Southern Community Laboratories

OS Operational Update MAY 15

TEST RELATED

Chlamydia and Neisseria gonorrhoeae testing:

We will soon be changing the platform used to test *Chlamydia* and *Neisseria gonorrhoeae*. The new platform is the Panther provided by Hologic. The test is still a Nucleic Acid Amplification Test (NAAT) but has the advantage of newer technology with enhancements, one of the main ones being the ability to confirm *N.gonorrhoeae* in Dunedin with a test that is more sensitive than the current supplementary method. We will need to change the collection kits (swabs). The date has not yet been confirmed but we hope this will be mid to late June. With this in mind please ensure that you don't over stock with the current swabs. Our stores department will be restricting the number of kits supplied in the lead up to the switch. More information will be provided over the next few weeks.

Harmony Pre-natal Testing

Harmony is a blood test which will shortly be made available from SCL on a patient pays basis. It provides limited screening for chromosomes 21,13,18 and/or XY (sex chromosomes). Harmony has a higher detection rate and lower false positive rate for trisomy 21 than combined first trimester screening (nuchal translucency scan plus maternal serum screening).
Testing will be able to be requested by Midwives, GPs and Obstetricians and an information pack is currently being prepared for distribution.

Respiratory multiplex PCR

From the 18th of May respiratory multiplex PCR will be performed at SCL Dunedin using the AusDiagnostics Respiratory Pathogens B multiplex assay. There will be some changes to the pathogens targeted. The new assay will target: influenza A, influenza B, RSV, rhinovirus/enterovirus, human parainfluenza virus 1-3, adenoviruses groups B, C, and E, human metapneumovirus, and *Bordetella pertussis*. It will also type influenza A as H1 or H3. Targets from the previous panel that are not included in the new panel are: human parainfluenza virus 4, bocavirus, parechovirus, coronaviruses, and *Mycoplasma pneumonia*e. An additional atypical pneumonia panel from AusDiagnostics which includes *Chlamydia pneumonia, Mycoplasma pneumonia, Legionella* sp and *Pneumocystis jirovecii* will also be available after discussion with the Clinical Microbiologist. Please note that in the community

respiratory multiplex PCR and *Bordetella pertussis* PCR are only at the direction of Public Health or after discussion with the Clinical Microbiologist. For further information contact
Dr James Ussher (Microbiologist Ph 4702924, email: james.ussher@sclabs.co.nz) or
Dr Antje van der Linden (Microbiologist Ph 470 2920, email: antje.vanderlinden@sclabs.co.nz).

Urine Biochemistry

On the 1 Dec 2014 Microbiology ceased routinely performing dipstrips on urines submitted for microscopy and culture. If biochemical testing of urine is required please note the following points:

- For detection of proteinuria an albumin/creatinine ratio (on a first void urine if possible) is preferred. This is more accurate than the dipstrip, less susceptible to interference and allows quantification.
- For qualitative detection of haemoglobinuria or myoglobinuria a dipstrip is preferred.
- Glycosuria is detected by dipstrip. However, for diabetes screening an EDTA blood for HBA1C is preferred.

If these tests are required please clearly indicate it on the form and provide appropriate clinical details. For further information please contact

Dr James Ussher (Microbiologist, Ph 4702924, email: james.ussher@sclabs.co.nz),
Dr Antje van der Linden (Microbiologist, Ph 4702920, email: antje.vanderlinden@sclabs.co.nz), or
Dr Geoff Smith (Chemical Pathologist, Ph 4702921, email: geoff.smith@sclabs.co.nz).

Parasite PCR

At the end of last year the method for routine detection of faecal parasites was changed from EIA and Trichrome stain to the more sensitive PCR. Due to the change in testing method we have noted a significant increase in the identification of *Blastocystis hominis* and *Dientamoeba fragilis*. Previously many infections may have gone undiagnosed.

D fragilis infection can be asymptomatic or can cause abdominal pain and diarrhoea. Diarrhoea associated with *D. fragilis* may be acute, chronic, or recurrent and may be associated with colitis. Infections should be treated when the organism is found as the sole pathogen in patients who are symptomatic for longer than 1 week. Treatment is with metronidazole for 10 days.

Blastocystis sp. are commonly found in stool and their pathogenic potential is controversial. Subtype 1 and perhaps 3 are more likely to be associated with symptoms, including diarrhoea and abdominal cramps. In symptomatic patients where no other infectious or non-infectious cause can be identified, a trial of treatment with metronidazole for 5-10 days is reasonable.

Detection of CMV on swabs for herpes PCR

We have recently changed our panel for herpes simplex and varicella zoster PCR. The panel now also includes enterovirus, adenovirus, and cytomegalovirus (CMV) and these are selectively reported. As CMV is intermittently shed from various mucosal surfaces, including the genital tract, detection of CMV in swabs of these sites is not unexpected and is generally of no clinical significance unless the patient is pregnant. Primary infection with CMV during pregnancy can cause congenital infection of the baby, which can lead to long term sequelae. By contrast, the risk of congenital infection is very low with reactivation of latent CMV infection. As detection of CMV by PCR cannot discriminate between primary infection and reactivation, CMV will be reported if it is detected in a swab from a pregnant woman. If CMV is detected, blood should be taken for CMV serology and tested in parallel with the antenatal sample to determine whether the woman is acutely or latently infected. Congenital infection of the baby can be diagnosed by detection of CMV in the urine within the first 3 weeks of life. For further information, please contact Dr James Ussher (Microbiologist Ph 4702924, email: james.ussher@sclabs.co.nz).

