

Site \_\_\_\_  
 Pt Initials \_\_\_\_-\_\_\_\_  
 Enrollment # \_\_\_\_\_

### Form 4 Apache Score Form

Use values from the first 24 hours from admission to ICU.

Physiologic Variable		HIGH ABNORMAL RANGE					LOW ABNORMAL RANGE					Severity Score
		(Check one range per variable and write the severity score in the column to the right. Note: use the worst possible score for all variables, except for the GCS score.)										
Severity Points		+4	+3	+2	+1	0	+1	+2	+3	+4		
1	Temperature – rectal (°C) (add 0.5° to oral temp, add 1.0° to axillary temp)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		≥41°	39-40.9°		38.5°-38.9°	36°-38.4°	34°-35.9°	32°-33.9°	30°-31.9°	≤29.9°		
2	Mean Arterial Pressure (mmHg)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
		≥160	130-159	110-129		70-109		50-69		≤49		
3	Heart Rate (Ventricular Response)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		≥180	140-179	110-139		70-109		55-69	40-54	≤39		
4	Resp. Rate (non-ventilated or ventilated)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
		≥50	35-49		25-34	12-24	10-11	6-9		≤5		
5	Oxygenation:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>						
	a. FIO <sub>2</sub> ≥ 0.5 record A·aDO <sub>2</sub> *	≥500	350-499	200-349		<200						
	b. FIO <sub>2</sub> < 0.5 record only PaO <sub>2</sub>					PaO <sub>2</sub> >70	PaO <sub>2</sub> 61-70		PaO <sub>2</sub> 55-60	PaO <sub>2</sub> <55		
6	Arterial pH	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		≥7.7	7.6-7.69		7.5-7.59	7.33-7.49		7.25-7.32	7.15-7.24	<7.15		
7	Serum Sodium (mmol/L)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		≥180	160-179	155-159	150-154	130-149		120-129	111-119	≤110		
8	Serum Potassium (mmol/L)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
		≥7	6-6.9		5.5-5.9	3.5-5.4	3-3.4	2.5-2.9		<2.5		
9	Serum Creatinine (µmol/L) (double point score for acute renal failure)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>				
		≥309.4	≥176.8≤309.3	≥132-176.7		≥53<132		<53				
10	Hematocrit (%)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
		≥60		50-59.9	46-49.9	30-45.9		20-29.9		<20		
11	White Blood Count (total/mm <sup>3</sup> ) (in 1000s)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
		≥40		20-39.9	15-19.9	3-14.9		1-2.9		<1		
12	Glasgow Coma Score (GCS) Score=15 minus actual GCS	(Note: The best GCS used for the 1 <sup>st</sup> 24 hours)									(15 - GCS Total)	
		Eye	Verbal	Motor	GCS Total (= Eye + Verbal + Motor)							
A=Total ACUTE PHYSIOLOGY SCORE (APS): Total severity points indicated for Variables 1-12 in the column to the right.												
	Serum HCO <sub>3</sub> (venous-mmol/L) (Use in place of variable 6 if no ABGs)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		≥52	41-51.9		32-40.9	22-31.9		18-21.9	15-17.9	<15		

\* A·aDO<sub>2</sub> = [(FiO<sub>2</sub> (713)-(PaCO<sub>2</sub>/0.8)]-PaO<sub>2</sub>

## Form 4 Apache Score Form

A= APS Points (see back)   
 B= Age Points (see back)   
 C= Chronic Health Points   
 Total= APACHE II Score

### Glasgow Coma Scale:

#### Eye Opening

4- Spontaneous  
 3 - To speech  
 2 - To pain  
 1 - None

#### Best Motor Response

6 - Obeys commands  
 5 - Localizes to pain  
 4 - Withdraws from pain  
 3 - Abnormal flexion  
 2 - Extension  
 1 - None

#### Verbal Response

5 - Oriented  
 4 - Confused  
 3 - Inappropriate words  
 2 - Incomprehensible sounds  
 1 - None

How to score age points (B):

Age (years)	Points
≤ 44	0
45-54	2
55-64	3
65-74	5
≥ 75	6

How to score chronic health points (C):

If the patient has a history of severe organ system insufficiency (see below) **or** is immuno-compromised assign points as follows.

1. For non-operative or emergency postoperative patients → 5
2. For elective postoperative patients → 2
3. Patient does NOT have a history of severe organ system insufficiency and is NOT immuno-compromised: → 0

#### CHRONIC HEALTH DEFINITIONS

Organ insufficiency or immuno-compromised state evident prior to this hospital admission and are consistent with the following criteria:

**LIVER:** Biopsy-proven cirrhosis and documented portal hypertension; prior episodes of 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 activities of daily living or household duties; or documented chronic hypoxia, hypercapnia, secondary polycythemia, severe pulmonary hypertension (>40 mmHg), or ventilator dependency

**RENAL:** Receiving chronic dialysis

**IMMUNO-COMPROMISED:** The patient has received therapy that suppresses resistance to infection (i.e., immuno-suppressive treatment, chemotherapy, radiation, long term or recent high dose steroids, or has a disease that is sufficiently advanced to suppress resistance to infection (i.e., leukaemia, lymphoma, AIDS)