

UK NEQAS (H)

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Chairman UK NEQAS (H) GSAG

UK NEQAS (H) Feedback & Directions



UK NEQAS

UK NEQAS (H) Scheme Registration

October 2014

Scheme	FBC	ADLC	Retics	Hb only	Plasma Viscosity
<i>Surveys / Annum</i>	12	6	6	12	12
UK	676	642	285	106	46
Non-UK	371	268	161	20	4
Total	1047	910	446	126	50

UK NEQAS (H) Registration-Instruments

October 2014

Scheme	FBC	ADLC	Retics	Hb only	Plasma Viscosity
UK	1312	1222	589	286	50
Non-UK	811	579	238	46	4
Total	2123	1801	917	332	54

Returns and Reports

October 2014

Scheme	FBC	ADLC	Retics	Hb only	Plasma Viscosity
Web Based	Yes	Yes	Yes	Yes	No
Participant Use	96%	96%	99%	98%	-

Developments and Updates

- ▶ **ESR & nRBC - Full pilots**
- ▶ **Measurement Uncertainty – (Poster/Hand outs)**
- ▶ **Working Group on Performance Assessment
- (*Members from GSAG*)**

Performance Assessment Tools

Monitoring Performance Trends

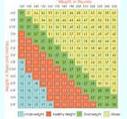
Traffic Lighting



- Deciding on colour limits
- Work on-going

Laboratory Index Chart

- Linking EQA/IQC
(Brendan Fitzpatrick)



CAPA



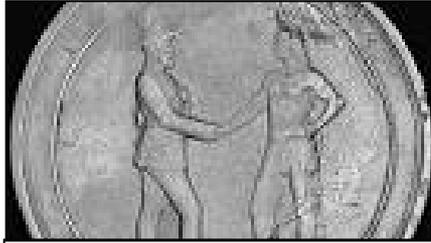
- Generic Format -All NEQAS schemes
- Standard data return for PUP letters
- Introduced from January 2015

Quality Trend Monitoring in Blood Sciences

A personal Reflection



Blood Sciences- In the Beginning!



The Treaty



Haematology



Biochemistry



Immunology

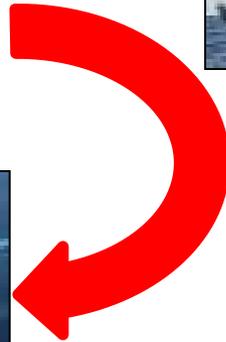
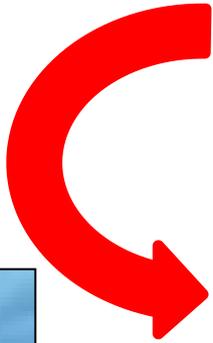


Build the Fleet



Sail for the Promised Land

UK NEQAS



Quality Challenges – Blood Sciences

- ▶ Blood Sciences created January 2013
- ▶ 3 Former departments  1 department
- ▶ 1 Management/Quality Management/Governance
- ▶ 14 New sections - 2 Large Hospital sites
- ▶ Hybridisation/Rationalisation of former services
- ▶ Staff rotation and training - Cross discipline working

Hernán Cortés (1485-1547)

Occupation - Conquistador



- ▶ No Turning Back
- ▶ Embrace the Indigenous Population
- ▶ Merge the best of cultures
- ▶ Ease the passing over
- ▶ Establish governance
- ▶ Nurse the wounded
- ▶ Create a multicultural society
- ▶ Found a new dynasty
- ▶ Childs play!

Quality Drivers in Blood Sciences

- ▶ **Blood Sciences itself**
- ▶ **Pathology Quality Assurance Review**
- ▶ **ISO 15189:2012**
- ▶ **NHS Improving Quality – NHS England (2013)**
- ▶ **KPI's – RCPATH**
- ▶ **Local KPI's for Newcastle Laboratory Medicine**