Nagalase Testing

We have had several requests lately for Nagalase testing. This test is not supported clinically by SCL / MLS and we do not offer a service to take or forward samples.

SAMPLE RELATED

Seminal Fluids:

A reminder that specimens are only received Monday to Friday 8am – 4.30pm. Please ask patients to deliver directly to the laboratory as results are time critical.

Change in swabs for molecular testing (including detection of viruses)

Please note that we will be changing from the green viral swabs to orange capped dry flocked swabs. Flocked swabs allow better release of material from the swab than traditional swabs. These swabs should be used for swabbing eyes, throats (for *Bordetella pertussis*), skin, and genital sites. For detection of respiratory viruses, such as influenza and measles, special respiratory packs should be used. These contain a viral transport medium into which the swab is broken. Please note that PCR testing for *Bordetella pertussis*, measles virus, and respiratory viruses are only at the direction of Public Health or after discussion with the Clinical Microbiologist (also see below for further information about measles testing).

Collection of specimens for the diagnosis of measles

There have been several introductions of measles into New Zealand over the last few years. Some of these have led to multiple cases. Measles is spread by the airborne route and is highly infectious. Vaccination effectively protects against infection.

If measles is suspected it is critical that Public Health is notified and that the patient is NOT sent in to the collection rooms for testing. Nasopharyngeal collection kits for measles PCR have been sent to collection rooms and isolated general practices. These will be urgently delivered by taxi to practices if required by Public Health. Please note, all testing for measles is at the direction of Public Health and samples sent to the laboratory must be accompanied by a measles reporting form (available from: http://www.measles.co.nz/images/stories/Measles%20Reporting%20form.pdf).

Measles PCR from nasopharyngeal swabs is the diagnostic test of choice. Measles virus is detectable from 3 days prior to rash onset to between 7-14 days after rash onset. Measles IgG and IgM antibodies become positive 1-7 days after rash onset. Positive measles IgG with a negative measles IgM indicates previous vaccination or infection. For further information see http://www.measles.co.nz/measles.

The Specimen Processing Department

Every day our specimen processing departments handle hundreds of samples, and they would like to pass on some requests:

- With the exception of Smear Takers (very limited range) and Nurse Practitioners registered nurses do not have authority to order any tests. Please review your processes to ensure that the **requesting doctor** is always printed on the form.
- Please do not write out form with another practitioner given as the primary referrer. The person who orders the tests has an absolute responsibility for following up on the results. It is not acceptable for hospital staff to direct the results to a GP who has not been directly involved in the episode of care. It is equally unacceptable for GPs to write out repeat cards nominating a hospital consultant as the requester.

Specimen quality

- When placing swabs into their sheath, please take care to insert it carefully so the material being swabbed not smeared on the outside of the sheath
- Please ensure patients always use proper lab containers for their specimens – samples in jam jars, pill bottles etc are less likely to be clean and secure
- Check lids are properly screwed on CSF, Histology and urines samples. A leaking sample is not only a hazard to our staff; it may become contaminated and give a spurious result, may all be lost in the carrier bag or may contaminate other samples.

Labelling

- As previously advised cervical smear samples are now subject to the same rules as other samples and will be rejected if unlabelled or mis-labelled.
- Labelling rules are to protect you and your patient from incorrectly assigned results.
- When hand labelling a form, please take care to spell the patient's name correctly
- The patient's address should be on the form, including the city/town.

Urgent specimens

It is essential that urgent requests are clearly indicated on the form. Please also include your contact details so we can contact you with the results, this includes after hours. For community work red bags are provided to increase visibility.

REQUEST RELATED

Restricted Tests

Some referrers appear to think that if they put a copy to a specialist, that then constitutes authorization for them to order the test (eg: DHEAS). We treat such requests as unauthorized and do not process

Thyroid Function Tests

Please ensure that medication and dosage is clearly indicated on the request form, many patients when asked are not at all sure what they are on. On occasions we have got the wrong information and the Nuclear Medicine scan report has been completely misleading

REPORTING

With the relatively small number of paper reports now being printed it is our intention to move to a single print run per day using plain paper reports. At that stage we will cease providing paper reports to those community referrers who receive both paper and electronic reports

In response to the announcement from New Zealand post that they will be reducing postal deliveries from six to three days a week we are looking to establish alternative means of getting results to requestors who do not currently have an electronic means of receiving results e.g. Midwifes, Commercial clients, Patients. What is proposed is a Web.Results solution which provides a secured website from which to referrers can retrieve their results. The Web.Results solution has an Android and i-Phone solution (Windows and other phone and tablet operating system will not be compatible). Autofaxing of results is also an option

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