

Persistence and Variability of DNA: Penile Washings and Intimate Bodily Examinations in Sex-Related Offences

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ABSTRACT

In 2008 the author conducted a five-year review of police case results, along with an academic and legal literature review surrounding the use of penile swabs obtained from male suspects in sexual assault investigations. This was the first review of its kind in Canada applying laboratory research to front line police practices. In this paper the author conducts a five-year follow-up of case results from 2010-2015 where both penile swabs were taken from the suspect and vaginal swabs were taken from the victim. This article provides an update to the original research, focusing not only on the current state of the law, but also on the value of collecting both penile swabs and vaginal swabs in the same case as evidence may be lost by collecting one but not the other. While some countries like Australia and South Africa have chosen to legislate the taking of penile or intimate samples incident to arrest, others such as Canada and the United States have relied on the common law approach to regulating the admissibility of such evidence. Nevertheless, the review shows that all four of these jurisdictions, as well as England and Wales, recognize the value of the evidence, they just differ on the process for collection and admissibility.

Keywords: penile swab; penile washing; sexual assault; intimate search, bodily examination; forensic DNA analysis

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I. INTRODUCTION

In 2008, the author conducted a five-year review of police case results along with an academic and legal literature review surrounding the use of penile swabs obtained from suspects in sexual assault cases in Winnipeg, Manitoba. The results were first published in *Police Practice & Research: An International Journal* on June 24, 2010 with iFirst.¹ A number of public presentations were subsequently done by the Winnipeg Police Sex Crimes Unit and Manitoba Public Prosecutions across Canada, outlining the results of the technique and procedures involved in collecting penile swabs from suspects by the Winnipeg Police.²

In 2017, a follow-up review of case results from 2010-2015 was conducted where both penile swabs were taken from the suspect and vaginal swabs were taken from the victim. In the author's original *Police Practice & Research* paper the focus was on the presence of the victim's DNA on the penile swab, rather than its persistence and variability in both quantity and quality.

In this review the author uniquely reviewed actual case results where both penile swabs were taken from the suspect and vaginal swabs were taken from the victim in the same case to assess the significance of collecting both for DNA analysis. In addition, the author reviewed current literature and jurisprudence in other common law countries to assess how or to what extent penile swabs may be used in the investigation of sexual assault offences. The question to answer was ~ are penile swabs from a suspect or vaginal swab from a victim the better source of DNA than the other in terms of presence and time in linking the suspect to the offence?

II. WINNIPEG CASE REVIEW

In the review of fifty-two case results between 2010 and 2015, it was found that 81% of the penile swabs submitted for analysis yielded female

¹ John W Burchill, "Invasive Searches: Penile Washings, Bodily Examinations, and Other Investigative Considerations for Sex-related Offences" (2011) 12:1 *Police Practice & Research* at 35-49.

² Cf Barry Pennell, Deborah Carlson & Wendy Friesen, "Invasive searches: penile washings, bodily examinations, and other investigative considerations for sex-related offences" (based on research article by John Burchill) (Presented at the Making a Difference Canada Conference, 18 April 2011) [unpublished]. Copies available on request from the author or Making a Difference Canada.

DNA profiles of varying quality, with 50% developing a full DNA profile of the victim. The time frame between offence, arrest, and penile swab for all cases ranged from 2.5 to 50 hours, with the mean being 10.75 hours. The time frame in which a full DNA profile of the victim was obtained from the penile swab ranged from 2.5 to 25 hours, with the mean being 9.75 hours.³

However, in only 35% of the same cases was the suspect's full DNA profile developed on the vaginal swabs taken from the victim. In half of the cases where the full DNA profile of the victim was located on the penile swab, no male DNA profile suitable for analysis was located on the victim's vaginal swab. Similarly, in 44% of the cases where the full DNA profile of the suspect was located on the vaginal swab, no female DNA suitable for analysis was located on the suspect's penile swab. In only 13% of the cases was the full DNA profile of both the victim and the suspect located on both the penile swab and the vaginal swab.

The time between the offence and the taking of the penile swab where no female DNA suitable for analysis was recovered, but DNA of the suspect was obtained from the vaginal swab, ranged from 7 to 21.5 hours, with the mean being 11.5 hours. The shortest period of time between the offence and the taking of the penile swab where female DNA was located, but of an insufficient quantity for analysis, was 4 hours.

These results are similar to a clinical study conducted by scientists at the GENA-Institute of DNA Analysis and the University of Stavanger in 2012 on the presence of female DNA on post-coital penile swabs in a controlled environment with 11 consenting couples.⁴ Full female DNA profiles were recovered in 90% of the samples taken between 5 and 12 hours.⁵ At the lowest, 67% of the full female profile was typed as an average of two swabs sampled at each time point. Samples collected from three couples at 20, 22, and 24 hours retrieved 100% of the female DNA profile from one couple, but only partial profiles of 37% and 30% from the other two couples.⁶

While female DNA was recovered on all post-coital penile swabs taken at 5 and 24 hour intervals, the quantity and quality was of diminishing value

³ An additional 31 case results were also examined, however, for a variety of reasons either the penile swab from the suspect or the vaginal swab from the victim were not examined. In just under a half of those 31 cases no charges were laid.

