



A Crisis of Consent? Police Surgeons, Rape and HIV/AIDS in Late Twentieth-Century Britain

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1 INTRODUCTION

Around the spring of 1986, John Campbell was arrested. Suspected of dealing drugs and pimping out younger boys, Campbell was in fact a fellow sex worker who had been caught with a personal supply of Class A drugs. Despite being only eighteen years old at the time, Campbell had been a sex worker for several years in and around Piccadilly Circus, known to its rent boys, their clients and the police as ‘the Dilly’ (Reed 2013). His protective guidance to other ‘Dilly boys’ had been misconstrued as pimping, just one example in a long history of the criminalisation of care within sex work (Slagstad and Kveim 2022; Laite 2012). According to Campbell, having been arrested he was ‘held in the wing overnight, medical the next day, told I had to have an HIV test—and I said I’ve already had one. And they said well that doesn’t mean that you’re not positive now, so you have to have another test’. With little choice, Campbell made his preferences clear: he did not want to be ‘in an isolation

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room like the last one²—his previous arrests seem to have resulted in similar experiences. This time was different: ‘they said, no, this time you’ll go onto the actual hospital wing, you’ll be in a cell on your own but you’ll go onto the actual hospital wing’. It was on the hospital wing that Campbell received his HIV diagnosis: ‘The doctor came back in and said “Mr Campbell, you had an HIV test last time you were here”. And I said “yeah”. He said, “the results were positive”’ (John Campbell interview).

Campbell’s diagnosis experience is revealing on several fronts, but two aspects stand out: that his HIV diagnosis was occasioned by his interaction with the criminal legal system, and that he was forced to undergo an HIV test. The medical and juridical structures which scaffolded this experience collided to remove Campbell’s ability to consent to medical testing. Contemporary biomedical ethics emphasise the need for informed consent as part of a medical procedure, particularly those which involve ‘giving a biological specimen’ such as a blood or tissue sample (Lee et al. 2019: 110). This was also the prevailing view amongst medical researchers across the period this chapter discusses, but during these years the primacy of informed consent was less stable, largely (but not exclusively) due to AIDS-related concerns (Gillon 1987; Cancer Research Campaign Working Party in Breast Conservation 1983; Tobias and Souhami 1993). In the coercive environment of the ‘medical wing’—presumably of HMP Chelmsford where Campbell was on remand—the option to consent was removed.

This chapter explores the ways in which medical doctors who worked with the police and victims of crime dealt with the emergence of the HIV test, the questions about consent which it engendered, and the ways in which rape and sexual violence cases shaped HIV testing practice. Debates in the wider medical research literature ran parallel to those in journals aimed at doctors who worked within the criminal legal system (Gillon 1987). This chapter focuses predominantly on the latter, mostly on ‘police surgeons’, precisely because they reveal the centrality of rape and sexual assault cases in the creation of implicit policies around testing. The post of police surgeon was created by the 1829 Metropolitan Police Act. As Joanna Bourke, one of the few historians to have worked on police surgeons explains, ‘Any person with a medical degree could be appointed to the role, but the majority were GPs’ (General Practitioners) working part-time except in major cities where higher crime rates demanded full time roles (Bourke 2018, 713). By the mid-1980s, being a police surgeon was a more professionalised, full-time medical role, albeit one

with unattractive hours and remuneration (Ibid 717). In 1994, the Association of Police Surgeons changed its name to the Association of Forensic Physicians as part of a broader organisational recentring of medicine (and decentring of police work).

What police surgeons thought about their patients' consent to HIV testing matters to historians of sexual violence not only because it reveals how a portion of the medical profession thought about consent, confidentiality and bodily autonomy. It also matters because police surgeons were likely to be involved in the testing and treating of those involved in sexual assault and rape cases, both as victims and perpetrators (Bourke 2018; Dirven 2024). Understanding how police surgeons conceptualised and practised consent during HIV testing helps us to reconstruct the experiences of victim/survivors more fully, and demonstrates the impact of sexual violence in shaping HIV testing policy in the late 1980s.¹ Recent work on the ways in which medicine has been manipulated by reactionary or abusive forces draws attention to the ways in which consent did, or did not, feature in working practices (Rusterholz and Kelly 2025; Thomlinson 2016, 168). Understanding the way consent played into policies which were formulated in response to new medical developments, such as the HIV test, forms part of the broader corpus of consent, power, and bioethics which sexual violence scholarship inhabits. It also contributes to scholarship on HIV/AIDS within criminal legal frameworks which have rightly identified carceral settings as inhibiting patient/prisoner access to healthcare, including HIV testing (Day 2023). As this chapter makes clear, HIV testing could be used coercively and illiberally at the intersection of medical and criminal legal settings.