Quality Challenge - Trend Analysis



Trend Identification



Monitor - Improvement



Governance



Investigation



Root Cause



Corrective Actions

Trend Monitoring Approach

▶ Traffic Light

- *Alert and warning*
- *Bias data –where available*



▶ Real time EQA Report viewing

- *Current Reports*
- *Past Reports*

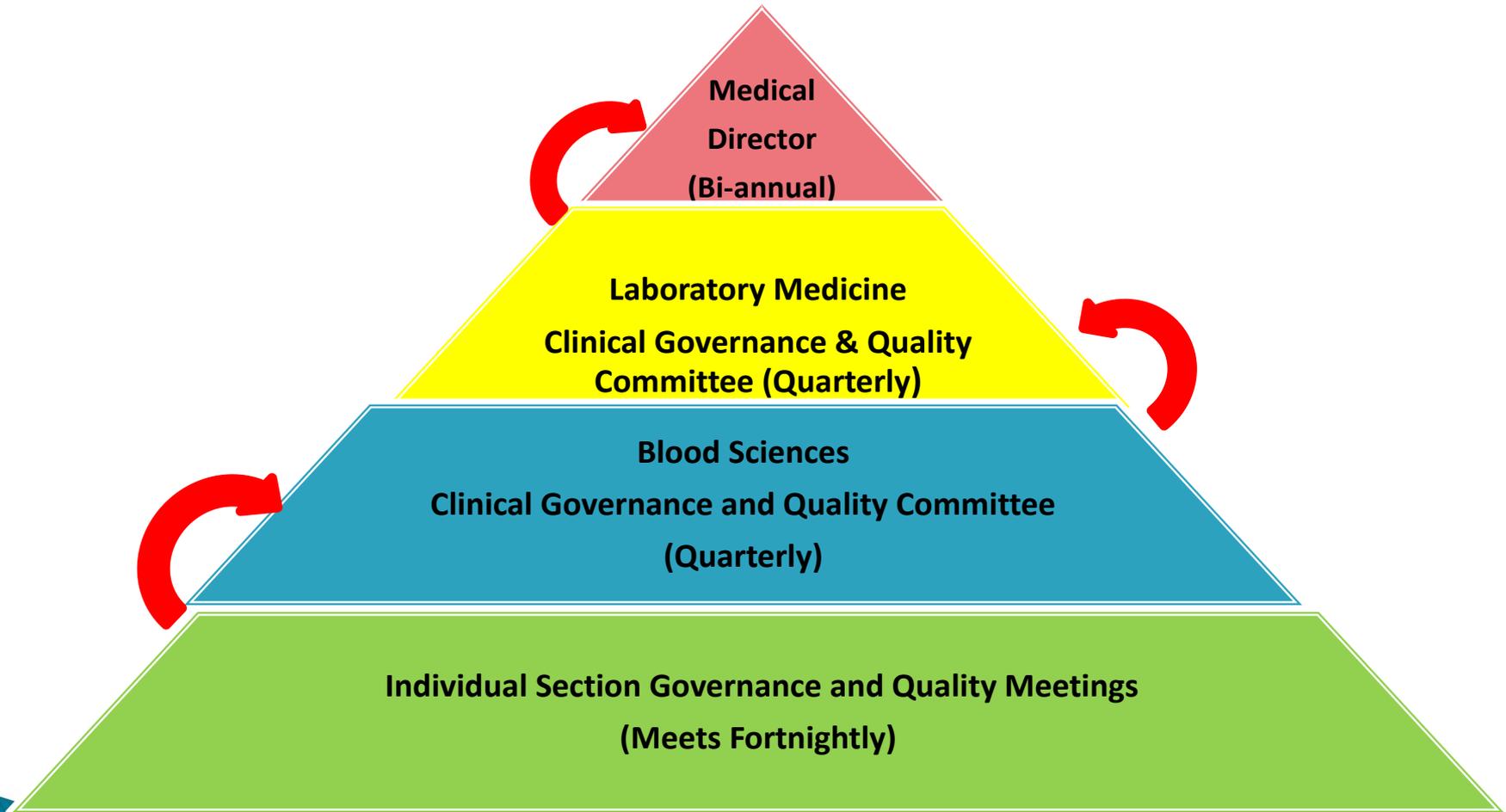


▶ Electronic Distribution

- *Shared drive*
- *Q-Pulse*



Governance-Quality Escalation (Blood Sciences)



