

Table 2. The APACHE II Severity of Disease Classification System[§]

| Physiologic Variable | High Abnormal Range | | | | | Low Abnormal Range | | | | Points |
|---|---------------------|-------------|---------------|---------------|---------------------|--------------------------|---------------|--------------------------|---------------------|--------|
| | +4 | +3 | +2 | +1 | 0 | +1 | +2 | +3 | +4 | |
| Temperature – rectal (°C) | 41° | 39 to 40.9° | | 38.5 to 38.9° | 36 to 38.4° | 34 to 35.9° | 32 to 33.9° | 30 to 31.9° | 29.9° | |
| Mean Arterial Pressure – mm Hg | 160 | 130 to 159 | 110 to 129 | | 70 to 109 | | 50 to 69 | | 49 | |
| Heart Rate (ventricular response) | 180 | 140 to 179 | 110 to 139 | | 70 to 109 | | 55 to 69 | 40 to 54 | 39 | |
| Respiratory Rate (non-ventilated or ventilated) | 50 | 35 to 49 | | 25 to 34 | 12 to 24 | 10 to 11 | 6 to 9 | | 5 | |
| Oxygenation: A-aDO ₂ or PaO ₂ (mm Hg) | 500 | 350 to 499 | 200 to 349 | | <200 | | | | | |
| a. FIO ₂ 0.5 record A-aDO ₂ | | | | | | | | | | |
| b. FIO ₂ <0.5 record PaO ₂ | | | | | PO ₂ >70 | PO ₂ 61 to 70 | | PO ₂ 55 to 60 | PO ₂ <55 | |
| Arterial pH (preferred) | 7.7 | 7.6 to 7.69 | | 7.5 to 7.59 | 7.33 to 7.49 | | 7.25 to 7.32 | 7.15 to 7.24 | <7.15 | |
| Serum HCO ₃ (venous mEq/l) | 52 | 41 to 51.9 | | 32 to 40.9 | 22 to 31.9 | | 18 to 21.9 | 15 to 17.9 | <15 | |
| (not preferred, but may use if no ABGs) | | | | | | | | | | |
| Serum Sodium (mEq/l) | 180 | 160 to 179 | 155 to 159 | 150 to 154 | 130 to 149 | | 120 to 129 | 111 to 119 | 110 | |
| Serum Potassium (mEq/l) | 7 | 6 to 6.9 | | 5.5 to 5.9 | 3.5 to 5.4 | 3 to 3.4 | 2.5 to 2.9 | | <2.5 | |
| Serum Creatinine (mg/dl) | 3.5 | 2 to 3.4 | 1.5 to 1.9 | | 0.6 to 1.4 | | <0.6 | | | |
| Double point score for acute renal failure | | | | | | | | | | |
| Hematocrit (%) | 60 | | 50 to 59.9 | 46 to 49.9 | 30 to 45.9 | | 20 to 29.9 | | <20 | |
| White Blood Count (total/mm ³) (in 1000s) | 40 | | 20 to 39.9 | 15 to 19.9 | 3 to 14.9 | | 1 to 2.9 | | <1 | |
| Glasgow Coma Score (GCS) Score = 15 minus actual GCS | | | | | | | | | | |
| A. Total Acute Physiology Score (sum of 12 above points) | | | | | | | | | | |
| B. Age points (years) | 44 = 0; | | 45 to 54 = 2; | | 55 to 64 = 3; | | 65 to 74 = 5; | | 75 = 6 | |
| C. Chronic Health Points (see below) | | | | | | | | | | |
| Total APACHE II Score (add together the points from A+B+C) | | | | | | | | | | |

Chronic Health Points: If the patient has a history of severe organ system insufficiency or is immunocompromised as defined below, assign points as follows:

5 points for nonoperative or emergency postoperative patients

2 points for elective postoperative patients

Definitions: organ insufficiency or immunocompromised state must have been evident **prior** to this hospital admission and conform to the following criteria: **Liver** – biopsy proven cirrhosis and documented portal hypertension; episodes of past upper GI bleeding attributed to portal hypertension; or prior episodes of hepatic failure/encephalopathy/coma. **Cardiovascular** – New York Heart Association Class IV. **Respiratory** – Chronic restrictive, obstructive, or vascular disease resulting in severe exercise restriction (i.e., unable to climb stairs or perform household duties; or documented chronic hypoxia, hypercapnia, secondary polycythemia, severe pulmonary hypertension (>40 mmHg), or respirator dependency. **Renal** – receiving chronic dialysis.

Immunocompromised – the patient has received therapy that suppresses resistance to infection (e.g., immunosuppression, chemotherapy, radiation, long term or recent high dose steroids, or has a disease that is sufficiently advanced to suppress resistance to infection, e.g., leukemia, lymphoma, AIDS).

Interpretation of Score:

| | | | |
|-------------------------|----------------------------|----------------------------|----------------------------|
| 0 to 4 = ~4% death rate | 10 to 14 = ~15% death rate | 20 to 24 = ~40% death rate | 30 to 34 = ~75% death rate |
| 5 to 9 = ~8% death rate | 15 to 19 = ~25% death rate | 25 to 29 = ~55% death rate | Over 34 = ~85% death rate |

[§] Adapted from *Crit Care Med* 1985;13:818-829