This chapter focuses on police surgeons and forensic medics working in Great Britain, but especially the jurisdiction of England and Wales. The professional association of police surgeons covered 'Great Britain' (despite having members in Northern Ireland), but physicians from England dominated its proceedings. Moreover, despite Edinburgh's reputation as the 'AIDS capital of Europe' because of the high proportion of intravenous (IV) drug use there (Elizabeth 2022, 168–169), it was the jurisdiction of England and Wales in which the highest numbers of HIV/AIDS cases were seen during the period, as well as being where most of

¹ Throughout this chapter I refer to both 'victims' and 'survivors' of sexual violence. I discuss the deployment of these terms in Severs (2024b).

the police surgeons engaged in published discussions about HIV/AIDS, consent and sexual violence were based.

The historical literature on police surgeons is small, though a few historians have given serious consideration to the ways in which police surgeons engaged with victims of rape and sexual assault (Bourke 2018; Dirven 2024). Bourke has suggested that police surgeons ricocheted between ‘cultures of harm and care’ from the 1960s, cultures which played out clearly in their uneven practices of caring for rape victims (Bourke 2018). This chapter further explores the ways in which police surgeons managed this uneasy balance, stemming from their sometimes competing demands as workers within medical and criminal legal systems. In doing so, it contributes to ongoing critiques of the term ‘criminal justice system’, identifying coercive medical practices within what was in fact a series of interconnected juridical *systems* which many identified as unjust (Levin 2023). The ways in which police surgeons responded to the HIV test, particularly the place of patient consent to such testing, reveals that an ethos of care prevailed in the late twentieth century alongside the potential for coercion. As I will demonstrate, there was a crisis of consent in the mid-1980s. Recognising this serves as a useful reminder of the fragility of the right of patients to consent when periods of national, particularly medical, emergencies are marshalled to trump the rights of vulnerable or minoritised individuals. This crisis of consent was short-lived, and otherwise the place of consent in the history of police surgeon thinking around HIV testing is one of broad continuity. In exploring this, it is possible to see an aspect of what the historian Virginia Berridge has identified as ‘a particular form of liberal consensus round AIDS’ in Britain taking shape, and doing so in often illiberal criminal legal settings (Berridge 1996, 55). Doing so further highlights the unbalanced power dynamics at play between doctors and patients. Histories of HIV/AIDS have emphasised the rise of the ‘patient expert’ (Ware 2019, 117–120), but we would do well to remember that this shift occurred alongside the continuation of patient groups with minimal power over their care or bodily autonomy. I therefore refer, where appropriate, to the ‘patient/prisoner’ to highlight the carceral and potentially coercive environments in which these HIV histories played out.

2 FIRST IMPRESSIONS: HIV/AIDS AND TESTING IN THE MID-1980S

As a result of work by virologists at the Middlesex Hospital and scientists at the Chester Beatty Institute (now the Institute for Cancer Research), a test for HIV became ‘widely available’ around October 1985 (Berridge 1996, 46, 51–2 and 92). One month later, HIV/AIDS was mentioned for the first time in *The Police Surgeon*, the journal of the Association of Police Surgeons. This came in the form of a review of Derek Llewellyn-Jones’ book *Herpes, AIDS and Other Sexually Transmitted Diseases*. It is likely that the emerging crisis around AIDS, rather than herpes, was of most interest to the journal, as few police surgeons considered sexual health as part of their remit. A survey of police surgeons carried out a year earlier had revealed that ‘only 36 per cent prescribed medicine against sexually transmitted diseases’ to women they dealt with following rape or sexual violence (Bourke 2018, 718). The review of Llewellyn-Jones’ book reveals the kernel of interest in HIV/AIDS amongst police surgeons, and suggests some of their concerns about the virus as discussions about HIV testing were emerging. These concerns are particularly useful in reconstructing the landscape of anxieties around HIV/AIDS amongst police surgeons during the months in which HIV testing first became a possibility.

