

	Policy/Procedure Title:		Critical Values Chart	
	<input checked="" type="checkbox"/> WCH <input checked="" type="checkbox"/> WSRH <input checked="" type="checkbox"/> WECH <input checked="" type="checkbox"/> WWH <input checked="" type="checkbox"/> WGH <input checked="" type="checkbox"/> WYH <input checked="" type="checkbox"/> WGSB			

Appendix A: Critical Laboratory Values

Section	Analyte	Critical Low	Critical High	Units	Age Range
Blood Gas	O2Hb	<85		%	All
Blood Gas	%COHb (Carboxyhemoglobin)		>15	%	All
Blood Gas	O2 Saturation	<85		%	All
Blood Gas	pCO2	<20	>60	mm Hg	All
Blood Gas	pH (arterial)	<7.25	>7.55	pH	All
Blood Gas	pO2	<55		mm Hg	All
Blood Gas	pH (venous)	<7.22	>7.52	Units	All
Chemistry	Bilirubin, Total	See Total Bilirubin Chart		mg/dL	0-6 days
Chemistry	Bilirubin, Total		≥15	mg/dL	6-28 days
Chemistry	Calcium	<6.5	>13	mg/dL	All
Chemistry	Calcium, ionized	<0.8	>1.58	mmol/L	All
Chemistry	CO2	<10	>45	mmol/L	All
Chemistry	Glucose	<40	>200	mg/dL	0-1 month
Chemistry	Glucose	<50	>500	mg/dL	> 1 month
Chemistry	Glucose, whole blood	<40	>200	mg/dL	0-1 month
Chemistry	Glucose, whole blood	<50	>500	mg/dL	>1 month
Chemistry	Lactic Acid		>4.0	mmol/L	All
Chemistry	Magnesium	<1	>5	mg/dL	All
Chemistry	Phosphorus	<1.0		mg/dL	All
Chemistry	Potassium	<2.8	>6.2	mmol/L	All
Chemistry	Potassium, whole blood	<2.8	>6.2	mmol/L	All
Chemistry	Sodium	≤120	>158	mmol/L	All
Coagulation	Fibrinogen	<80		mg/dL	All
Coagulation	PT (INR)		≥5.0		All
Coagulation	PTT (ECH, GH, WSRH, YH) PTT (GSH)		>130 >136	seconds	All
Hematology	Blasts		Present		All
Hematology	Platelet Count	<100	>800	K/mcL	0-1 month

Section	Analyte	Critical Low	Critical High	Units	All
Hematology	Platelet Count	<20	>800	K/mcL	> 1 month
Hematology	ABS neut. Ct	<0.5		K/mcL	All
Hematology	Blood Parasite (Malaria)		Present		All
Hematology	Hematocrit	<24	>69	%	0-1 month
Hematology	Hematocrit	<21	>69	%	> 1 month
Hematology	Hemoglobin	<7	>21.6	K/mcL	0-1 month
Hematology	Hemoglobin	<7	>19.9	K/mcL	> 1 month
Hematology	WBC	<1.0	>50	K/mcL	All
Microbiology	AFB Culture		Positive	n/a	All
Microbiology	AFB Smear		Positive	n/a	All
Microbiology	Blood Culture		Positive	n/a	All
Microbiology	COVID-19 (Inpatient only)		Detected	n/a	All
Microbiology	CSF Culture		Positive	n/a	All
Microbiology	CSF Gram Stain		Positive	n/a	All
Microbiology	CSF Meningitis Panel		Positive	n/a	All
Microbiology	Rapid HIV		Positive	n/a	All
Microbiology	Sterile BF Culture		Positive	n/a	All
Microbiology	Sterile BF Gram Stain		Positive	n/a	All
Microbiology	Transfusion Reaction Culture		Positive	n/a	All
Microbiology	Transfusion Reaction Stain		Positive	n/a	All
Drugs	Acetaminophen		>150	mcg/mL	All
Drugs	Carbamazepine		>15	mcg/mL	All
Drugs	Digoxin		>2.0	ng/mL	All
Drugs	Gentamycin Peak		>12	mcg/mL	All
Drugs	Gentamycin Trough		>2.5	mcg/mL	All
Drugs	Lithium		>1.2	mmol/L	All
Drugs	Phenobarbital		>50	mcg/mL	All
Drugs	Phenytoin (Dilantin)		>30.0	mcg/mL	All
Drugs	Salicylate		>40	mg/dL	All
Drugs	Theophylline		>20	mcg/mL	All
Drugs	Tobramycin Peak		>12	mcg/mL	All
Drugs	Tobramycin Trough		>2.0	mcg/mL	All
Drugs	Valproic Acid		>200.0	mcg/mL	All
Drugs	Vancomycin Trough		>20	mcg/mL	All

