Faculty of Forensic & Legal Medicine

Recommendations on the order of ano-genital sampling when obtaining forensic specimens from complainants and suspects of sexual offences

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1. Introduction

Recommendations for the Collection of Forensic Specimens from Complainants and Suspects[1] is the document produced by the Forensic Science Subcommittee of the Faculty of Forensic & Legal Medicine providing recommendations on collecting specimens from complainants/complainers and suspects of sexual assault. It provides guidance on how and when to take individual forensic samples.

However, the order in which these samples are taken is crucial to the interpretation of the findings.

Laboratory forensic scientists are tasked with the analysis of submitted specimens as well as the interpretation and subsequent communication of findings to the court. It is essential Scientists are informed about the order in which the samples are taken for the accuracy and reliability of these interpretations.

This document aims to provide recommendations on the order of sampling.

Forensic Clinicians collecting forensic specimens must have the knowledge, expertise and be deemed competent to exercise clinical judgement appropriately. They must have the skills to adapt forensic strategy as necessary to accommodate the complexities of individual examinations and the needs of the patient, without compromising the interpretation of forensic findings. In doing so, forensic clinicians must be mindful of their patient population: a report from the Office for National Statistics showed, within the previous year, adults aged 16 – 24 years were the largest group of victims, and 86% were female.[2] Moreover, most females in this age group will never have had a vaginal examination using a speculum, as they will be called for their first cervical smear aged 25 years.[3] Therefore, in seeking consent for the use of a vaginal speculum, or a proctoscope, the rationale for their use must be explained and the patient's choice respected and documented.

Forensic Clinicians should understand why each individual sample/swab is being collected and what evidential value that sample may add to the case overall. The *Recommendations* document[1] should not be read as a didactic list of samples to collect in every case but as a guide to aid and inform clinical judgement.

Above all, obtaining informed consent from the patient and/or the person who has parental responsibility for the child to be examined remains the paramount ethical obligation for all forensic sample collection, regardless of setting.

2. Intimate Sampling

Prior to taking any forensic samples, the forensic clinician must observe or inspect the area to note any injury, skin condition or other findings. Forensic sampling should take place prior to any physical contact between the clinician and the area of interest, such as occurs when documenting an injury.

In a female alleging anal intercourse only, the recommendations state that the forensic clinician should obtain consent to take the full sequence of genital samples in addition to ano-rectal swabs. The purpose of taking the recommended range of samples is to aid the scientist's interpretation of the amount of body fluid or distribution of semen.

As a result of natural drainage and underwear movement during normal daily activities, it is expected there may be forensic evidence transfer between the anal and genital areas. To determine the area where ejaculation is likely to have taken place, the forensic scientist will examine the distribution of forensic evidence.[2]

Performing genital sampling prior to anal sampling presents a risk of body fluid displacement upon speculum withdrawal. In the supine position, under the influence of gravity, this displaced fluid may gravitate to the peri-anal region and, during subsequent anal sampling, be inadvertently transferred to the anal canal, potentially leading to misinterpretation of the fluid's origin as ano-rectal. In addition, lubricant fluid has been observed to drain from the vaginal opening towards the perianal area during speculum examination in the supine position, this also potentially poses an iatrogenic contamination risk to anogenital samples if obtained following speculum examination.[3]

To avoid this issue, the following order of examination and sampling is proposed for allegations of anal penetration only and allegations of anal **AND** vaginal penetration (in cases of vaginal penetration only, if a perianal swab is indicated, it is less important whether the perianal sample is obtained prior to or following the vaginal samples).

1. Peri-anal swabs
2. Anal canal swabs
3. Proctoscope insertion (if tolerated)
4. Rectal swabs (or 'blind' rectal swabs*)
5. Mons pubis swabs (if indicated)
6. Vulval and perineal swabs
7. Swab examination of hymen (if indicated)
8. Low vaginal swabs
9. Speculum insertion (if tolerated)
10. High vaginal swabs (or 'blind' high vaginal swabs*)
11. Endo-cervical swabs
12. Foley (balloon) catheter examination of the hymen (if indicated)

Patients may decline any swab or the use of a proctoscope and/or speculum. They may also express preferences regarding the order of swab collection, such as prioritising genital swabs over skin samples, or opt for self-swabbing for the intimate samples. Ensuring the patient receives clear and comprehensive information to facilitate informed decision-making, while prioritising their comfort and respecting their choices, is crucial.

