ± 17 (if inhalational burn)  
Paediatric Baux score (P-Baux) = TBSA – Age ± 18 (if inhalational burn)

50% Mortality at score of 109.6, futility at 160 (2012 paper)

**Abbreviated Burn Severity Index**

- Gender: Male (1) / Female (0)  
- Age: 1 for each 20 years or part thereof (max 5)  
- TBSA: 1 for each 10% or part thereof  
- Inhalation injury: 1 if present  
- Full thickness burn: 1 if present

<table>
<thead>
<tr>
<th>Score</th>
<th>Probability of survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-3</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>4-5</td>
<td>98%</td>
</tr>
<tr>
<td>6-7</td>
<td>80-90%</td>
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<tr>
<td>8-9</td>
<td>50-70%</td>
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<tr>
<td>10-11</td>
<td>20-40%</td>
</tr>
<tr>
<td>12-13</td>
<td>&lt;10%</td>
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</tbody>
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More recent studies suggest the score remains fairly valid, but younger ages should have less weighting (score 0 if ≤40; 1 if 41-60; 2 if 61-80; 5 if 81-100), but mortality slightly higher for each score.