Blood Sciences Approach

1. Traffic Light Data Base

	A	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
649	Vitamin D	AB/RM/CI																						
650	NEQAS																							
651	NEQAS-General Haematology																							
652	Full Blood Count	JW/JH/NF/CC	Core Hoem																					
653	White Cell Count	JW/JH/NF/CC	Core Hoem																					
654	Red Cell Count	JW/JH/NF/CC	Core Hoem																					
655	Haemoglobin	JW/JH/NF/CC	Core Hoem																					
656	Packed Cell Volume	JW/JH/NF/CC	Core Hoem																					
657	Mean Cell Volume	JW/JH/NF/CC	Core Hoem																					
658	Mean Cell Haemoglobin	JW/JH/NF/CC	Core Hoem																					
659	Mean Cell Haem Conc	JW/JH/NF/CC	Core Hoem																					
660	Platelet Count	JW/JH/NF/CC	Core Hoem																					
661	Full Blood Count	JW/JH/NF/CC	Core Hoem																					
662	White Cell Count	JW/JH/NF/CC	Core Hoem																					
663	Red Cell Count	JW/JH/NF/CC	Core Hoem																					
664	Haemoglobin	JW/JH/NF/CC	Core Hoem																					
665	Packed Cell Volume	JW/JH/NF/CC	Core Hoem																					
666	Mean Cell Volume	JW/JH/NF/CC	Core Hoem																					
667	Mean Cell Haemoglobin	JW/JH/NF/CC	Core Hoem																					
668	Mean Cell Haem Conc	JW/JH/NF/CC	Core Hoem																					
669	Platelet Count	JW/JH/NF/CC	Core Hoem																					
670	Full Blood Count	JW/JH/NF/CC	Core Hoem																					
671	White Cell Count	JW/JH/NF/CC	Core Hoem																					
672	Red Cell Count	JW/JH/NF/CC	Core Hoem																					
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687	Platelet Count	JW/JH/NF/CC	Core Hoem																					
688	Full Blood Count	JW/JH/NF/CC	Core Hoem																					
689	White Cell Count	JW/JH/NF/CC	Core Hoem																					

2. EQA –Report distribution (Q-Pulse)



Trend Analysis Tools

Filters and Tools

- Site
- Section
- Instrument
- Parameter (Analyte)
- Responsibility
- Add comments

The screenshot shows the Microsoft Excel interface for a file named 'Blood Sciences EQA Performance.xlsx'. A red box highlights the 'Filter' and 'Sort & Filter' buttons in the ribbon. A red arrow points from the 'Filter' button to the 'Site' column header in the data table below. The data table is titled 'Directorate of Laboratory Medicine - Blood Sciences EQA Performance 2013-2014' and contains columns for 'Scheme', 'Q-Pulse No', 'Site', 'Analyser', 'Frequency', 'Responsibility', 'Section', and months from Jan to Dec 2013. The table is filtered to show data for 'RVI' and 'Betaquant'.

