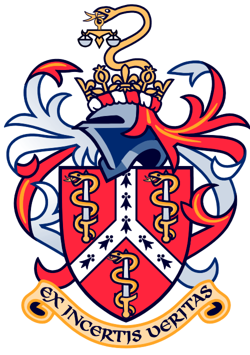


Faculty of Forensic & Legal Medicine

Forensic Science Sub-committee

NEWSLETTER July 2022

Updated versions of the following documents are available in July 2022:

- Recommendations for the collection of forensic specimens from complainants and suspects;
- Recommendations for the collection of forensic specimens from complainants and suspects - the evidence;
- Forensic Science Subcommittee (FSSC) Newsletter;
- Guide to establishing urgency of sexual offence examination - Pre Pubertal;
- Guide to establishing urgency of sexual offence examination - Post Pubertal;
- Provision of advice and help to those who have been raped or sexually assaulted abroad;
- Frequently Asked Questions (FAQs) on Police Requests for Tests from Detainees in Custody for Sexually Transmitted Infections.

Just a Reminder - National Forensic Kits

National Forensic Kits are now available from SceneSafe based on the FFLM *Recommendations for the Collection of Forensic Specimens from Complainants and Suspects*. The kits and their contents are listed on the website: *https://fflm.ac.uk/about/board-and-committees/forensic-science-subcommittee*

SARC National Consumable Validation

ISO 15189, FSR-C-100, FSR-C-116 and ILAC G19 are consistent in the requirement that consumables that can affect the quality of examination shall be verified for performance before use in examinations. To fulfil this requirement the Forensic Capability Network (FCN), in collaboration with Cellmark Forensic Services and SceneSafe, conducted a National Consumable Validation.

The FSSC received a presentation on this project at the meeting in June 2022 from Michelle Gaskell, Kevin Sullivan and Stuart Wiseman. For more information including a one hour webinar to explain how the project worked and answer questions please see: *https://www.fcn.police.uk/sarc-national-consumable-validation*

Questions to the FSSC

1. **The FFLM Recommendations state that blood can be taken from a peripheral cannula already in situ. However, after canvassing a few ED doctors, I still have my reservations about this practise as it shouldn't really be used to take blood once in situ. It should only really be used for substances to go in (such as fluid) and not taken out. If someone did use this to take a blood sample, which is at increased risk of haemolysis, would haemolysis affect the toxicology?**

   The FFLM advises that it is acceptable to take blood from a cannula, central, or arterial line **IF** (emphasis added) no other site is available. Document the specific site in your notes and whether the blood is venous or arterial. See: *Blood Samples in Hospital for Unconscious/Incapacitated Patients*

   The toxicologists on the FSSC advise that generally the sample would be separated in the early stages of analysis and that the red blood cells would be removed. Unclotted free-flowing blood samples were needed for Section 5A road traffic cases so it would not make a difference if the blood sample had haemolysed.

2. **Is there a recommended piece of equipment to use for removing foreign objects in the vagina during a forensic examination to minimise the risk of forensic contamination and injury to the complainant?**

   There is not a recommended piece of equipment as it would depend on the object that needed to be removed. It may be possible to use a swab or a disposable plastic forceps from a hair kit could be used as they would be DNA free. Sponge forceps could also be used but they may not be DNA free. The ability to remove the foreign object from the vagina would also depend on who was doing the examination and their level of experience/skill. It is recognised that if a physical object is retained, it may be difficult to see the object with the speculum in place but complainants would sometimes inform the forensic clinician that a tampon was retained.

   If non-disposable equipment was used for this purpose this should be swabbed rather than exhibited. The committee agreed that single-use items should be exhibited.

