

Critical results management and reporting: whose responsibility?

A laboratory's view

Briefcase with important lab results...



Actioned limits reviewed in 2012 as a result of an SUI

- HB lower limit triggered. (72g/L)
- No record of telephoning.
- Patient in A and E and discharged before Junior Dr had checked results
- Patient returned 3 days later with HB 53g/L
- Declared SUI.....

Full blood count parameters

Parameter	Unit	Level	Comment
Haemoglobin	g/L	< 50	Microcytic or macrocytic anaemia
	g/L	<70	Normochromic, normocytic as this might suggest blood loss or bone marrow failure
	g/L	>190	Or haematocrit above 55 l/l. Only requires urgent referral if there appears to be compounding medical problems

White cell count

Neutrophils	$\times 10^9/L$	< 0.5	
	$\times 10^9/L$	>50	
Lymphocytes	$\times 10^9/L$	>50	Requires urgent but not immediate referral
Platelets	$\times 10^9/L$	<30	
Platelets	$\times 10^9/L$	>1000	Requires urgent but not immediate referral

Blood film

Presence of blasts or diagnosis suggestive of chronic myeloid leukaemia		Discuss with the covering haematologist prior to deciding what action should be taken
Malaria parasites	Positive	

Coagulation

INR	>6.5	For patients on warfarin
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ISO:15189

- 5.8
 - Reporting of results

5.8.2 C)

The laboratory shall ensure that critical results, where applicable are communicated effectively and meets the users' needs

UHA Action Limits 2015

Parameter	Action Limit		Appropriate Response
	Lower Limit	Upper limit	
Leucocytes		> 50 x 10 ⁹ /dL	Phone
Neutrophils	< 0.5 x 10 ⁹ /dL < 0.2 x 10 ⁹ /dL (CRITICAL)	>50	Phone if not known Inform HAEM med cover
Haemoglobin	<50 x10 ⁹ g/L (Macrocytic >110 /microcytic,<75) <70 x10 ⁹ g/dL (normochromic/ normocytic)	> 200 x 10 ⁹ /L	Phone if not known
Platelets	< 30 x 10 ⁹ /L < 10 x 10 ⁹ /L (CRITICAL)	> 1000 x 10 ⁹ /L	Phone if not known Inform HAEM med cover Check with blood film before phoning if not known
INR-anticoagulated		> 6.5	Phone requestor were possible otherwise see Appendix C
APTT		> 7.0	Phone
Haematological malignancies	New Acutes:-Films with Blasts etc		Inform HAEM med cover ASAP

**TECHS CALLING
A CRITICAL TO
A CLINIC BE LIKE**



LabHumor on facebook 843128

The telephone process...

TRACEY SMITH-STRANEY

ew Patient Utilities Codes Tools Help



Authorising - 15575168

Name: [REDACTED] BH DOB: 05/02/1939 Sex: M F
Cons/GP: Dr Christopher Goldsmith Location: WARD 15 NEPHROLOGY Sample Date/Time : 30/09/2015
Clinical Details: Nephrotic syndrome ?cause

Status: Complete

Report Date: 30/09/2015

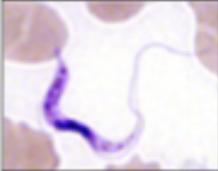
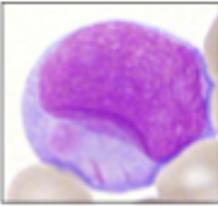
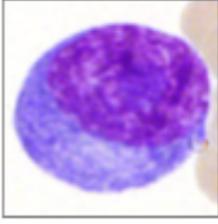
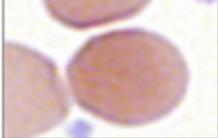
Tests	Current Results	0/10
a A Hgb.....	56	
a A WBC.....	11.6	
a A PLT.....	283	
a A RBC	1.91	
a A HCT	0.16	
a A MCV	85.3	
a A MCH	29.3	
a A MCHC	344	
a A RDW	16.3	
p A MPV	10.0	
a A Neutrophil	68.0% 7.89	
a A Lymphocyte	18.0% 2.09	
a A Monocyte	10.1% 1.17	
a A Eosinophil	3.6% 0.42	
a A Basophil	0.3% 0.03	
a A Nucleated RBCs	0.0% 0.00	
a A Haematology Comment	Attempted to phone Hb result to ward 15 numerous times, no answer. ? Hb result accuracy. Suggest repeat FBC. APEA.	
a A		
a A		



Critical values in Hematology

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- Survey was sent to 182 participants questioning sources for establishing critical values. It was completed by laboratory managers, supervisors, technical specialists, senior technologists, and bench technologists working in haematology in laboratories in Ontario

Morphology	Percent of labs reporting results as critical (<i>n</i> = 174)
	Malaria: 94%
	Parasites other than malaria: 84%
	Blast cells: 74%
	Sickle cells: 48%
	Schistocytes: 39%
	Plasma cells: 37%
	Spherocytes: 22%