Scheme	Q-Pulse No	Site	Analyser	Frequency	Responsibility	Section	2013											
							Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
RVI		RVI																
NEQAS - Birmingham		RVI																
Betaquant		RVI	BS-EQA-38	Monthly	DN/LH	SAS												
Lipid Investigations		RVI	NEQAS - Birmingham (Showing All)	Monthly	EH/SR	Core Bio												
Total Cholesterol		RVI	Line 1	Monthly	EH/SR	Core Bio												
Triglyceride		RVI	Line 1	Monthly	EH/SR	Core Bio												
HDL Cholesterol		RVI	Line 1	Monthly	EH/SR	Core Bio												
non-HDL Cholesterol		RVI	Line 1	Monthly	EH/SR	Core Bio												
LDL Cholesterol		RVI	Line 1	Monthly	EH/SR	Core Bio												
APO B		RVI	Line 1	Monthly	EH/SR	Core Bio												
APO A1		RVI	Line 1	Monthly	EH/SR	Core Bio												
Lpa		RVI	Line 1	Monthly	EH/SR	Core Bio												
Newborn Screening		RVI		Monthly	KB/JD	NNS												
Initial TSH		RVI	BS-EQA-33	Monthly	KB/JD	NNS												
Final TSH		RVI		Monthly	KB/JD	NNS												
Initial IRT		RVI		Monthly	KB/JD	NNS												
Final IRT		RVI		Monthly	KB/JD	NNS												
Initial Phe		RVI		Monthly	KB/JD	NNS												
Final Phe		RVI		Monthly	KB/JD	NNS												
Tyr		RVI		Monthly	KB/JD	NNS												
Initial CB		RVI		Monthly	KB/JD	NNS												
Final CB		RVI		Monthly	KB/JD	NNS												
C10		RVI		Monthly	KB/JD	NNS												
CB/C10 ratio		RVI		Monthly	KB/JD	NNS												
Quantitative Phenylalanine		RVI	BS-EQA-36	Monthly	KB/MH	Paediatrics												
Phenylalanine		RVI		Monthly	KB/MH	Paediatrics												
Tyrosine		RVI		Monthly	KB/MH	Paediatrics												
Specific Proteins		RVI	BS-EQA-32	Monthly	EH/GM/RM	Core Bio												
IgG		RVI	Line 2	Monthly	EH/GM	Core Bio												
IgA		RVI	Line 2	Monthly	EH/GM	Core Bio												
IgM		RVI	Line 2	Monthly	EH/GM	Core Bio												
C3		RVI	Line 2	Monthly	EH/GM	Core Bio												
C4		RVI	Line 2	Monthly	EH/GM	Core Bio												
AAT		RVI	Line 2	Monthly	EH/GM	Core Bio												
Transferrin		RVI	FRH Line 1	Monthly	EH/GM	Core Bio												
Ceruloplasmin		RVI	Line 2	Monthly	EH/GM	Core Bio												

EQA Flagging notes

Scheme	Site	Analyse	Frequency	Responsible	Section	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Final C8	RVI		Monthly	KB/JD	NNS	-	+	+	-	+	+						
C10	RVI		Monthly	KB/JD	NNS	-	-	-	-	+	-	-					
C8/C10 ratio	RVI		Monthly	KB/JD	NNS	+	+	+	+	+	+	+					
Quantitative Phenylalanine	RVI		Monthly	KB/MH	Paediatrics												
Phenylalanine	RVI		Monthly	KB/MH	Paediatrics		-	+	-	-	-	-	-				
Tyrosine	RVI		Monthly	KB/MH	Paediatrics		-	-	-	-	-	-	-				
Specific Proteins	RVI		Monthly	EH/GM/RM	Core Bio												
IgG	RVI	Line 2	Monthly	EH/GM	Core Bio	-	-	-	-	-							
IgA	RVI	Line 2	Monthly	EH/GM	Core Bio												
IgM	RVI	Line 2	Monthly	EH/GM	Core Bio	+	-		-	-							
C3	RVI	Line 2	Monthly	EH/GM	Core Bio	+	-		+	+							
C4	RVI	Line 2	Monthly	EH/GM	Core Bio	-	-										
AAT	RVI	Line 2	Monthly	EH/GM	Core Bio	-	-	-	-	+	-	-	-				
Transferrin	RVI	FRH Line 1	Monthly	EH/GM	Core Bio	+	+	+	-					+			
Caeruloplasmin	RVI	Line 2	Monthly	EH/GM	Core Bio	-	-	-									
Steroid Hormones	RVI		Monthly	AB/LH/GM	Core/SAS												
Cortisol (Serum)	RVI	Line 1	Monthly	AB/GM	Core Bio	+	+	+	+	+	+	+	+				
Cortisol (Urine)	RVI	Line 1	Monthly	AB/LH/GM	Core Bio	+	+	+		+	+	+					
Progesterone	RVI	Line 2	Monthly	AB/GM	Core Bio	-							+				
Oestradiol	RVI	Line 2	Monthly	AB/GM	Core Bio			+			+	+	+				
High Oestradiol	RVI	Line 2	Monthly	AB/GM	Core Bio				-								
Testo Female	RVI	Line 2	Monthly	AB/GM	Core Bio	-	-	-	-	-	-	-	+				
Testo Male	RVI	Line 2	Monthly	AB/GM	Core Bio				+	+	+	+	+				
SHBG	RVI	Line 2	Monthly	AB/GM	Core Bio		+						+	+			
Androstenedione	RVI	Immulite	Monthly	AB/GM	Core Bio	+			+	+	+	+	+				
Dheas	RVI	Line 2	Monthly	AB/GM	Core Bio	+	+	+	+	+	+	+	+				
Aldosterone	RVI	Line 2	Monthly	AB/LH	SAS		-			-	-						
Sweat Testing	RVI		Monthly	KB/CJ/MH	Paediatrics			+	+	+			+				