⁴ Ragne Kristin B Farnen, Ingerborg Haukeli, Peter Ruoff & Elin S Frøyland, "Assessing the presence of female DNA on post-coital penile swabs: Relevance to the investigation of sexual assault" (2012) 9:7 J Forensic Leg Med 386-389.

⁵ *Ibid.*

⁶ *Ibid.*

for DNA profiling.⁷ Nevertheless, the Farmen study confirms that skin cells sloughed off the inside of the vaginal walls can be reliably collected on a suspect's penis where recent penetration has occurred.⁸ While a warrant or other court order may be obtained to carry out a penile swab on a suspected offender, considering the nature of the offences involved and the need to prevent perishable evidence under the control of the accused from being destroyed, officers searching incidental to a lawful arrest may still be justified, providing they have reasonable grounds and the seizure is done within both a reasonable time and manner (e.g. in private and by a person of the same sex).

From both a clinical and practical level these reviews confirm that penile swabs in conjunction with vaginal swabs will yield significant confirmatory evidence of contact between the victim and suspect in cases of recent sexual assault. However, they do not always co-exist. The DNA evidence is highly variable in both quantity and quality and may persist in one, but perish in the other. While a full DNA profile of the victim was found to exist for up to 25 hours in both reviews, the results also showed that a full DNA profile may not be recovered at all within a matter of hours. Due to this variability, whether from natural or environmental factors such as wiping, washing, body heat, urination, bacteria, or sweat, time may be of the essence in collecting the sample.

As the persistence or perishability of the victim's DNA on a penile swab has been the subject of several court decisions since 2008, the purpose of this supplement is to provide an update to the original paper first published in 2010 and any current academic or legal literature on the practice in Canada and elsewhere, including the United States, England and Australia.

III. JURISPRUDENCE

A. Canada

Prior to the completion of this review, on June 23, 2016 the Supreme Court of Canada upheld the warrantless seizure and DNA analysis of penile swabs taken in 2011 from a suspect incident to his arrest by the Edmonton Police in *R v Saeed*.⁹

⁷ *Ibid.*

⁸ *Ibid.*

⁹ *R v Saeed*, 2016 SCC 24, aff'g 2014 ABCA 238 [*Saeed*].

In an 8 to 1 majority the Supreme Court in *Saeed* found that while a penile swab constitutes a significant intrusion on the privacy interests of an accused, the police may nonetheless take a swab incident to arrest if they have reasonable grounds to believe that the search will reveal and preserve evidence of the offence for which the accused was arrested, and the swab is conducted in a reasonable manner (in this case by the accused at the direction of the police). Specifically the Court stated:

Penile swabs performed incident to arrest enable the police to preserve important evidence. If this evidence is not promptly seized, it runs the risk of degrading or even worse, being destroyed by the accused... It can be crucial in the case of complainants who are unable to testify, such as children, adults with disabilities, or those who have died or suffered serious injuries as a result of the offence or otherwise.¹⁰

As an example, the Supreme Court cited *R v Laporte*,¹¹ a decision of the Manitoba Court of Appeal that was handed down less than two months earlier. In that decision the Court of Appeal also upheld the collection of a complainant's bodily fluids from a penile swab as important evidence. The author's *Police Practice & Research* paper on penile swabs¹² was highlighted as an example of the commentary available showing police authorities have a legitimate concern that, if not collected in a timely manner, the type of evidence available from penile swabs will disappear.

In addition, at paragraph 45 in *Saeed*, the Supreme Court added that “a penile swab is not designed to seize the accused's own [DNA] but rather, the complainant's,” which is not part of the accused and does not reveal anything about him.¹³ Accordingly, accused persons do not have a significant privacy interest in the complainant's DNA, any more than they have a significant privacy interest in drugs that have passed through their digestive system.

Subsequent to the decision in *Saeed*, on January 19, 2017 the Supreme Court released its decision in *R v Awer*,¹⁴ another penile swab case, sending

¹⁰ *Ibid* at para 59.

¹¹ *R v Laporte*, 2012 MBQB 227, *aff'd* 2016 MBCA 36 [*Laporte*]. Another recent case applying *Laporte* and the admissibility of penile swabs is the decision of Justice Munroe in *R v Johnson*, 2016 ONSC 3947.

¹² Burchill, *supra* note 1.

¹³ *Saeed supra* note 9 at para 45.