   Caution is required in cases where there is suspected internal drug concealment and access to emergency equipment would be needed and any examination would need to be done in hospital. See FFLM Guidance on intimate searches:

   Recommendations – Healthcare professionals asked to perform intimate body searches

   Intimate Searches in Police Custody Flow Chart

3. **Do police forces have an obligation to do environmental background DNA swabbing annually in all rooms used to take forensic swabs e.g., custody medical rooms? If so, is this usually completed? Do the labs tend to get these swabs sent in and if so, do they send the results to anyone at the FSR office or just back to the police force with whom they hold the contract?**

   It is the responsibility of the police to do environmental monitoring. The Scottish Government with Her Majesty's Inspectorate of Constabulary in Scotland (HMICS) and Health Improvement Scotland are going to introduce annual inspections for custody suites in Scotland and provide recommendations for improvement. The Forensic Science Regulator (FSR) has not, as yet, set a requirement; a sub-group of the Medical Specialist Group has been developing guidance for the key requirements for custody. The development of the FSR Statutory Code is a priority and although there has been no recent progress on the guidance it has been proposed to involve Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICFRS) to progress the matter. It is recognised that custody suites need to be kept clean otherwise there would be little/no benefit in environmental monitoring. Forensic clinicians need to document the actions they have undertaken in relation to reducing the possibility of contamination when taking samples from complainants/complainers and /or suspects.

4. **I have a quick question for you on the exhibiting of wet and dry swabs in SARCs. I have been contacted by a Police Force, their FMEs have been exhibiting their wet and dry swabs separately, which has caused confusion. They have tried feeding this back but it is still re-occurring. From what I can see the FFLM guidance does not give specific details on how wet and dry swabs should be exhibited. Standard practice is that both wet and dry swabs are exhibited as 1 in a single bag. Has this been raised before to the FFLM, do you know of any reason why FMEs might be doing this? Do you know of any specific guidance on how to exhibit wet and dry swabs?**

   This has not been raised before and not sure why the FMEs might be doing this. It should be covered in training and part of the problem is the standard of training is very variable in quality and content. We do have a syllabus for the initial training but not every provider follows this. There are several who do not have trainers with appropriate qualifications in the field. The Recommendations document covers this and nowhere does it say to separate the swabs.

5. **Can someone please help me understand better, what the purpose of taking control swabs for background DNA is for? Is this done to get a reference DNA of the complainant? Do we still need to take such swabs since the FFLM recommendations state that control swabs are no longer needed.**

   Retention of water vials or moist control swabs is not necessary, but in their absence, the module batch number, expiry date and supplier should be recorded, if available. The control skin swabs are required for the recovery of background DNA and/or other material - to help the scientist's interpretation when its presence in a specific area is significant e.g. visible injury or bite on the skin. Ensure relevant background area is sampled and if multiple areas of skin are sampled, take appropriate multiple controls.

6. **Police are asking HCPs for pre-transfusional bloods of injured parties (IP). This as a specific doesn't exist as a sample as we know, it is a toxicology request in theory and needs a good rationale as to why this is required (if the IP has been drugged pre assault, in reference to an IP in hospital requiring surgery). Of course would go down incapacitated/unconscious route if appropriate. Can the FSSC assist in clarifying:**

   i. **Why are they asking for pre-transfusional bloods?**

   ii. **How can the FSSC encourage this term to be stopped being used/requested?**

   iii. **Pre-transfusional blood sample is not under PACE: should CPS be made aware it doesn't exist?**

   This continues to be an area where there was still a lot of confusion. If a transfusion has taken place then it would have the potential to lower drug and alcohol levels (alcohol not as much as drugs though). Much depends on what drug had been taken and how widely distributed around the body it was. The sample should still be taken and it would need to be labelled as post-transfusion.

   The incapacitated/unconscious route is only in relation to the Road Traffic Act. Pre-transfusion blood from a suspect under arrest would come under PACE and the relevant authority is required for the sample

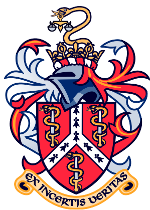
7. **Is there ever a requirement to take a baseline hair sample? Perhaps where ongoing drug poisoning is suspected as opposed to a one off drug facilitated event. There are still questions about taking hair at baseline/presentation and after 3 days and:**

   - **not waiting 4-6 weeks**
   - **taking hair at baseline and at 4-6 weeks**
   - **how many people decline**

   The committee discussed and advised that a baseline hair sample would only be required in exceptional circumstances, e.g. suspicion of prolonged poisoning. Hair is not always comparable and different factors would impact its growth, it would usually be best to wait 4-6 weeks to take the sample. There is no data on how many people decline to have a hair sample taken at 4-6 weeks.

