

Canterbury DHB

District Health Board

T e P o a r i H a u o r a ō W a i t a h a

Meeting Minutes

Subject: Community Éclair Results Repository Biochemistry Meeting

Location: Seminar Room, Canterbury Health Laboratories

Meeting Date 03/04/2008

Attending:

Peter George (PG)	Medical Director	CDHB
Richard Mackay (RM)	Chemical Pathologist	CDHB
Chris Florkowski (CF)	Chemical Pathologist	CDHB
Lesney Stuart (LS)	Biochem Section Head	CDHB
Geoff Smith (GS)	Chemical Pathologist	SCL
Max Reed (MR)	Biochem / Haem Section Head	SCL
Guy Mulligan (GM)	Chemical Pathologist	MLS
Gordon Sutton (GSu)	Biochem Section Head	MLS
John Sheard (JS)	Biochem Section Head	WCDHB
Ruth Spearing (RS)	Haematologist	CDHB
John Moodie (JM)	LIS Co-ordinator	CDHB
Rebecca Clayton (RC)	Business System Analyst	CDHB
Ken Beechey (KB)	Haem Section Head	CDHB

Minute No	Minutes	Action
1)	<p><u>Welcome</u></p> <p>JM welcomed everyone to the meeting and thanked attendees for taking time out of their schedules to come along.</p> <p>RM introduced JS to the group and RS initiated a round of introductions her role as the Project Sponsor of the Community Éclair Project.</p>	
2)	<p><u>Project Status</u></p> <p>JM provided a brief background to the project. In June 2007 an initial meeting was held to agree the scope of the comparability project and in July / Aug 2007 a project charter was drafted and agreed. Subsequently a project board and a project team was put together. Representation from Med Lab South (MLS) included Brian Wilcox on the board with Guy Mulligan and Roger Chapman on the project team. Representation from Southern Community Laboratories (SCL) included Ben Harris on the board with Geoff Smith and Brent Glanville on the team.</p> <p>JM noted that the overall Community Éclair project was made up of four separate work-streams 1) A privacy work stream to look at Éclair Access, Auditing and</p>	

opting on / off 2) A technical work stream to cover the Éclair upgrades which will provide additional necessary functionality 3) A Communications work stream to inform the public and other necessary parties 4) The comparability work stream to look at which tests between the laboratories might be able to cumulate – primarily those tests on the Health PAC schedule.

In December 07 / January 08 Haematology Consultants and Sections Heads from the three laboratories met to discuss the Haematology tests. Significant progress was made in identifying which tests were likely to be comparable and agreed a number of common ranges (a large proportion being in a agreement with the ranges proposed by NorthQAG). JM noted that there were still issues to be addressed, including the cut-off value for an adult range. With Paediatric ranges, NorthQAG did not have a recommended series. Canterbury Heath Laboratories (CHL) and MLS agreed that their ranges couldn't be substantiated so the group agreed to adopt the SCL ranges.

PG asked which of the Haematology tests had been looked at and queried whether Ferritin was on the list. RS noted that it was anticipated this test would be covered by the Biochemists. With regards to the Haematology tests reviewed, KB noted it was primarily the CBC tests, but INR and coagulation was covered. ESR's and blood grouping were also looked at.

KB noted that that the Haematologists were keen to standardise as many of the ranges as they could focussing on the benefits that cumulating results in Éclair would deliver to GP's and others. KB did point out that doing this for Biochemistry would pose other issues. GS agreed that everyone would be keen to progress and get as much agreement as possible.

JM raised some of the issues that still need to be addressed. Assessing the use of the LOINC codes to be able to link tests so they can cumulate in Éclair. This would mean the LOINC code would have to be included in the HL7 message. Ensuring changes agreed for ranges / units are implemented – this will be time consuming for the respective labs IT staff. Ensuring changes agreed at this meeting are communicated out to and agreed by those laboratories using our respective LIS systems.

KB left the meeting:

3) Current Biochemistry Status:

Information received from each laboratory has been collated into a single spreadsheet which can be filtered in different ways to display information. Included in the spreadsheet is information from ARQAG and the Lower North Island group though JM pointed out this information was incomplete.

PG noted that although this meeting was to look primarily at the comparability of the reference ranges / units beyond this it was also important to show a commitment to the on-going assessment of the comparability of these data, and in particular to establish a mechanism to determine and monitor which analytes actually are comparable. JM noted that one of the objectives of this work stream is to look at the ongoing monitoring of these tests because there will be analyser / method changes and we need to have a structure in place to be able to deal with this.

JM noted that the aim of this meeting was to start looking at this spreadsheet and

review as much of the information as possible aiming to look at the high volume tests first.

Importantly it was noted; that with Biochemistry tests even if agreement is reached with the ranges / units, samples will need to be run at each site to ensure that the methods on questionable tests are actually returning comparable results.

PG provided a spreadsheet showing the volumes of tests across the three laboratories so that we could assess the high volume tests first.