The unnamed reviewer recorded the ‘terror and panic’ of professionals dealing with HIV/AIDS. This was situated within a broader culture of anxieties around HIV/AIDS which accompanied the realisation that the virus was not confined to gay men, IV drug users or haemophiliacs, but had the potential to infect anyone (Cook 2017b). As the UK Government’s public health television advert broadcast in 1987 informed its viewers, HIV/AIDS was ‘now a danger that has become a threat to us all’. Police surgeons’ panic preceded the national culture of unease in part because they understood the ways in which HIV was transmitted better than most. As qualified medics, most would have assimilated the knowledge that the virus was transmitted through bodily fluids (mostly semen and blood) which had been apparent for several years before the review of Llewellyn-Jones’s book was published. Their concern, articulated by the anonymous reviewer, emerged from police surgeons’ proximity to those most at risk of contracting HIV. The reviewer told his police surgeon readers that ‘our police colleagues and their clients are involved so often with those most prone to harbour, nay to propagate, such

serious ailments with their grave outlooks'. Here, the ailment was HIV and the 'grave outlook' was AIDS and, presumably, an AIDS-related death. The chances of such a 'grave' outcome was, the reviewer noted, 'minimal, yet the consequences may be dire' ('Book review' 1985, 79). The reviewer hoped that more information along the lines of Llewellyn-Jones' book would serve to allay some of the panic their colleagues were displaying, and welcomed its publication. They took issue, however, with the author's 'philosophy'. Llewellyn-Jones 'cannot be faulted for his desire to see patients "treated confidentially without any moral strictures being passed"' wrote the reviewer, 'but that does not excuse us from the need to have a stance ourselves. Where does emancipation stop and licence start?' (Ibid, 79–80). The reviewer was particularly concerned with 'greater promiscuity' which, they argued, 'must be the cause of the increased incidence of sexually transmitted diseases' (Ibid, 80).

Testing was not mentioned in this review, but the reviewer's underlying opposition to medical practice anchored in 'emancipation' points to early signs of the crisis of consent. Police surgeons like the reviewer were keen for more information about HIV/AIDS, but the nascent epidemic had ossified beliefs which were staunchly opposed to 'permissive' liberal attitudes towards sex (Cook 2017a). For the reviewer, sex was 'not simply a matter between two consenting adults... as police surgeons know only too well' and argued that there was a 'clear locus to express strong disapproval when attendance at genitourinary clinics has more than doubled in ten years' ('Book review' 1985, 80). These dual crises, of promiscuity and HIV/AIDS, led the reviewing police surgeon to question the sanctity of medical practices such as confidentiality and impartial treatment.

This early stance on HIV/AIDS did not set the tone for discussions of the virus within *The Police Surgeon*. A year later, in November 1986, James Hilton published an article on 'AIDS and the Police'. Hilton was by this point a long-serving and senior police surgeon. As Force Surgeon to the Norfolk Constabulary, he was the most senior police surgeon in the county, but Hilton's influence was national. Not only was he an elected member of the Council of the Association of Police Surgeons of Great Britain, he also co-edited *The New Police Surgeon*, a volume which informed the practice of many of his colleagues (Burgess and Hilton 1978, 16–17). His, therefore, was an influential voice. Hilton's intervention addressed a culture of fear which continued to beset the police force, particularly amongst 'the beat officer' whom Hilton described (in gendered language which speaks to the male-dominated police service of

1980s Britain) as being ‘naturally fearful for his own health and safety’ because ‘he knows [his duties] will bring him into contact inevitably with these very terrifying infections about which he knows little and understands less’. Hilton offered to ‘point the way in which we should be advising our respective Chief Police Officers and, incidentally, how we should be looking after ourselves’ (Hilton 1986, 120).

Unlike the review published the previous year, Hilton’s article tackled the issue of testing for HIV. The merits of early HIV testing, particularly for police surgeons as a medical and prosecutorial tool in rape cases, had not yet been established (a development I discuss below). As a result, Hilton discussed HIV tests cautiously. ‘Tests to determine whether a person has or has had the virus are not always accurate’ he wrote, noting that they could ‘take months to develop’ and that ‘several follow-up tests are always required’ (Hilton 1986, 120–121). Hilton was not convinced of the short-term benefits of HIV testing but, in establishing a policy around testing patient/prisoners for HIV, his position was clear. ‘ANY tests conducted on a person be he a suspected criminal or a police officer must be with his consent and the release of information about the result of the test must also be with that person’s consent’ (Hilton 1986, 122).

