

# Canterbury DHB

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## District Health Board

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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 4)

**Location:** Seminar Room, Canterbury Health Laboratories

**Meeting Date** 06/11/2008

**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	
Guy Mulligan (GM)	Chemical Pathologist	MLS	Apologies
Gordon Sutton (GSu)	Biochem Section Head	MLS	
John Moodie (JM)	LIS Co-ordinator	CDHB	
Robert Allan (RA)	Medical Lab Scientist	SCL	
John Livesey (JL)	Scientific Officer, Endolab	CDHB	
John Sheard (JS)	Biochem Section Head	WCDHB	

Minute No	Minutes	Action
1)	<p><u>Welcome</u></p> <p>JM welcomed everyone to the meeting and pointed out that there is potential for this to be the last one. Currently by volume, 60% of tests have been deemed comparable and have had the ranges pretty much agreed and there is about 25% that need further work.</p>	
2)	<p><u>Terms of Reference; South Island Quality Assurance Group (SIQAG )for Biochemistry</u></p> <p>JM noted that the latest draft version of the Terms of Reference had been sent out with the agenda and there were a couple of points that needed clarification.</p> <ul style="list-style-type: none"> <li>Senior Management Support:           <ul style="list-style-type: none"> <li>Copy sent to Trevor English (TE), Ben Harris and Brian Wilcox. TE has fed back his support but has highlighted a risk around changing of methods / instrumentation – when the labs sign up to this document it is important that when a lab changes it's method or instrumentation that the SIQAG group is notified so that it can be confirmed the test is still comparable, or it comparison testing needs to be completed or whether the LOINC code needs to be removed is that the test is no longer cumulating. There is the potential for clinical risk if analytes are cumulating and they are not comparable.</li> </ul> </li> </ul>	

- Attendees:
  - JM asked if the people were having ARQAG and LNIQAG representation at the meeting or whether it is best to include them on the minutes. **The group agreed it was best to invite representation from ARQAG and LNIQAG.**
  - JM asked GS if there was anyone missing from Med Lab South that should be included. **GS noted it would be a good idea to include Jeff Spurdle (Timaru), James Hurst and Peter Moore (Nelson Marlborough)**
  - JM asked whether the Quality Mangers need from each lab need to be included. **It was agreed that the Quality Managers would be included from meeting within their own laboratories and they should be on the distribution list for minutes, but they didn't need to attend the actual meetings.**
  - The issue of on-going management of the group was raised with JM noting that his remit was to project manage the comparability work stream and to put in place an infrastructure for the on-going comparability of tests. JM was unclear what, if any, future involvement he would have in these groups and queried whether this would fall into the remit of the Quality Mangers. **It was agreed that this should be discussed at a Senior Management Level.**
- Chair:
  - JM noted that we will need to identify a chair for the group? JM pointed out that the Haematologists have agreed that the chair will be a rotating position and chair will be by a consensus. JM asked if CF would like to be the first chair of the SIQAG. CF stated he would be happy to do it for the first year if no-one else wanted to do it. **It was agreed that CF would be the first chair of the SIQAG Biochemistry Group.**
- Additional Notes:
  - GS noted that with the IT side, 6 weeks might be too restrictive. It would be better to phrase it as "endeavour" or something along the lines "Time for implementation to be agreed at the time of change." PG noted that whatever is adopted should be the same across both SIQAG groups.
  - GS noted that Chris Lovell-Smith hadn't heard anything about the group yet. JM noted that outside of this meeting, no-one had been approached yet until we had obtained senior management support. PG noted there was a Biochemistry Credentialing Meeting on Nov 20<sup>th</sup> which Chris Lovell-Smith will be attending. Mike ?? who is on the LNIQAG will also be attending. It would be a good opportunity to raise SIQAG at this group.  
**Action: JM to arrange attendance with CF to briefly discuss the SIQAG group. Chris Lovell-Smith and Mike to be contacted to see if they have anything they want to raise at this meeting regarding SIQAG.**

3) SIQAG Biochemistry Comparability document.

JM noted that that this document was drafted to outline what all the agreed reference intervals are and the justifications for these intervals.

JM pointed out that the key elements requiring agreement are the names (this would be adopting the LOINC name), decimal places the result should be reported too, the units and reference intervals. All of these need to be agreed to ensure that tests will cumulate correctly in Éclair. JM demonstrated a cumulating example with an Éclair screenshot and reiterated the importance of standardisation where possible.