¹⁴ *R v Awer*, 2017 SCC 2, *rev'g* 2016 ABCA 128 [*Awer*]. Also see appeal factums filed in the Supreme Court online: Respondent's Factum: <www.scc-csc.ca/WebDocuments-DocumentsWeb/37021/FM020_Respondent_Her-Majesty-the-Queen.pdf>

it back for re-trial. However, the issue was not that the victim's DNA existed on the penis or the manner of search, rather it was the scrutiny the two DNA experts were subjected to by the trial judge.¹⁵

The defence expert, Dr. Libby advocated in favour of innocent explanations for the presence of the complainant's DNA on the appellant's penis: the complainant's DNA could have been "everywhere"; it could have made its way from person to person and thing to thing (such as a toilet, cans, towels, and countertops); the process is complicated and involves many factors. The accused testified that he did not have sexual contact with the complainant. He suggested that his entire, very large, penis entered a freshly-flushed toilet bowl and might have encountered the complainant's DNA therein while he either urinated (examination-in-chief) or defecated (cross-examination). Or, the DNA might have travelled from the complainant to the true culprit, and then possibly to other people and surfaces, before landing on his penis.¹⁶

The trial judge subjected the testimony of Dr. Libby to intense scrutiny and found that his evidence was speculative and without scientific foundation. However, the trial judge did not subject the Crown's expert, Steven Denison, to similar scrutiny. As a result, the Supreme Court found that:

[I]n our respectful view, the materially different levels of scrutiny to which the evidence of the two experts was subjected – none for the Crown expert and intense for the defence expert – was unwarranted, and it tended to shift the burden of proof onto the appellant. In these circumstances, we feel obliged to quash the conviction and order a new trial.¹⁷

While the Supreme Court decision in *Awer* was very short, it was the acceptance of the evidence proffered by the Crown witness without scrutiny that raised the concern of at least one commentator:

Denison, the Crown's expert in *Awer*, opined that the amount of DNA found on *Awer* indicated it was transferred through direct contact with a wet body fluid source because that was the case in previous observations he had made during his career. This opinion, which was central to the decision, fails the guidelines set forth in the NAS Report, the *Daubert* factors, and, more generally, many of

[perma.cc/9F6K-K55F]; Appellant's Factum: <www.scc-csc.ca/WebDocuments-DocumentsWeb/37021/FM010_Appellant_Nihal-Awer.pdf> [perma.cc/677L-4L27]

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ *Ibid* at paras 6-7.

science's best practices. In particular, Denison's methodology was apparently untested, likely biased, and of dubious precision.¹⁸

In the case of *Laporte*,¹⁹ which went to trial in 2012, and involved two sexual assaults and two penile swabs taken in 2007 and 2008, Justice Schulman found that both searches contravened the accused's rights to be free from an unreasonable search for two reasons: First, because the prosecution had not proven that the common law power of search incident to arrest authorized such searches in these circumstances; and secondly, particularly for the 2008 seizure, the manner in which the search was conducted was unreasonable as the police had not afforded the accused the right to consult with legal counsel first. Consequently, Justice Schulman admitted the DNA evidence from the 2007 seizure as the police had not acted in bad faith or against established authority, but excluded the evidence from the 2008 seizure.

Upon further review in 2016 the Manitoba Court of Appeal found that the 2007 search was lawfully conducted incident to arrest and was in compliance with *Laporte*'s constitutional rights:

The collection of a complainant's bodily fluids from a penile swab of an accused person in a sexual assault investigation can provide important evidence. There is sufficient commentary in the case law and academic articles to say that the police authorities rightly have a legitimate concern that, if not collected in a timely manner, the type of evidence available from penile swabs will disappear...Also see John W. Burchill, "Invasive searches: penile washings, bodily examinations, and other investigative considerations for sex-related offences" (2011) 12:1 *Police Practice & Research: An International Journal* (24 June 2010). Therefore, the law-enforcement interests of penile swab searches are significant.²⁰

As noted above, the decision in *Laporte* was subsequently considered by the Supreme Court of Canada decision in *Saeed* less than two months later. Affirming the decision of the Alberta Court of Appeal, in particular the

¹⁸ Jason M Chin & Scott Dallen, "R v Awer and the Dangers of Science in Sheep's Clothing" (2016) 63; *Crim LQ* 527-554. Also available at SSRN online at: <ssrn.com/abstract=2815537> [perma.cc/Q695-6ZML].

¹⁹ *Laporte*, *supra* note 11.