In all cases, it is essential for the order of sampling, that any adaptations, deviations, errors in sampling, visible transfer of fluid, known potential contamination and mitigations used are recorded on the Forensic Medical Examination (FME) form or local equivalent.[5] The FFLM FSSC recommends this form is exhibited and a copy forwarded to the laboratory to ensure that the forensic scientist has all the relevant information when analysing the samples.

3. Swabs obtained using a speculum or proctoscope

There is a recognised risk of forensic trace evidence displacement onto the surface of a speculum or proctoscope.[4]

A lubricated speculum is used to obtain high vaginal and endo-cervical swabs.

The high vaginal swabs are obtained by carefully inserting a swab beyond the end of the speculum, specifically beyond where trace evidence might have been transferred during speculum insertion. The fornices are sampled, taking care to avoid any part of the swab touching the edges of the speculum or the vaginal walls as it passes through the speculum to the high vagina.

The same considerations apply when taking the endo-cervical swabs, in addition the flocked end of the swab must remain visible when sampling the cervical os.

A lubricated proctoscope is passed into the ano-rectum to obtain rectal swabs. These rectal swabs should be obtained from beyond the position of the tip of the obturator, but practical limitations may preclude the isolation of rectal tissue which has not been in direct contact with the obturator. Care must be taken to avoid any part of the swab being in contact with the rim or inner surface of the proctoscope.

4. *Blind Swabs

'Blind' swabs may be taken from the high vaginal or rectal areas without the use of a speculum/proctoscope, when a patient declines the use of such instruments. The possibility of forensic contamination exists under these circumstances, and it is imperative to document this on the Forensic Medical Examination (FME) form or local equivalent.[5] It is essential that the limitations of this method of evidence collection have been explained and accepted by the patient.

5. Examination of the Hymen

If indicated, the hymen or hymenal remnants can be examined during a forensic medical examination. This examination would normally be performed when it is suspected that this is the patient's first experience of vaginal penetration or intercourse or where there is concern regarding possible injury to the hymen.

Pre-pubertal

The pre-pubertal hymen is very sensitive to touch, and its examination is through no-touch, positional techniques.[6]

Examination of the pre-pubertal child using a swab, Foley (balloon) catheter, speculum, or any other instrument will usually only take place if the child requires a general anaesthetic for clinical reasons, most commonly to assess and treat an injury.

Post-pubertal

In post-pubertal patients, the examination should be conducted in a developmentally appropriate, trauma-informed way. The patient should have every stage of the process explained and be given choices over what happens.[6]

Where an examination of the hymen is undertaken, a forensic DNA-grade swab should be used to assess the hymenal edge/anatomy and assist in assessment and description of any injury. If this is undertaken prior to the vaginal forensic swabs, it must be exhibited and numbered in sequence denoting the order of sampling. This may either be a separate sample exhibit or the swab used to delineate the hymen can be used as the first low vaginal sample but must be clearly labelled as 'low vaginal 1 and hymen'.

A Foley or balloon catheter may also be used to examine the hymen. It should be used after the ano-genital forensic swabs have been taken. The reason for this is twofold: it is not a forensic DNA-grade product and its introduction past the low vagina may contaminate the high vaginal swabs. Provided the balloon catheter is used after the forensic sampling, there is no need to exhibit the catheter. [6,7,8]

When advising on the point at which the foley catheter should be used, consideration was given to the possibility that the speculum could cause injury to the hymen, complicating interpretation of findings. Evidence of this effect is limited.[9]

Prior to the use of a speculum in post pubertal complainants/complainers, observation for an injury, swelling or the presence of blood during inspection (with and without the use of a swab) should be documented to help determine whether there was an injury, or signs suggestive of an injury, present prior to the insertion of the speculum. Best practice would be to video-record the full ano-genital examination, with consent for all patients regardless of age and the apparent presence or absence of an injury.

6. Injury documentation and skin sampling

Examination of non-intimate areas can take place prior to, or following, intimate examination depending on the needs and preference of the individual patient. If a site, such as an injury, requires forensic swabbing, the swabs should be obtained prior to touching the area.[1,10]

7. Penile Swabs

Where penile swabs are indicated, the order and method of sampling are described in the *Recommendations*.[1]

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