The capitalisation of the word ‘ANY’ in this emphatic directive suggests that Hilton was anticipating—or had experienced—the questioning of this approach, either from outright opposition or through conditions drawn from the juridical nature of the work. Hilton did attach some conditions, warning against acts of disclosure for reasons ‘other than medical or public health’. For Hilton, reasons attached to policing or imprisonment did not trump the need for patient/prisoner consent in the way that, in incredibly rare circumstances, medical necessity might. As I have written about elsewhere, the late twentieth century saw debates over whether the consent of a person living with HIV was required for their HIV status to be disclosed by a third party. Some university staff, for example, objected to policies which demanded they never disclose the HIV status of their students, arguing that if an employer’s reference asked for this they could be accused of providing false information (Severs 2024a, 118–120). Hilton’s article, however, reveals the emphasis on consent by senior forensic medics in early discussions of HIV testing. Significantly, it also underscores that it was medical, rather than juridical arguments which had the potential to trump the insistence on consent. On the more authoritarian side of police surgeons’ work, namely within the criminal legal system, consent was afforded primacy in HIV testing.

Hilton was not alone in emphasising the importance of consent and confidentiality in police surgeons' handling of HIV. A debate in the *British Medical Journal* in 1992 reveals that most police surgeons emphasised consent and confidentiality in their HIV-related work. The debate was sparked in response to a *BMJ* editorial written by Ken Mason, Emeritus Regius Professor of Forensic Medicine at the University of Edinburgh, on the recording of HIV status on police computers (Laurie 2017). Mason concluded that a balance needed to be struck (and, he argued, was being struck) between the need for police officers to know the HIV status of those in their charge and their prisoners' right to privacy, though he more heavily emphasised the former. The police, Mason suggested, were 'a particularly vulnerable group' who had 'a right to know if they had been or are being exposed to contagious disease' (Mason 1992, 995).

That Mason seemed to be suggesting that prisoners' rights to privacy were surpassed by police officers' need for 'protection' perturbed his colleagues. Letters from four forensic medical professionals were published in the *BMJ*, ranging from suggesting 'room for improvement' in an article which 'cries out for correction', to outright 'dismay...' ('Recording HIV status on police computers' 1992, 1243). Allison Jaynes, a physician who had researched HIV risk, pointed out that 'medical professional bodies insist on maintaining confidentiality and obtaining proper informed consent' before testing patients for HIV. A. J. Lyons, a London-based police surgeon, wrote that, despite being told by custody officers 'From time to time... "Doc, be careful, he's got HIV"', these warnings had never been validated. As such, Lyons could see 'no reason for the police to record this information at all'. Confidentiality and consent were principles which, for these police surgeons at least, were central to forensic HIV medicine.

To be sure, police surgeons' practice was not overtly liberal, even if Hilton's and those writing against Mason appeared to be. It was in the mid-1980s that, according to the historian Virginia Berridge, 'a particular form of liberal consensus' emerged in the UK, with testing for HIV acting as 'an important symbolic procedure in the establishment of a liberal policy line' (Berridge 1996, 55, 72). Carceral settings such as police stations and especially prisons, however, could not be described as liberal in either their operations or their responses to HIV/AIDS (though, as Janet Weston has pointed out, the response of prison authorities to HIV/

AIDS varied across Europe) (Weston 2022). Hilton's insistence on confidentiality and consent led him to 'the principle of treating any suspected case as if it were AIDS'. As he explained, 'In cases where a person in custody provides a sample which confirms AIDS and yet does not permit that information to be released, police officers could be at risk' (Hilton 1986, 122). Treating all suspected HIV/AIDS 'cases' 'as if it were AIDS', he argued, allowed workers within the criminal legal system to take adequate precautions without violating the need for the patient to consent to wide disclosure of their HIV status. This was in marked contrast to the ways in which other elements of the criminal legal system, notably prisons, were dealing with HIV testing, both in and beyond Britain. Weston's work on HIV/AIDS in prison contexts has revealed widespread concern that, in the UK, 'the confidentiality of test results was not respected within prisons' (Weston 2019, 228) and that, in countries including Ireland, 'Doctors shared the identities of those testing positive with prison management' (Weston 2022, 92; Day 2023). In both national contexts, such breaches in confidentiality led to policies of segregating HIV-positive prisoners on separate wings (Weston 2019, 228; Weston 2022, 92). Whilst police surgeons appeared to be more committed to their emphasis on consensual HIV testing, that commitment was not universal or inevitable.