²⁰ *Laporte*, *supra* note 11 at para 49. See also *R v Cortes Rivera*, 2017 ABQB 275 at para 96-124, where Goss J found a s 8 *Charter* breach, not because of the type of search, rather because (i) there were too many officers present during the procedure, (ii) it was not conducted so as to ensure that the accused was not completely undressed at any one time, and (iii) a complete record was not created of the procedure. Nevertheless he found the breaches were at the low end of the spectrum and did not have a significant impact on the interests of the accused.

dicta of McDonald JA, the Supreme Court held that there had been no breach of the appellant's constitutional rights because the seizure was made reasonably and in exigent circumstances and was, accordingly, a reasonable search incident to arrest. As noted by McDonald JA in the Court of Appeal "it would be an affront to one's sense of justice for the police in this case to be required to stand idly by while highly relevant but time sensitive DNA evidence disappeared forever."²¹

While there was evidence at trial presented by Kenneth Hunter, an expert witness, that DNA of a complainant transferred through sexual intercourse could degrade in a matter of hours as a result of urination, bacteria, sweat, etc., Justices Bielby and Watson JJA, concluded that the evidence led by the Crown was too thin to support the seizure as being incident to the arrest based on exigent circumstances as the police officers themselves had not testified to such a concern - only that they were concerned with preserving evidence. However, they agreed the evidence should nonetheless be admitted.

In his testimony Kenneth Hunter referred to a paper published "in October," which showed that in a study of consenting adults DNA from penile swabs was shown to degrade after five hours in a clinical setting. Although DNA was also found in samples up to 24 hours, he opined that numerous factors in non-clinical settings from wiping, washing, urination, bacteria, sweat, etc. were too many and too varied to pinpoint an actual time frame. This opinion would be consistent with the findings in the review of Winnipeg Police case results.²²

Although the title of the "October" paper was not cited, from a literature review it would appear the paper referred to by Kenneth Hunter was the one published by Farmen et al in the *Journal of Forensic and Legal Medicine*.²³ The conclusion of the authors in that paper, based on swabs taken from 11 consenting couples, was that a full female DNA profile could be recovered in the majority of cases between 5 and 12 hours in a clinical

²¹ Saeed, *supra* note 9 at para 36 (ABCA).

²² In addition to these factors I would also add the capabilities and thresholds set by the testing laboratory for sample size. It is well known, for example, that the forensic laboratories in England and Wales will test a smaller amount of starting material, meaning that a profile can be obtained from only a few cells, compared to the RCMP Laboratory.

²³ Farmen Haukeli, Ruoff, & Elin S Frøyland, *supra* note 4.

setting. However, the DNA evidence was highly variable in both quantity as well as quality and may have significantly degraded within 24 hours.

In more recent recommendations for the collection of forensic specimens from complainants and suspects, the Faculty of Forensic & Legal Medicine of the Royal College of Physicians has stated that the recovery of body fluids/DNA/other material from a penile swab (even if a condom was purported to have been used) is possible where intercourse has occurred within 3 days (72 hours). Recovery of body fluids/DNA/other material from vaginal swabs is possible where vaginal intercourse with or without anal intercourse has occurred within 7 days (168 hours); or 3 days (72 hours) where only anal intercourse has occurred (even if a condom is purported to have been used). However, the Faculty cautioned that these timescales are based on the maximum seen in published persistent data to date and the examining person must decide on a case-by-case basis, as exceptions are possible:

Information from other sources will inform the decision regarding which samples are relevant. Officers submitting samples may have further information regarding the circumstances which will direct the forensic strategy and assist with decisions regarding the relevance and submission of items for forensic analysis.²⁴

As most accused are not arrested immediately at the scene, and only after interviewing the victim and conducting some preliminary investigation, there will already be the passage of some time, possibly many hours, before the suspect is arrested and detained. Considering the shortest period of time between the offence and the taking of a penile swab where female DNA was located but insufficient for analysis in the Winnipeg cases was 4 hours, this already puts the police at a disadvantage in preserving the evidence using other procedures.

The impact of a penile swab on the accused's *Charter* protected interests is as profound as one can imagine. Indeed, in her review of the *Saeed* decision, Christine Mainville believes that the Supreme Court "failed to sufficiently recognize the acute personal privacy interest engaged in that area

²⁴ UK, The Faculty of Forensic & Legal Medicine of the Royal College of Physicians, *Recommendations for the collection of forensic specimens from complainants and suspects* (Recommendations) produced by Dr. Margaret Stark and the Forensic Science Subcommittee (Faculty of Forensic & Legal Medicine, 2018), online: <fflm.ac.uk/publications/recommendations-for-the-collection-of-forensic-specimens-from-complainants-and-suspects-3/> [perma.cc/29TR-PTQ9].

of the body aptly referred to in common parlance as a person's 'private parts.'"²⁵

However, when balancing the interests of the community in adjudicating the case on its facts, the Alberta Court of Appeal stated in *R v Arcand* that trial judges should also consider the impact of a major sexual assault on the victim and the sense of defilement, shame and embarrassment they must endure not only from the assault itself, but also from having swabs taken of their bodily orifices by others to collect evidence.²⁶

B. United States

The results in the United States have been mixed and to date there has been no appeal on the issue to the United States Supreme Court. Nevertheless, the results of DNA analysis from penile swabs have generally, but not always, been admitted at trial where exigent circumstances existed for the seizure.

