

Guidance notes on how to evidence tests and procedures not performed locally

There are some tests listed in the competencies that are not performed in routine hospital laboratories but in specialised laboratories; below are some examples from biochemistry. The ideal situation would be for everyone to arrange a visit to the specialist laboratories that perform these tests but that could mean going to three to four different hospitals! Even if this is achievable there may not be sufficient time to become 'competent' in performing the procedure.

For these situations the important points are to understand and perform the tests you do locally and have the knowledge and understanding of how the **specialist tests** and the associated methods can help in the diagnosis and treatment of patients. For these tests it is necessary to know the importance of any sampling requirements such as timing of samples, patient preparation, contraindications, preservatives, special arrangements for transport to the laboratory and limitations of the test.

Additionally, there are some procedures that are not routinely performed, for example in infection sciences; cell culture, agglutination, immunofluorescence or gel diffusion and electron microscopy. For these procedures a knowledge of the theory and understanding of these processes is important in understanding how testing has developed and know (be competent in) the modern procedures that have replaced them. It is important to understand their benefits and limitations in a diagnostic setting.

At all times you should first discuss any concerns regarding competencies with your training officer.

Examples of specialist tests:

- Perform the analyses to laboratory standard operating procedures on specimens for:
 - liver function tests
 - INR (international normalised ratio)
 - tumour markers
 - ferritin and iron saturation
 - *copper and caeruloplasmin*
- Perform the analyses to laboratory standard operating procedures specimens for:
 - cardiac biomarkers
 - lipids
 - *metadrenalines*
 - *renin and aldosterone*
- Perform the analyses to laboratory standard operating procedures on:
 - bone metabolism (calcium, phosphate, magnesium and alkaline phosphatase)
 - *vitamin D and its metabolites*
 - parathyroid hormone (PTH)
 - markers of bone turnover
- Perform the analyses to laboratory standard operating procedures on patients with:
 - hyperinsulinaemia (*insulin and C-peptide*)
 - *GI hormone-secreting tumours*
- Perform *cell culture, interpret cell line* and perform identification tests for commonly isolated viruses from a range of biological specimens
- Select suitable methods for the laboratory diagnosis of X, including: *electron microscopy, immunofluorescence*.