Special Criteria: Massive Transfusion Protocol Patients

Result	Low Critical	High Critical	Units	Action
Platelet	< 50	>800	K/mcL	Platelet transfusion
Fibrinogen	< 120		mg/dL	Cryo transfusion
Ionized Calcium	< 1.00	>1.58	mmol/L	Calcium dose
pH, Venous	< 7.25	>7.52	units	Bicarbonate dose

Total Bilirubin – Critical Levels:

Age in Hours	Bili (mg/dL)	Hours	Bili (mg/dL)	Hours	Bili (mg/dL)	Hours	Bili (mg/dL)
0 12	7.0	45 46	12.9	79 80	16.5	113 114	17.6
12 13	7.1	46 47	13.0	80 81	16.6	114 115	17.6
13 14	7.2	47 48	13.2	81 82	16.7	115 116	17.6
14 15	7.2	48 49	13.4	82 83	16.7	116 117	17.6
15 16	7.3	49 50	13.6	83 84	16.8	117 118	17.6
16 17	7.3	50 51	13.7	84 85	16.8	118 119	17.6
17 18	7.3	51 52	13.9	85 86	16.9	119 120	17.6
18 19	7.4	52 53	14.1	86 87	17.0	120 121	17.6
19 20	7.5	53 54	14.2	87 88	17.0	121 122	17.6
20 21	7.6	54 55	14.4	88 89	17.1	122 123	17.6
21 22	7.7	55 56	14.6	89 90	17.1	123 124	17.6
22 23	7.7	56 57	14.8	90 91	17.2	124 125	17.6
23 24	7.8	57 58	14.9	91 92	17.3	125 126	17.5
24 25	8.2	58 59	15.1	92 93	17.3	126 127	17.5
25 26	8.5	59 60	15.2	93 94	17.4	127 128	17.5
26 27	8.7	60 61	15.3	94 95	17.4	128 129	17.5
27 28	9.0	61 62	15.3	95 96	17.4	129 130	17.5
28 29	9.3	62 63	15.4	96 97	17.4	130 131	17.5
29 30	9.5	63 64	15.5	97 98	17.4	131 132	17.4
30 31	9.8	64 65	15.5	98 99	17.4	132 133	17.4
31 32	10.1	65 66	15.6	99 100	17.4	133 134	17.4
32 33	10.4	66 67	15.7	100 101	17.5	134 135	17.4
33 34	10.6	67 68	15.7	101 102	17.5	135 136	17.4
34 35	10.9	68 69	15.8	102 103	17.5	136 137	17.4
35 36	11.1	69 70	15.9	103 104	17.5	137 138	17.4
36 37	11.4	70 71	15.9	104 105	17.5	138 139	17.3
37 38	11.7	71 72	16.0	105 106	17.5	139 140	17.3
38 39	12.0	72 73	16.1	106 107	17.5	140 141	17.3
39 40	12.2	73 74	16.1	107 108	17.5	141 142	17.3
40 41	12.3	74 75	16.2	108 109	17.6	142 143	17.3
41 42	12.4	75 76	16.3	109 110	17.6	143 144	17.3
42 43	12.5	76 77	16.3	110 111	17.6	144 145	17.4
43 44	12.5	77 78	16.4	111 112	17.6	145 146	17.4
44 45	12.7	78 79	16.4	112 113	17.6		

PROCEDURE HISTORY

REVISION #	DATE/INITIALS	REVISION DESCRIPTION
1	4/4/18 ALP	Initial Chart.
2	3/11/19 ALP	Changed Ptt from > 150 to >130. Added GSH PTT >136. Removed CSF Crypto AG. Added CSF Meningitis panel.
3	4/15/19 ALP	Changed glucose critical value from < 40 to <50. Approved by all MEC's on 4/8/19.
4	3/31/20 ALP	Added COVID-19 (Inpatient only)
5	5/14/20 ALP	Critical value changes for Bilirubin.
6	8/25/20 ALP	Critical Value changes for Calcium total & ionized, Sodium, Fibrinogen, Platelets, Digoxin, Lithium, and Theophylline
6.1	2/10/21 ALP	Added Waynesboro and Chambersburg

Approved by System Lab Integration and all Medical Directors 3/11/19.

Approved by Incident Command Center 3/31/20.

Approved by:

Ephrata Community Hospital 6/9/20

Gettysburg MEC 6/16/20

Good Samaritan MEC 8/18/20

York Hospital MEC 8/10/20

Chambersburg MEC 9/2020

Waynesboro MEC 9/2020