For example, in 2010 the D.C. Court of Appeal affirmed the trial court's denial of a motion to suppress penile swab evidence in *Kaliku v United States*²⁷ by applying the exigent circumstances doctrine. The court held that because of the delicate nature of the DNA evidence in this case and the area in which it was located, it could easily have disappeared. Therefore, there was urgency to its collection, a time-sensitivity that justified the officer's reliance on exigent circumstances, rather than seeking a court order.

More recently, in *Jackson v State*,²⁸ the Georgia Court of Appeal reviewed the decision of an accused indicted for rape and aggravated sodomy. The accused was arrested shortly after the alleged rape and the police obtained a penile swab incident to arrest to preserve any latent DNA that might be on the surface of his penis. The police officer did not secure a warrant for the swab believing, based on his training as a sexual assault investigator, that

²⁵ Christine Mainville, "R v Saeed: Penile Privacy and Penal Policy" (2017), 81 SCLR (2d) 195 at para 3

²⁶ *R v Arcand*, 2010 ABCA 363 at para 176-177.

²⁷ *Kaliku v United States*, 994 A (2d) 765 (DC Cir 2010) [*Kaliku*].

²⁸ *Jackson v State*, 784 SE (2d) 7 (Ga Ct App 2016) [*Jackson*]. Other recent appellate cases include *People v Fulton*, 141 Cal Rptr 3d 374 (Cal Ct 2012); and *State v Lee*, 967 NE (2d) 529 (Ind CA 2012).

any potential evidence was “fleeting or...could be compromised in a short amount of time.”²⁹

Both the trial court and the Court of Appeal concluded that exigent circumstances permitted the penile swab. Although no Georgia authority addressed the precise issue, the court adopted the principles in *Kaliku*. They did so as given the delicate and easily compromising nature of DNA evidence, “there was urgency to its collection which justified the officer's reliance on exigent circumstances, rather than seeking a court order.”³⁰

Penile swabs may also be obtained with consent. In 2015, the Maryland Court of Appeals in *Varriale v State*³¹ admitted a DNA profile of the accused that was obtained from a consent penile swab in an unrelated rape investigation in 2012, to a 2008 burglary case where an unknown DNA profile had been developed. Although the DNA profile from the penile swab supported the conclusion that he did not commit the alleged rape, because Varriale had not put any conditions on what use could be made of his consent sample the police uploaded it to a local police DNA database and an automatic search revealed the match to the earlier crime. As a result of the lack of conditions on subsequent use, the Court admitted the evidence in the older case. The United States Supreme Court refused to hear a further appeal in 2016.³²

The procedures for obtaining and analyzing penile swabs are laid out in many forensic collection guides for law enforcement in the United States, such as the use of Penile Swabbing Forensic Evidence Kits in the Physical Evidence Manual of the Oregon State Police, the report on Laboratory Analysis of Biological Evidence, and the Role of DNA in Sexual Assault Investigations.³³

²⁹ *Jackson*, *supra* note 28 at para 6.

³⁰ *Ibid* citing *Kaliku*, *supra* note 27 at 780.

³¹ *Varriale v State*, 444 Md 400, 119 A(3d) 824, (Md Ct App, 2015).

³² This should be clearly distinguished in Canada where any consent DNA sample provided by a suspect, including the results in electronic form, shall be destroyed without delay when it is determined it did not match the crime scene DNA it was being compared to (see s. 487.09(3) Criminal Code of Canada). However forensic laboratory personnel should not even be searching a penile swab for the accused's DNA profile, rather the sole purpose of the swab should be to locate the victim's DNA (see *R v Saeed*, *supra* note 9 at para 45).

³³ Oregon, Operations Manager, Physical Evidence (Oregon State Police Forensic Services Division, September 2015) at 36-37. See also Sergeant Joanne Archambault et al, Laboratory Analysis of Biological Evidence and the Role of DNA in Sexual Assault

C. Australia

1. *Model Forensic Procedures Bill*

Unlike Canada and the United States where the admissibility of penile swab evidence is primarily argued on common law principles of search incident to arrest, most Australian states have adopted in whole or in part the *Model Forensic Procedures Bill 2000* (Model Bill) drafted by the Model Criminal Code Officers Committee.³⁴

The draft Bill provided for: the power to request or require forensic procedures on suspects, convicted offenders and volunteers; a process for carrying out forensic procedures, including safeguards for those undergoing forensic procedures; rules in relation to evidence improperly obtained from forensic procedures; the regulation of DNA database systems; and a scheme for interstate jurisdiction.

While there is some variation between the different States, I will focus only on South Australia as an example of the processes and procedures involved in conducting intimate searches (i.e. penile swabs).

