

## Label-Trace User Guidance

Correct use of Label-Trace allows the laboratory to process requests quickly by different departments.

**Sample tubes** must have the following:-

- Label-trace sticker with full Patient Details

**Request forms** must have the following :-

- Label-trace sticker with full Patient Details
- Label-trace sticker with GP surgery and GP information

### Completing request forms

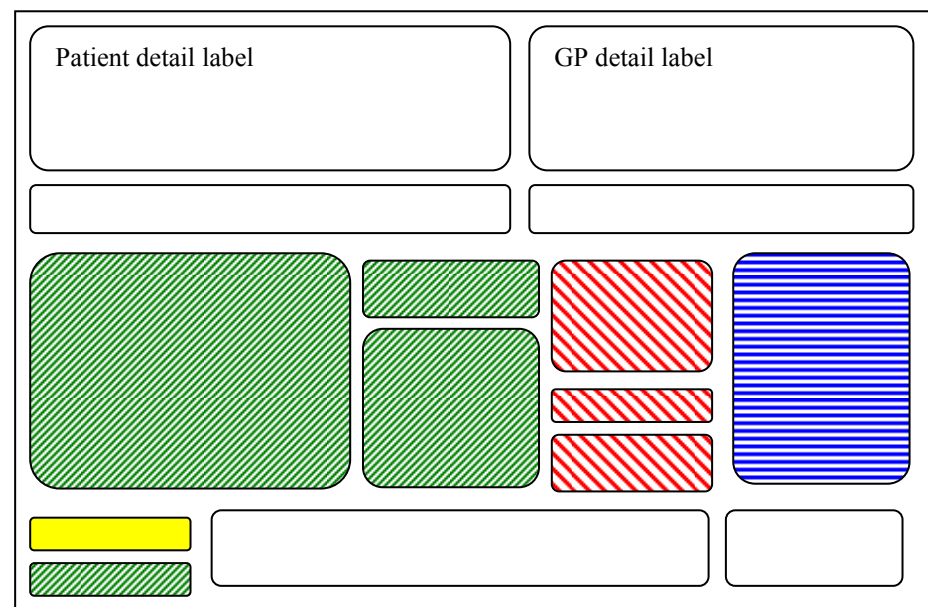
It is essential to complete the Date and Time Section with the **actual date and time** that the specimen was **TAKEN**, and **not** the time the request label was generated. It is better to leave the date & time shown on the patient addressograph blank if it differs from the actual date & time when the specimen is due to be taken.

Complete ONE leaf of the request form, with labels affixed, for tests requested in EACH colour (hatched) block shown in the diagram below, up to a maximum of three. Thus if all tests requested are from boxes of one colour complete one leaf of the form with one set of labels, if tests requested are from boxes in 2 colour groups complete two leaves of the form with 2 sets of labels, for tests from 3 or 4 more colour blocks complete all three leaves of the form with 3 sets of labels.

Failure to complete sufficient parts of forms may result in some tests not being performed.

### Additional points

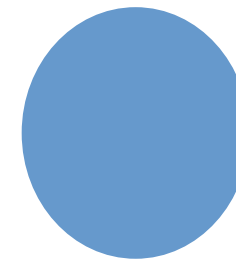
- Do not include loose stickers.
- Ensure that the printer is fully aligned so there are no missing patient or address details. If these are missing the specimen cannot be processed.
- Do not stick a label on top of another label.



Please contact Mike Creasy or colleagues in Laboratory Medicine Directorate Office with any queries on 029 2074 2719

## Want to Reduce Your Paperwork?

80% of GP practices now receive their Biochemistry and Haematology results electronically only, with no paper copies, and about half of these have gone paperless for Microbiology as well. Most practices report that this saves them time and storage space, as well as the problem associated with disposing of the reports when they are no longer needed. We know that some practices want to retain their paper reports, but if you have not gone paperless yet but would like to, then please contact Laboratory Medicine IT Help Desk on 2074 2362 for Biochemistry and Haematology or Trefor Morris on 029 2074 2171 for Microbiology.



# LABORATORY MEDICINE NEWSLETTER FOR PRIMARY CARE

This edition includes some useful clinical articles about safe monitoring of lithium therapy and the endocrine investigation of menstrual disturbances.