3 TESTING, CONSENT AND VICTIMS OF SEXUAL VIOLENCE

That the primacy of consent was not guaranteed within police surgeons' practice reveals the ways in which a liberal testing policy could shield potentially coercive practices. For victims of rape and sexual abuse, whose refusal to consent had already been overridden, the potential for further coercion in medical or criminal legal settings was concerning. Police surgeons sat at the nexus of medical and criminal systems, one which victims of rape and sexual violence navigated. Conducting medical examinations of victims and perpetrators of various forms of sexual assault formed some eighteen per cent of police surgeons' workloads when these were surveyed in the mid-1960s, the third-highest element of their workload (Bourke 2018, 714). It is likely that this percentage increased in the late twentieth century, part of the 'rapid increase in reports of rape since the 1960s' (Bourke 2007, 15). Victims of rape were integral in establishing practices of HIV testing. Their cases demonstrated both the

evidential importance of the HIV test *and* the need for those tests to be conducted consensually.

The number of rapes being dealt with by police surgeons was increasing at the same time as new ways of treating victims were being developed. The first Sexual Assault Referral Centre (SARC) was opened in 1986 in St Mary's Hospital, Manchester. Raine Roberts, a police surgeon who had been arguing for SARCs since the early 1980s, was appointed as its first Clinical Director. The numbers of women police surgeons was rising in this period, but slowly. The year before the St Mary's SARC was opened, a study found that there were over seven male police surgeons to every one of their female colleagues (Bourke 2018, 717). SARCs like St Mary's offered dedicated spaces for victims of rape and sexual assault to undergo testing, treatment and therapy, an alternative to the 'cool detachment' with which police surgeons had treated rape victims until at least the early 1980s (Roberts 1987; Dirven 2024, 498). Police surgeons were not only responding to the new possibility of testing from the mid-1980s, but were increasingly doing so in new and particular sites specific to rape and sexual assault.

Roberts herself published articles which detailed her own experience of responding to new ways of testing for sexually transmitted infections. These articles illuminate changing attitudes of police surgeons towards sexual health testing and treatment, including for HIV. Roberts told her colleagues that she did 'not usually take swabs for gonorrhoea or other sexually transmitted diseases in rape victims'. The reason was not a lack of care or concern for such victims but rather, she argued, from concerns of a false negative test result. As she explained 'if the infection had been passed on during alleged rape only a few organisms might be present and might not be picked up on the swab. A negative result would give the woman a false sense of security'. In other words, testing for STIs was not standard practice amongst many police surgeons because, at the moment they were charged with examining victims, the chances of detecting them was low, leading to the risk of a false negative result. Instead, Roberts advised the victims of rape she examined 'to attend a Genito-Urinary Clinic in about a week's time' when the infection was more likely to be detectable (Roberts 1986, 31).

In 1986, then, testing rape victims for sexually transmitted infections was not standard practice for police surgeons, who tended not to see this as part of their medico-legal work. That year, though, a case with which Roberts was presented caused her to rethink her practice, and that

of her fellow police surgeons. Roberts explained that 'A girl whom I saw a few weeks ago after she had complained of rape has now found that she has gonorrhoea'. Unsurprisingly, the added knowledge that her rape had led to a sexually transmitted infection had 'caused her extreme distress'. Adding to this distress was the fact that the alleged rapist in the case, whilst admitting he had gonorrhoea, was suggesting to police that he might have caught it from the victim. His allegation was that the victim's STI was evidence of her promiscuity 'and had consented to what occurred' (Roberts 1986, 31).