4) Biochemistry Spreadsheet Review:

CREATININE

Gender Specific Differentiation: CF noted that the Australasian group recommended that there should be gender specific ranges for adults for Creatinine

Ranges: MLS and SCL noted that their ranges should be in umol/L. It was agreed that the Creatinine range for Females should be lower than that of males. It was asked what ARQAG were recommending. JM noted that ARQAG had not given a range for adults, but did have a range for Paediatrics.

It was agreed that the three laboratories would adopt the following Adult range.

The Adult Male range for Creatinine would be: 50 – 110 umol/L

The Adult Female range for Creatinine would be: 40 – 90 umol/L

It was agreed that the three laboratories would adopt the ARQAG paediatric range.

It was also noted that CHL may be moving to another Architect method but there was still evaluation to be done.

5) FASTING GLUECOSE

Gender Specific Differentiation: It was agreed by the three laboratories that the Adult range would be the same for both Males and Females.

Ranges: GS noted that Southern's upper range of 5.5 is because between 5.6 and 6.9 it is they indicate to GP's that in some patients this may be abnormal i.e. indicative of diabetes mellitus. CF noted that it is generally acknowledged and queried whether SCL would consider raising the upper limit to 6.0 and then make an appropriate comment. CF also noted that the Australasian group note that from 6.1 it is indicative of impaired fasting glycaemia. GS asked whether CHL could lower their range and make an associated comment. CF noted that we already have a significant amount of comment attached to our reports.

It was agreed in principle that the three laboratories would adopt the following Adult range for both sexes.

The Adult range for Fasting Glucose would be: 3.5 – 6.0 mmol/L

Provision: On the basis that SCL adopt the upper limit of 6.0 and introduce a comment noting to GP's the potential indications of glucose in the high 5.0 range GS would like CHL to also put this comment on their reports to standardise reporting in the community.

Action: CF to look at the possibility of being able to add an appropriate comment and liaise with GS for a common solution.

CF /GS

6) Paediatric ranges were not discussed.
RANDOM GLUCOSE

Gender Specific Differentiation: It was agreed by the three laboratories that the Adult range would be the same for both Males and Females.

Name: PG queried the name "Random" noting the word "Unspecified" would be a more correct term. CF pointed out that although probably true the term "Random" is the more widely understood terminology.

Ranges: Having reviewed the ranges GS noted that in the literature a Random Glucose range of 7.8 is deemed abnormal to which CF agreed.

It was agreed that the three laboratories would adopt the following Adult range for both sexes.

The Adult range for Random Glucose would be: 3.5 – 7.7 mmol/L

Paediatric ranges were not discussed.

7) TOTAL CHOLESTEROL

Gender Specific Differentiation: It was agreed by the three laboratories that the Adult range would be the same for both Males and Females.

GM noted that MLS don't actually report a result for Total Cholesterol which is part of the Fasting Lipid profile. Comments are reported based on the outcome of the result. PG confirmed that optimal / therapeutic ranges go out as a comment.

It was agreed by the three laboratories:

The Adult range for Total Cholesterol would be: <4.0 mmol/L

Although the cut off value wasn't disputed, it was agreed that the comments should be reviewed. Because of the possibility of result variation between the laboratories it will be important that Total Cholesterol results get compared across all identified laboratories as part of a comparison study to ensure comparability.

Action: Total Cholesterol to be reviewed in all Laboratories as part of the comparability exercise.

LS /JM

8) HDL CHOLESTEROL

It was noted that at CHL the comment for HDL didn't generate till a result of 2.5.

LS noted that the methods across the three laboratories for doing HDL are different. GS noted that HDL Cholesterols had been looked at 18months ago and as early as a few months ago.

Gender Specific Differentiation: It was agreed by the three laboratories that the Adult range would be the same for both Males and Females.

It was agreed by the three laboratories:

	<p>The Adult range for HDL Cholesterol would be: >1.0 mmol/L</p> <p>A comparison study across laboratories will need to be completed to assess the comparability of the HDL result given the different methodologies.</p> <p>Action: HDL Cholesterol to be reviewed in all Laboratories as part of the comparability exercise.</p>	<p>LS / JM</p>
9)	<p><u>LDL CHOLESTEROL</u></p> <p>Gender Specific Differentiation: It was agreed by the three laboratories that the Adult range would be the same for both Males and Females.</p> <p>It was agreed by the three laboratories: The Adult range for LDL Cholesterol would be: <2.5 mmol/L</p> <p>A comparison study across laboratories will need to be completed to assess the comparability of the LDL result given the different methodologies.</p> <p>Action: LDL Cholesterol to be reviewed in all Laboratories as part of the comparability exercise.</p>	<p>LS / JM</p>
10)	<p><u>CHOLESTEROL / HDL RATIO</u></p> <p>The name for this ratio was different across the three laboratories. The group agreed that it would be best to go with the NZPOCS LOINC name if suitable.</p> <p>Action: JM to identify the NZPOCS LOINC name for Cholesterol/HDL Ratio.</p> <p>Gender Specific Differentiation: It was agreed by the three laboratories that the Adult range would be the same for both Males and Females.</p> <p>It was agreed by the three laboratories: The Adult range for Cholesterol / HDL Ratio would be: <4.5</p> <p>A comparison study across laboratories will need to be completed to assess the actual comparability of the Cholesterol / HDL Ratio result given the different methodologies.</p>	<p>JM</p>
11)	<p><u>TRIGLYCERIDES</u></p> <p>Gender Specific Differentiation: It was agreed by the three laboratories that the Adult range would be the same for both Males and Females.</p> <p>It was agreed by the three laboratories: The Adult range for Triglycerides would be: <1.7 mmol/L</p> <p>A comparison study across laboratories will need to be completed to assess the actual comparability of the Triglycerides result given the different methodologies.</p> <p>Action: Triglycerides to be reviewed in all Laboratories as part of the comparability exercise.</p>	<p>LS / JM</p>