2. *Criminal Law (Forensic Procedures) Act*

As a result of the Model Bill, the *Criminal Law (Forensic Procedures) Act* of South Australia was amended in 2002 allowing the police to apply for an interim order from a magistrate to conduct an “intimate forensic procedure,”³⁵ which was defined as involving the “exposure of, or contact with, the genital or anal area, the buttocks or, in the case of a female, the breasts.”³⁶

The application for an interim order could be granted if the magistrate was satisfied that the evidence (or the probative value of evidence) may be lost or destroyed unless the forensic procedure was carried out urgently; and there were reasonable grounds to believe that the grounds for making a final order would ultimately be established. However, the evidence obtained was

Investigations, (module) (End Violence Against Women International, 2015). Penile swabbing is mentioned throughout.

³⁴ Model Criminal Code Officers Committee, *Final Draft: Model Forensic Procedures Bill and the Proposed National DNA Database* (2000), Standing Committee of Attorneys-General, Canberra.

³⁵ *Criminal Law (Forensic Procedures) Act 1998* (SA) 1998/8, as amended by *Summary Offences (Searches) Amendment Act 2000* No. 54 of 2000.

³⁶ *Ibid.*

inadmissible against the person unless a final order was made confirming the interim order by another magistrate.

For a final order to be granted the court needed to be satisfied there were reasonable grounds to suspect that the respondent had committed a criminal offence; there were reasonable grounds to suspect that the forensic procedure could produce material of value to the investigation of the suspected offence; and the public interest in obtaining evidence tending to prove or disprove the respondent's guilt outweighed the public interest in ensuring that private individuals were protected from unwanted interference.

In 2007 a new *Criminal Law (Forensic Procedures) Act* was introduced in South Australia.³⁷ While similar, the substantive change was that a senior police officer, defined as a police officer of or above the rank of Inspector, could make an order authorizing the carrying out of a forensic procedure (s. 19). In effect the senior police officer assumed the duties of the interim issuing magistrate under the previous Act.³⁸

Conducting a search pursuant to an order of a senior police officer is akin to a writ of assistance that existed in Canada until 1985. However, its use and application by the police as a tool to conduct warrantless searches and seizures was severely criticized by the Law Reform Commission of Canada in its 1983 report on *Writs of Assistance and Telewarrants*.³⁹ In effect, they lacked the neutrality and impartiality of an independent individual. As noted in the 1984 Supreme Court of Canada decision, *Hunter v Southam Inc.*, "the person performing this function need not be a judge, but he must at a minimum be capable of acting judicially."⁴⁰

Nevertheless, in addition to being satisfied that there are reasonable grounds to suspect that the accused has committed a serious offence and that there are reasonable grounds to suspect the forensic procedure could produce material of value to the investigation, the senior officer is also

³⁷ *Criminal Law (Forensic Procedures) Act 2007 (SA) 2007/58 [2007 Forensic Procedures Act]*.

³⁸ See *R v Priestley*, [2012] SASC 119, for a decision involving a penile swab taken from an accused post 2007. There was no argument as to admissibility of the DNA evidence, just the inference to be drawn and whether it proved penetration had occurred. See paras 39 and 52.

³⁹ Law Reform Commission of Canada, *Report 19: Writs of Assistance and Telewarrants*, Catalogue No J31-39/1983(Ottawa, Minister of Supplies and Services Canada, 1983). Also see the *Criminal Code of Canada*, RSC 1985, c 19, s 200, as it then applied to the repeal of Writs of Assistance by police.

⁴⁰ *Hunter v Southam Inc.*, [1984] 2 SCR 145 at 163, 33 Alta LR (2d) 193.

required under s. 19 of the 2007 *Forensic Procedures Act* to weigh the public interest factors previously required by the confirming magistrate under the previous Act.

While the remainder of the procedures under ss. 21-27 remained similar (i.e. it must be carried out in private; by a qualified person; by a person of the same sex; a witness is allowed to be present; outlines when an audiovisual record must be made, etc), the 2007 Act also placed a time limit on the execution of the order.⁴¹ Specifically, it may only remain in force for a period of 12 hours and cannot be extended or renewed.⁴² Though, nothing in the legislation appears to prevent the making of another order.⁴³

3. *R v Jessop*

In *R v Jessop*, a 2015 trial decision involving the vaginal penetration of an 11-year old girl by her mother's boyfriend, the evidence consisted of samples taken from the accused during a forensic procedure conducted by the police within 13 hours of the offence.⁴⁴ The evidence included swabs from the accused's hands, fingernails and penis. The victim's DNA was found on both the accused's left hand and penis.