8. **Concern has been raised about whether endocervical swabs should be taken after allegations of digital penetration. Is any updated evidence from swabs taken after digital penetration only?**

   Currently there is no hard evidence to change the recommendations. The forensic science providers are hoping to review results for the next meeting in November 2022 and this will be discussed again.



9. **We ask about illicit drugs in the last 14 days - is that reasonable - should it be a longer or shorter period? (see sexual assault pro forma and FME form) e.g. persistence of cannabinoids may be up to 3-4 weeks, so not relevant to the offence, but might be found if urine/blood tested and if the patient hasn't disclosed such use (or we haven't asked) might they appear as though hiding something and so unintentionally have an effect on their credibility?**

   Ideally an overall drug history should be taken (see below). Most drugs would be detected within a 14 day period.

   Substance Misuse History (including alcohol)

   - Type(s) of substance(s) used
   - Form of substance used e.g. cannabis resin, weed, synthetic
   - How long each substance has been used
   - How often each substance used – daily v occasional
   - Quantity of each drug taken per day (average day)
   - Amount spent on drug per day (average day)
   - Method of administration (noting sites of injection if used)
   - The time of the last dose(s) of substances
   - The amount used in the last 24-48 hours
   - Prescribed medication, especially opiate substitution therapy (OST)
   - Use of alcohol and/or tobacco
   - Use of over the counter (OTC) medicines

   Detainees with substance use disorders in police custody: Guidelines for clinical management (5th edition)

   Remember the DSM-V Diagnostic Criteria for Alcohol Intoxication, as an example of diagnosing intoxication:

   A. Recent ingestion of alcohol AND

   B. Clinically significant problematic behavioural or psychological changes (e.g. inappropriate sexual or aggressive behaviour, mood lability, impaired judgement) that developed during or shortly after alcohol ingestion.

      AND

   C. One (or more) of the following signs developing during or shortly after, alcohol use:

      - Slurred speech
      - Incoordination
      - Unsteady gait
      - Nystagmus
      - Impairment in attention or memory
      - Coma

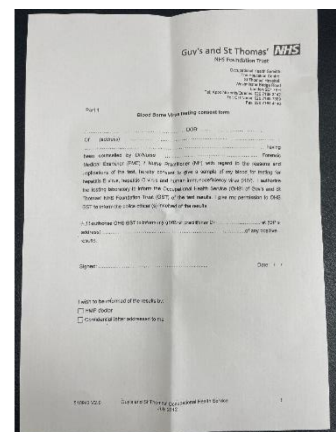
      AND

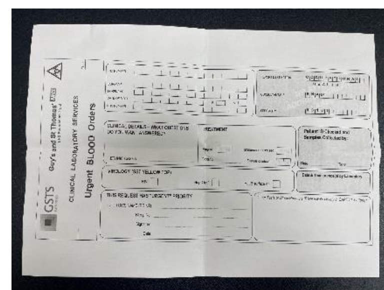
   D. The signs or symptoms are not attributable to another medical condition and are not better explained by another mental disorder, including intoxication with another substance.

10. **In my experience, there are no kits available in custody to take samples from the source (or indeed, from anyone) in relation to an 'at risk exposure'. I appreciate that practice varies wildly across the nation/s but I wondered if the forensic labs ever receive samples for BBV analysis with chain of evidence and if so, how often and are these only from certain forces?**

    I think there is scope to raise awareness within forces, that this practice is available and should be happening, provided there are appropriate kits and chain of evidence forms within the custody suites.

    There are purpose made kits available for purchase (see below for an example kit with contents including consent form). It is recognised that access to the kits are area/force dependent and that it is the police forces responsibility to order the kits. Chain of evidence would not be required in the circumstance of an acute 'at risk exposure' and the forensic science providers would not usually be involved. The samples would need to go to laboratories used for virology samples.





There is work ongoing to use dried blood spot testing in the results. A care pathway where the detainee/police officer in custody cases receive appropriate management and treatment from GUM specialists is important.

Members are reminded that the FFLM document *Recommendations – Managing blood-borne virus exposures in custody* has recently been revised. It is essential that police forces have a process to manage 'at-risk exposures' with a robust follow-up process in place.

Produced by Prof Margaret Stark
on behalf of the Faculty of Forensic & Legal Medicine
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