Lithium testing has been transferred onto the main biochemistry computer system which means that the results are directly downloaded onto the GP computer systems – a previous cause of concern.

The article on use of label trace should allow the most efficient use of these labels – this article is best followed in colour!

For the specific articles please contact the author listed.

For feedback and comments on the newsletter in general please contact either Fiona Ricci at Bro Taf lmc [brotafmltd@btconnect.com](mailto:brotafmltd@btconnect.com) or Jane Ellison in the Cardiff and Vale Laboratory Medicine office. [jane.ellison@cardiffandvale.wales.nhs.uk](mailto:jane.ellison@cardiffandvale.wales.nhs.uk)

*Jane McDowell*

Clinical Director Laboratory Medicine

Chair Laboratory Medicine—Primary Care Liaison Group

## Lithium Monitoring in General Practice

Lithium therapy was the focus of an NPSA alert (see <http://www.nrls.npsa.nhs.uk/alerts/?entryid45=65426>), issued December 20,09 following an audit of prescribing practice which found a high rate of adverse incidents relating to the treatment with the drug. A local audit of biochemical testing in patients on lithium therapy highlighted similar issues, and demonstrated that many patients were not being appropriately monitored. Guidelines for Bipolar Disorder were issued by NICE in 2006, and recommend the following biochemical monitoring intervals for patients established on lithium therapy:

- Lithium levels (taken 12 - 24 hours post dose) – every 3 months
- Thyroid function (TSH and free T4) – every 6 months
- Creatinine, electrolytes and eGFR – every 6 months, or more frequently if there is renal impairment

If patients are symptomatic, there is a change of dose, or if there is any other clinical concern, then these tests should be requested more frequently according to the clinical need.

We would encourage all General Practitioners to review their practice with regards to lithium monitoring, to ensure it meets the standards set out in the NICE guidelines (<http://www.nice.org.uk/nicemedia/pdf/CG38niceguideline.pdf>).

Please note that all lithium assays for the UHB are now being run in UHW. All lithium results are transferred electronically to the requesting practice. Any queries should be directed to the Special Chemistry section, on 029 2074 3560 in UHW, in the first instance, and clinical advice is available from the Duty Biochemist on 029 2074 8334.

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## Guidance for Laboratory Investigation of Menstrual Disturbances in Primary Care

1. Menopause
2. Secondary Amenorrhoea
3. PCOS
4. Investigations in Patients taking the Oral Contraceptive Pill

### 1) Investigation of the Menopause

WHO Definition – permanent cessation of menstruation, determined retrospectively after 12 consecutive months of amenorrhoea without any other pathological or physiological cause.

#### Women >45 years:

Hormone measurements are not required to diagnose the menopause in patients of menopausal age (>45 years<sup>1</sup>) with menopausal symptoms.

In the perimenopause<sup>2</sup> (time from the beginning of the menopausal transition until at least 1 year after the menopause) hormone activity fluctuates greatly, so any results obtained at this time may be misleading.

The most reliable marker of the onset of the menopause is an increased FSH. LH and oestradiol measurements are not recommended to assess menopausal status.

#### Women ≤45 years:

Cessation of menstruation before the age of 45 is more likely to be due to a pathological cause (as opposed to physiological early menopause) and therefore may warrant more detailed endocrine investigation. In the presence of amenorrhoea or significant oligomenorrhoea when menopause is suspected, FSH is recommended as the first-line test. If this is increased, a repeat FSH 4-8 weeks later is indicated. Two FSH measurements in the menopausal range (>30 U/L) in the presence of amenorrhoea is consistent with ovarian failure.

#### Contraceptive advice in the perimenopause

Hormone measurements are not a secure basis for ceasing contraception – non-hormonal contraception should be continued for a year after amenorrhoea in women >50, and for 2 years ≤50 years. HRT is not contraceptive, and if started perimenopausally may mask the symptoms of the menopause so non-hormonal methods of contraception should be continued.