Discussion was had over which laboratories would adopt the recommended ranges outlined in this document. Would it include Otago / Southland, Timaru and Nelson Marlborough? PG noted it would be good to get an idea early as to what laboratories would be impacted. It was agreed that as a minimum those laboratories putting results into Éclair must follow the guidelines of this document. JM reiterated the potential for clinical risk.

- **The concept of this document was agreed.**
- **The layout of this document was agreed.**

JM also noted that the Haematologists would like an excel version of the ranges. It was agreed that it would be good to set this up for biochemistry as well.

JM noted that we would draw a line under the tests discussed at this meeting, sort out the remaining issues update the SIQAG Biochemistry Comparability document and then circulate for final sign-off. For there it can be used as the basis for updating the reference ranges in our LIS systems.

4) Comparability Exercise.

JL and LS co-ordinated the comparability exercise. JM displayed the results and graph for each analyte (LH, FSH, Progesterone, Prolactin and Estradiol)

Oestradiol:

- JL noted that the Endocrinology laboratory method is run purposely looking for low values as opposed to high.
- GS noted that SCL is going to re-equip in the near future moving to the Roche Method so they are likely to align more with MLS.
- PG noted the results look like they are comparable up to 2000, JL pointed out that they actively discourage high tests. PG asked how frequently the private labs get low results and queried the comparability under 100. GS and GSu noted that they don't get many.

Prolactin:

- JL noted sample eleven was enriched with macroprolactin. It didn't seem to make much difference for the prolactin test, but was more noticeable with LH and FSH.

LH /FSH

- JL noted that LH and FSH are done on the same machine as prolactin, and the differences shown in results were confined to the one sample. PG noted that we have to accept that for immunoassays, with some samples, we will

see anomalies, but most will be comparable.

**It was agreed that LH, FSH, Prolactin and Progesterone were comparable for the exercise of cumulating results in Éclair. It was agreed that Estradiol was comparable up to a value of 2000.**

JM noted that a comparability exercise had been initiated for Cortical and Testosterone. Samples had been sent out, but it appears that some samples have gone to the wrong laboratories and some laboratories didn't receive samples at all.

**Action: JM to investigate current situation with the cortisols / testosterones and reinitiate the comparability exercise as appropriate.**

JM

5) Luteinising Hormone (LH)

JL noted that he had discussed the ranges with Steve ?? and there was no evidence to suggest the ARQAG ranges were not correct. GS noted that ARQAG had done some recent work on these ranges.

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

B	0-9	0-2.5	IU/L
B	>=10-15	"Prepubertal range 0-2.5 IU/L. Levels rise during puberty towards adult range	
M	Adult	2-9	IU/L
F	Adult	2-8	IU/L
F	Adult	10-75	IU/L
F	Adult	2-8	IU/L
F	Adult	>15	IU/L
F	Antenatal	<1	IU/L

Follicle  
Mid cycle  
Luteal  
Post  
Menopause

6) FSH

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

B	0-9	0-6.5	IU/L
B	>=10-15	"Prepubertal range 0-6.5 IU/L. Levels rise during puberty towards adult range	
M	Adult	2-12	IU/L
F	Adult	3-10	IU/L
F	Adult	4-25	IU/L
F	Adult	2-8	IU/L
F	Adult	>20	IU/L

Follicle  
Mid cycle  
Luteal  
Post  
Menopause

7) PROLACTIN

**It was agreed that all three laboratories would adopt the ARQAG Architect range.**

M	Adult	50-450	mIU/L
F	Adult	50-650	mIU/L

8) PROGESTERONE

**It was agreed that the following range would be adopted.**

M	Adult	0-1	IU/L	Follicle Luteal Post Menopause
F	Adult	1-4	IU/L	
F	Adult	15-100	IU/L	
F	Adult	<4	IU/L	

9) OESTRADIOL

**It was agreed after further discussion that it would not be suitable for the CHL Endocrinology laboratory to cumulate their results with the private labs because of method difference.**

**It was agreed that SCL and MLS should be able to cumulate their results for Oestradiol.** GS and GSu to liaise with each other and agree the ranges based on the Roche values.

**Action: GS / GSu to send JM a copy of the agreed Oestradiol range.**

**GS / GSu**

10) CREATININE

JM noted that when collating the agreed creatinine ranges into the SIQAG Biochemistry document it was identified there was no range between 0-7days.

JM liaised with Tony / Colleen in Auckland to see what they did. Auckland has a comment that notes that the range between 0-7days is not accurate.

PG asked RM for his opinion. RM noted that paediatricians are more interested in any creatinine level changes in a patient as opposed to the actual range.

**It was agreed to start the lowest creatinine range from zero (0).**

11) FASTING GLUCOSE

JM noted that there was still an outstanding action for Fasting Glucoses with regards to values in the high 5 range.