A physical examination of the victim did not locate any semen in her vagina, however, friction injuries to her erythema and hymen consistent with the forceful application and/or insertion of either fingers or a penis were observed. Based on the nature of the injuries it was determined that they had occurred within 12 hours of the examination.⁴⁵

The accused argued the injuries were self-inflicted and that, considering the accused lived with the family, the victim's DNA on his hands and penis were from innocent contact. Specifically, the accused submitted that the DNA of the victim found on his penis could have been a secondary transfer

⁴¹ 2007 *Forensic Procedures Act*, *supra* note 37.

⁴² *Ibid.*

⁴³ In *The Queen v CS* [2012] NTSC 94, the police took a penile swab from a sexual assault suspect 35 hours after being taken into custody. While s 137(2) of the *Police Administration Act* (NT) "permits a member of the police force, for a reasonable period, to continue to hold a person" for the purpose of obtaining evidence "in relation to an offence" that involves the person in custody, Justice Barr held that 35 hours was not reasonable (paras 33-34).

⁴⁴ *R v Jessop*, [2015] SADC 168 at para 123 [*Jessop*].

⁴⁵ *Ibid.*

by the accused having held his penis when using the toilet. The argument is not unlike that made by the defence in *R v Awer*.⁴⁶

Considering the totality of the evidence, the trial judge convicted the accused, having no doubt that his fingers touched the complainant's genitals based on the recent bruising. However, whether he had used his penis in relation to touching her was not certain. It is possible, stated the judge, "that his hand came in contact with his penis after he touched the complainant and there was a transfer of DNA both onto his penis...and the accused must be given the benefit of this doubt."⁴⁷

D. South Africa

Like South Australia, South Africa has also recently codified procedures for taking intimate samples pursuant to section 36D of the *Criminal Law (Forensic Procedures) Amendment Act 2013*, so long as they are taken "(i) by a registered medical practitioner or registered nurse; and (ii) in accordance "with strict regard to decency and order."⁴⁸

Unlike South Australia however, South Africa has an enshrined Bill of Rights in its Constitution to protect human dignity, bodily integrity, and privacy of the person.⁴⁹ However, the legislative scheme that has been enacted in both countries is similar to the common law powers of search incident to arrest in Canada, which also has a Charter of Rights to protect against unreasonable searches,⁵⁰ but with an additional level of oversight provided for by a police inspector not involved in the investigation.

While "strict regard to decency and order" is not defined in the South African legislation, the application and criteria for an order to conduct an intimate forensic procedure would likely be similar to the common law jurisprudence adopted in Canada in *R v Golden*⁵¹ or the similarly legislated provisions in South Australia.

⁴⁶ *Awer*, *supra* note 14.

⁴⁷ Jessop, *supra* note 4 at para 123.

⁴⁸ *Criminal Procedure Act* (S Afr), No. 51 of 1977 as amended by the *Criminal Law (Forensic Procedures) Amendment Act* (S Afr), No. 37 of 2013, s 36D(7)(d) [emphasis added].

⁴⁹ See Constitution of the Republic of South Africa, No. 108 of 1996, c 2, ss 10, 12(2)(b) & 14(a).

⁵⁰ *Canadian Charter of Rights and Freedoms*, s 8, being Part 1 of the *Constitution Act, 1982*, being Schedule B to the *Canada Act 1982* (UK), 1982, c 11. Section 8 states "Everyone has the right to be secure against unreasonable search or seizure."

⁵¹ *R v Golden*, 2001 SCC 83.

E. England and Wales

Pursuant to s. 53 of the *Police and Criminal Evidence Act* (PACE) all common law powers of constables to search a person incident to arrest were abolished in 1984. These powers were subsequently replaced by a complete legislative code of search powers promulgated pursuant to the Act.⁵²

When PACE was originally enacted s. 62 stated that all searches for “intimate” samples could only be conducted by consent. Section 65 further defined intimate samples as blood, urine, pubic hair, dental impressions or physical examination of a bodily orifice. Non-intimate searches such as pulled head hair, fingernail scrapings and skin impressions could be done without the person’s consent.⁵³

However, a problem arose as to what a penile swab was. Was it a “physical examination of a bodily orifice” or was it more akin to that of a fingernail scraping or “skin impression”? As it did not fit squarely into either category a report into *Modernising Police Powers* recommended that PACE be amended to further define intimate searches so as to include penile swabs as an intimate sample.⁵⁴

The Home Office recommendations were subsequently adopted and on July 1, 2005. Section 119 of the *Serious Organized Crime Act* came into force amending s. 65 of PACE so that an intimate search included “a swab taken from any part of a person's genitals (including pubic hair) or from a person's body orifice other than the mouth.”⁵⁵ However, swabs taken from other parts of the body may still be obtained without the person’s consent.

As such, penile swabs can only be done in England and Wales if the suspect consents. While this could result in the loss of significant probative evidence, under s. 62(10) of PACE a judge or jury may draw an adverse inference against anyone who refuses to provide a consent sample.