Musgrove:
Method Change to Roche Modular

EQA Distribution Blood Sciences

Current Report

Previous Reports

Document

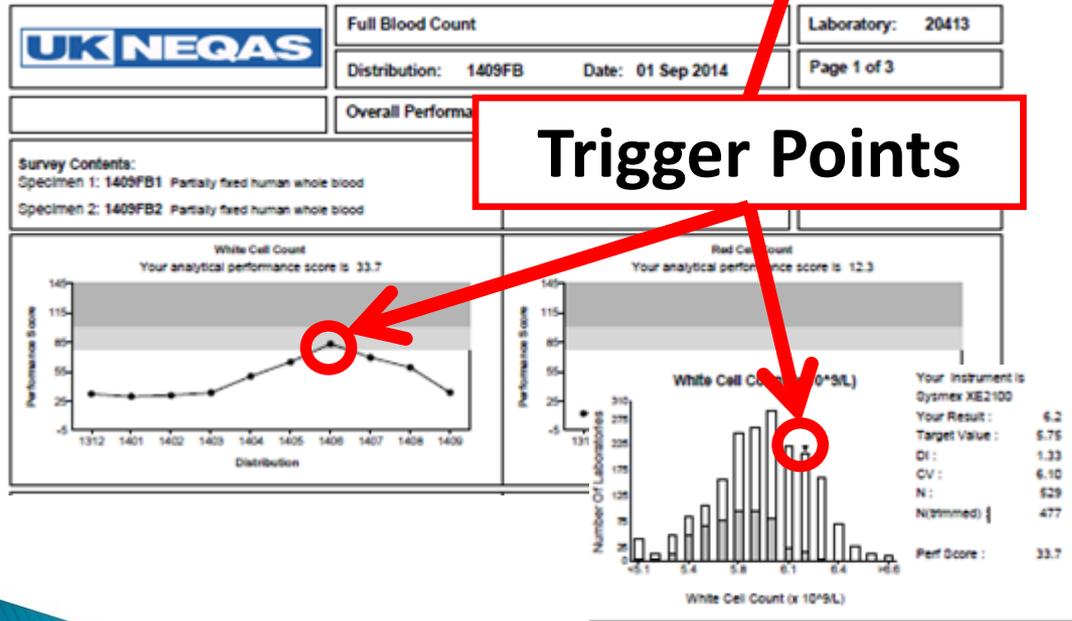
Distribution Acknowledgement (electronic signature)

Current and Previous Reports

Trend Monitor Example - WBC

3	Scheme	2014												
4		Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct
5	RVI													
652	<i>Full Blood Count</i>													
653	White Cell Count									+				
654	Red Cell Count													
655	Haemoglobin													
656	Packed Cell Volume													
657	Mean Cell Volume													
658	Mean Cell Haemoglobin													
659	Mean Cell Haem Conc													
660	Platelet Count													

- Trend - 3 months
- Trigger Points
- IQC – good
- Manufacturer called
- Fault identified/corrected
- EQA monitored/improved
- Preventative action – (before problem)



Challenges to Laboratories

- ▶ **Trend recognition-Investigation and root cause**
- ▶ **Pre-emptive alerts and actions**
- ▶ **Joining the dots (EQA,IQC, Complaints, incidents, system, equipment failure etc.)**
- ▶ **Corrective and remedial actions**
- ▶ **Monitoring effectiveness**

Veni, Vidi, Vici



**Achieve The Objectives
(Hopefully)**