CF noted that the hospital would be reluctant to start adding comments to the

result in the 5.5 → 6.0 range.

GS pointed out that for results going out to the community from the Hawke's Bay hospital then an appropriate comment would be important.

PG suggested that this could be a case for Hawke's Bay having their own TCP if required.

Further discussion showed that it would be acceptable to have an appropriate comment set-up to report just for Hawke's Bay fasting glucose tests between the 5.5 → 6.0 range and not for CHL test.

**Action: JM to check with the Myles / LIS Team that this is possible.**

12) POTASSIUM

JM noted that we still have an issue with potassium's with regards to serum vs. plasma.

JM presented one option which would allow CHL and MLS to cumulate fully and SCL to cumulate just their plasma sample, but highlight the risk that there was a possibility that some potentially important results could get missed.

GS noted that if the group was happy to raise the upper limit of potassium's to 5.2, then that would negate the need for sample differentiation.

**It was agreed to amend the potassium range to 3.5 -5.2.**

13) ALT

**RM confirmed that no paediatric range was required for ALT.**

14) TSH

JM noted that we had agreed comparability but not range. RM had completed the paediatric range.

It was agreed that the adult TSH range should be 0.40 – 4.00.

PG raised the point that Nuclear Medicine also report TSH and that they need to be told / involved with what we are doing.

**Action: JM to follow up.**

PG also noted that they do Total T4, Total T3 and Free Thyroxine index. We need to ensure that these don't end up cumulating with our tests.

15) FT3

Paediatric Range: It was agreed that FT3 should be referred to RM's paediatric work-group.

It was agreed there did not need to be differentiation by sex.

**It was agreed that the adult range should be 2.5 -6.0.**

- 16) FT4
- Paediatric Range: It was agreed that FT4 should be referred to RM's paediatric work-group.
- It was agreed there did not need to be differentiation by sex.
- It was agreed that the adult range should be 10 -24.**
- 17) PSA
- It was agreed that this still needed further discussion.
- Action: CF to follow up.**
- 18) LITHIUM
- It was noted that the differentiation of therapeutic vs. prophylaxis is done by comment.
- It was pointed out that we may not want the actual reference interval to appear in Éclair, instead just flag up abnormal if appropriate. CF noted that a comment would be used to point out differences. Set-up would be similar to paracetamol.
- Action: CF and GS to discuss further.**
- 19) TRANSFERRINS
- Paediatric Range It was agreed that Transferrins should be referred to RM's paediatric work-group.
- It was agreed there did not need to be differentiation by sex.
- It was agreed that the adult range should be 2.0 - 3.5.**
- 20) CHLORIDE
- Paediatric Range: It was agreed that no paediatric reference range is required.
- It was agreed there did not need to be differentiation by sex.
- It was agreed that the adult range should be 95 - 110.**
- 21) Paediatric Reference Ranges
- Calcium:
- **It was agreed that paediatric results would be interpreted by the adult reference interval.**
- It was agreed that the following are outstanding or need to be referred to RM's paediatric workgroup.**
- Phosphate
  - Urate

CF

- Urea
- Total Protein
- Iron

22) Next Steps:

JM noted that;

- TOR will be updated
- SIQAG Biochemistry doc will be updated.
- Outstanding actions / work from these meetings need to be progressed.
- Start looking at how the agreed ranges will get implemented in our various LIS systems. It was noted by all that it is appreciated how busy and stretched each of our different IT Team are.

PG asked if JM could circulate a list of those remaining tests and their volumes to the group. It was clear that areas such as antiepileptics should not be forgotten.

**Action: JM to circulate a list of outstanding tests.**

JM confirmed with the group that they were happy for the SIQAG TOR and Comparability document could be shared with ARQAG / LNIQAG.

23) Any other business

Neonatal bilirubin: JM noted that a job had been raised with the CHL IS Team from Hawke's Bay regarding neonatal bilirubin. Jim Greenwood was asking if a nominal interval of (0-0) could be added so that the neonatal bilirubin results will flag in their IBA system.

JM pointed out that at CHL we phone the results when they are high. JM asked what SCL does. GS noted that they send their tests to us. MLS phone high results.

PG raised a query over why they weren't checking their results anyway instead of requiring a prompt.

RM noted that there are action levels rather than reference intervals, noting the ranges that had been provided for total bilirubin and that we should be able to use these.

GS noted that he will talk to Jim to progress.

**Action: JM to send GS a copy of the job for background information.**

No other business was identified and the meeting closed.

End