As there is no such adverse inference provision in the *Criminal Code of Canada* the police and/or prosecutors cannot rely on such a presumption in Canada. While similar adverse inference provisions can be found in

⁵² *Police and Criminal Evidence Act 1984* (UK), 1984, c 60. [PACE]. Similar provisions exist pursuant to s. 62 of the *Police and Criminal Evidence (Northern Ireland) Order 1989* (NI), SI 1989/1341. This criteria was adopted in Canada: *Golden*, *supra* note 51, and applied in *Saeed*, *supra* note 9 at para 78.

⁵³ *Ibid.*

⁵⁴ UK, Home Office, *Policing: Modernising Police Powers to Meet Community Needs* (Summary of Responses) (London: Home Office, 2004) at 22.

⁵⁵ *Serious Organised Crime and Police Act 2005* (U.K.), 2005, c 15.

family law statutes regarding issues such as parentage,⁵⁶ a similar provision in criminal law statutes would likely violate the principle regarding the presumption of innocence. For an in-depth discussion on this topic see the Supreme Court of Canada's 1994 decision in *R v Laba*⁵⁷ and John Webster's paper on "The Proper Approach to Detection and Justification of Section 11(d) Charter Violations Since Laba."⁵⁸

In fact, in *F.(S.) v AG Canada*,⁵⁹ an early challenge to the DNA warrant legislation in Canada, the Ontario Superior Court held that drawing of an adverse inference for refusal to comply was considered unrealistic and would provide evidence of diminished reliability to that secured through comparative forensic testing. Citing the Scottish Law Commission, *Report on Evidence: Blood Group Tests, DNA Tests and Related Matters*, Justice Hill stated at paragraphs 115-118 that "evidence is preferable to inference as a basis for a criminal conviction."⁶⁰ Justice Hill also adopted the reasoning of the Law Reform Commission of Canada Report 25, *Obtaining Forensic Evidence* that "the very allowance of an adverse inference may not be logically defensible in any case where the subject has failed or refused to submit to an investigative procedure of a particularly intrusive nature."⁶¹

Nevertheless, in *Saeed*, the Supreme Court of Canada distinguished the legislative regime in England and Wales as striking an inappropriate balance in the Canadian context, holding that the approach in England and Wales "effectively disregards the interests of victims of sexual assault...and all but ignores the public interest in bringing sexual offenders to justice."⁶²

⁵⁶ Cf *Family Maintenance Act of Manitoba*, CCSM c F20, s 21(3) which states that the court may draw any inference it considers appropriate regarding parentage where a person refuses to submit to a blood test or other genetic test.

⁵⁷ *R v Laba*, [1994] 3 SCR 965, 120 DLR (4th) 175

⁵⁸ John Webster, "The Proper Approach to Detection and Justification of Section 11(d) Charter Violations Since Laba" (1995) 39 CR-ART 113.

⁵⁹ *F(S) v Canada (AG)*, 182 DLR (4th) 336, 141 CCC (3d) 225, (Ont Gen Div), rev'd 182 DLR (4th) 336, CRR (2d) 41.

⁶⁰ *Ibid* at 115-118, citing Scotland, Scottish Law Commission, *Report on Evidence: Blood Group Tests, DNA Test and Related Matters* (Scot Law Com No 120) (Edinburgh: Her Majesty's Stationery Office, 1989).

⁶¹ Law Reform Commission of Canada, *Report 25: Obtaining Forensic Evidence*, Catalogue No J31-45/1985(Ottawa: Law Reform Commission of Canada, 1985).

⁶² *Saeed*, *supra* note 9 at para 61.

IV. CONCLUSION

In the author's original *Police Practice and Research paper* the focus was more on the presence of female DNA on the penile swab, rather than its persistence and variability in both quantity and quality.

In the current review, from both a clinical and practical level penile swabs obtained in conjunction with vaginal swabs will yield significant confirmatory evidence of contact between the victim and suspect in cases of recent sexual assault. However, the DNA evidence is highly variable in both quantity and quality. While a full DNA profile of the victim may persist for up to 25 hours, due to natural or environmental factors such as wiping, washing, body heat, urination, bacteria, or sweat, it may be significantly degraded within a few hours that no suitable profile for analysis is developed. As such, time may be of the essence in collecting the sample regardless of the possibility female DNA suitable for analysis might survive for 25 hours in individual cases.

While some countries like Australia and South Africa have chosen to legislate the taking of penile or intimate samples incident to arrest, others such as Canada and the United States have relied on the common law approach to regulating the admissibility of such evidence. England and Wales, on the other hand, has made the evidence of such searches inadmissible without consent, but incorporated a reverse onus provision where consent is refused. Nevertheless, all these jurisdictions recognize the value of the evidence, they just differ on the manner in which it is collected.