12) SODIUM

Gender Specific Differentiation: It was agreed by the three laboratories that the Adult range would be the same for both Males and Females.

Ranges: The group agreed to adopt the ARQAG range for Sodium.

It was agreed that the three laboratories would adopt the following Adult range.
The Adult range for Sodium would be: 135 – 145 mmol/L

13) POTASSIUM

GS noted that at SCL they have different codes for plasma and serum potassium's. SCL have done a small study to validate their reasoning along with work done at DML.

LS confirmed that at CHL we don't differentiate between the use of serum or plasma for reporting potassium's.

GM noted that at MLS they use Serum but also don't differentiate either.

Discussion was had as to the merits of differentiating between plasma and serum. It was agreed that the LOINC codes / names should be reviewed with a view to looking the possibility of separating the two sample types.

14) ALANINE AMINOTRANSFERASE (ALT)

Gender Specific Differentiation: It was agreed that there should be gender specific ranges for adults.

Ranges: It was agreed that the three laboratories would adopt the following Adult range. This is currently what CHL and the Lower North Island Group use.

The Adult Male range for ALT would be: 0 – 40 U/L
The Adult Female range for ALT would be: 0 – 30 U/L

No laboratory had Paediatric ranges so these were not discussed.

15) GAMMA GLYTAMYL TRANSFERASE (GGT)

Gender Specific Differentiation: It was agreed that there should be gender specific ranges for adults.

Ranges: It was agreed that the three laboratories would adopt the following Adult range.

The Adult Male range for GGT would be: 10 – 50 U/L
The Adult Female range for GGT would be: 10 – 35 U/L

A comparison study across laboratories will need to be completed to assess the

Adult range would be the same for both Males and Females.

Ranges: It was agreed that the three laboratories would adopt the following Adult range.
The Adult range for Bilirubin would be: 2 – 20 umol/L

Action: RM to review Total Bilirubin as part of the paediatric range working group.

20) CONJUGATED (DIRECT) BILIRUBIN

Discussion was had over the use of the term “Direct Bilirubin” and the group decided that the name should be standardised to “Conjugated Bilirubin”.

Gender Specific Differentiation: It was agreed by the three laboratories that the Adult range would be the same for both Males and Females.

Ranges: It was agreed that the three laboratories would adopt the following Adult range.
The Adult range for Conjugated Bilirubin would be: 0 – 5 umol/L

21) TOTAL PROTEIN

Gender Specific Differentiation: It was agreed by the three laboratories that the Adult range would be the same for both Males and Females.

Ranges: It was agreed that the three laboratories would adopt the following Adult range.
The Adult range for Total Protein would be: 64 – 83 g/L

22) Any other business

Further Tests
PG asked if he could take the time to quickly run through a few tests to see which of the private laboratories performed them.

Test	SCL	MLS
24hr urine potassium	YES	YES
Magnesium, urine	NO	YES (but not many)
Faecal Fat, quantitative	NO	NO
Acid Phosphatase, serum	NO	NO
VMA, 24hr urine	NO	NO
Fructosamine	NO	NO
Theophylline	NO (done in Dunedin)	YES
Alcohol, diagnostic purposes only	YES	YES
Urine Cortisol	NO	NO
Urine Calcium	YES	YES
Catecholamines, 24hr urine	NO	NO
Faecal Reducing Substances	NO	YES
Blood Gases	YES	YES
Digoxin	YES	YES
Lithium	YES	YES

PG noted that there weren't that many other tests on the lists to go through that would cover the bulk of the tests done at the three labs.

RS asked if we could get another date pencilled in the diary to go through the remaining tests maybe in early May? GS noted that early May was busy for him, but did note that he could do the first of May.

JM noted that he would update the spreadsheet with the agreed ranges / units so far so that these can be compared against what laboratories are currently reporting. That way changes that need to be made within each laboratory system can be easily identified.

Action: JM to raise the 1st of May as the next proposed meeting date.

JM thanked everyone for there time and the meeting closed.

End