### 2) Investigation of Secondary Amenorrhoea in Women under 45

Causes of secondary amenorrhoea include:

- a. Pregnancy
- b. Lactation
- c. PCOS
- d. Ovarian failure<sup>3</sup>
- e. Hyperprolactinaemia
- f. Hypopituitarism or Hypothalamic amenorrhoea
- g. Thyroid dysfunction

After ruling out pregnancy, appropriate laboratory investigations should include FSH, prolactin and thyroid function tests. If there is a need for an investigation to rule out pregnancy this should be carried out as a point of care urine test in the GP surgery. The endocrine laboratory does not offer a test for this purpose.

Oestradiol concentrations fluctuate and so are not helpful in differentiating the cause.

Continued ...

### 3) PCOS

The diagnosis of PCOS is largely clinical.<sup>4</sup> Diagnostic criteria include demonstration of:

1. Clinical (hirsutism, acne, androgenic alopecia) or biochemical hyperandrogenism
2. Oligo/anovulation and/or polycystic ovaries.
3. Exclusion of other causes

#### Biochemical Investigations

Testosterone	To demonstrate hyperandrogenism and to exclude serious pathology. Patients with significantly increased serum testosterone concentrations (>4 nmol/L) <sup>6</sup> require further investigation by an Endocrinologist (Dr Steve Davies / Dr Aled Rees at UHW). A normal testosterone measurement does not exclude PCOS
Prolactin FSH	To exclude hyperprolactinaemia, and primary ovarian failure. An LH/FSH ratio is no longer regarded as a useful diagnostic test for PCOS <sup>5,6</sup>

Oestradiol measurement is not required.

If fertility is sought, suggest seek advice from a gynaecologist.

### 4) Investigations in Patients taking the Oral Contraceptive Pill

Ethinyl oestradiol contained in the oral contraceptive pill (OCP) is not detected in the oestradiol assay. There is no benefit in measuring gonadotrophins or oestradiol in patients taking the OCP.

### SUMMARY

Patients on OCP	Hormone measurement is not indicated
Menopause: >45 years	Typical symptoms of oestrogen deficiency plus amenorrhoea—no biochemical investigations needed
>45 years	Clinical diagnosis doubtful—request only FSH
≤45 years	Request FSH
Secondary Amenorrhoea	Exclude pregnancy (point of care urine pregnancy test if needed). FSH, prolactin, thyroid function
PCOS	Testosterone—if >4 nmol/L referral to Endocrinology for further investigation
All of above	Oestradiol is NOT a helpful test except in special circumstances

For advice on laboratory tests or interpretation of results, please ring Dr Carol Evans (Clinical Scientist, Head of Endocrine Laboratory, UHW) on 029 2074 8367.

These guidelines have been prepared by Dr Judith Fox (SpR in Chemical Pathology) and Dr Carol Evans in conjunction with the Department of Endocrinology and Department of Gynaecology Cardiff and Vale University Health Board.

<sup>1</sup>WS Smellie, JO Forth, CAM McNulty, L Hirschowitz, D Lilic, R Gosling, D Bareford, E Logan, KG Kerr, GP Spickett, J Hoffman, A Galloway, CA Bloxham. *Best practice in Primary Care Pathology: review 2*. *J Clin Pathol*, 2006; **59**: 113-120.

<sup>2</sup>SM Gow, EI Turner & A Glaiser. *The Clinical Biochemistry of the menopause and hormone replacement therapy*. *Ann Clin Biochem*, 1994; **31**: 509-528.

<sup>3</sup>The Practice Committee of the American Society for Reproductive Medicine. *Current evaluation of Amenorrhea*. *Fertility and Sterility*, 2008, **90** (3), S219-S225.

<sup>4</sup>The Rotterdam ESHRE/ASRM-sponsored PCOS consensus workshop group. *Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovarian syndrome (PCOS)*. *Human Reproduction*, 2004, **19** (1), 41-47.

<sup>5</sup>JH Barth, E Yasmin & AH Balen. *The diagnosis of polycystic ovary syndrome: the criteria are insufficiently robust for clinical research*. *Clin Endocrinology*, 2007, 1-5.

<sup>6</sup>AM Wallace & N Sattar. *The Changing Role of the Clinical Laboratory in the Investigation of Polycystic Ovarian Syndrome*. *Clin Biochem Rev*, 2007, **28**: 79-92.

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