This case was instructive to Roberts. Having examined the victim shortly after the incident was reported, she had 'noted that the genital area was sore and red, the findings being consistent with her story'. However, in line with her usual practice (and that of most of her fellow police surgeons), Roberts had administered no tests for sexually transmitted infections. 'It would have been of great value', she conceded, 'to know whether gonorrhoea could have been found at the time of the examination'. If it had, the alleged rapist's version of events would have been more likely to have been believed. If no gonorrhoea was found, 'it would suggest that the infection had indeed been transmitted in the rape and had not become apparent until later'. Sexually transmitted infections, Roberts realised, were potential evidentiary links between presenting victims and their alleged rapists. Pushing back against the largely standard practice of not swabbing victims for such infections when they first presented to police surgeons, Roberts suggested that 'Perhaps we should think again' (Roberts 1986, 31).

That process of thinking again was not just undertaken by police surgeons. Other medical professionals, crucially those who dealt with victims of rape and sexual assault or abuse, were also grappling with HIV and the challenges which testing for the virus posed (not least as part of the evidentiary basis of proving the rape). Genitourinary medics, who diagnose and treat people with sexually transmitted infections, were also formulating ways in which to administer HIV tests during the 1980s. Unlike police surgeons, whose debates about HIV tests were always articulated broadly, genitourinary medics were particularly concerned about victims of sexual violence. Perhaps for this reason, the need for the patient's consent was not questioned. The policies and practices which hospital medics began to recommend reveal the ways in which the medical colleagues of police surgeons (who often collaborated with them on sexual assault cases) thought about testing for sexually transmitted

infections. It points to a broader medical reckoning with HIV testing, particularly with the question of when they were useful, clinically and evidentially. Examining how genitourinary medics thought about HIV tests not only furthers our understanding of the ways in which medical professionals responded to the new possibility of such tests, it also reveals how doctors whose professional allegiance was clearly defined by medical rather than juridical practice engaged with questions posed by the criminal legal system when it came to consent, HIV and sexual violence.

One of the earliest reported cases came in 1987, when ‘a 24-year-old woman was examined and tested for HIV’ in St Mary’s Hospital, London ‘because she had been raped two weeks previously’ (Murphy et al. 1989, 718). As is the case in the majority of rapes, the victim knew her rapist and, having forced her to have sex, he ‘subsequently told her that he was positive for HIV’. Unlike in other cases, such as the one discussed above where victims subsequently discovered that they had contracted a sexually transmitted infection, here the victim had been told that her assailant was living with HIV, putting it on the agenda of her post-rape care immediately. This was becoming increasingly common during this period. A study of male rape victims published in 1991 found that over half had been threatened with HIV transmission by their assailants (Hillman et al. 1991, 22–24; Severs 2024b, 204). Using it as a tool to further inflict sexual violence, rapists were incidentally pushing HIV onto the genitourinary medical agenda.

Those who treated the victim at St. Mary’s had a clear course of action: ‘all adult victims of rape should be offered a test for HIV, reassured that the risk of infection is low, and offered counselling’. Their emphasis on HIV further indicates that it was the HIV/AIDS epidemic which prompted the turning point in how medics approached testing victims of rape and sexual assault. In addition to their medical role, though, juridical issues were also at play. Not only did they need to ascertain whether their patients were HIV positive, genitourinary medics were tasked with determining whether their positive patients had seroconverted as a result of their sexually violent encounter. In short, it was not just whether their patients who had been raped had HIV, but also whether their patients had HIV *because* they had been raped. Genitourinary medics may have been working squarely within the medical field, but they found themselves dealing with the same evidentiary questions as their police surgeon colleagues.

Despite the fact that it was police surgeons who sat uniquely at this intersection of medical and legal practice, discussing this important causative medical evidence was often left to genitourinary medics based in hospitals. In part, this may reflect the fact that police surgeons were beginning to transition away from their role ‘within’ the police service towards more medical roles. From the late-1970s, police surgeons began to talk of their work in terms of forensic medical examinations, and were increasingly identifying as Forensic Medical Examiners (FMEs). In relation to this shift, Bourke has argued that police surgeons were attempting ‘to distance themselves from law enforcement agencies’, highlighting their medical roles and decentring their place within the criminal legal system (Bourke 2018, 726). This was a significant shift from earlier in the twentieth century, when police surgeons ‘aligned themselves more with the law than with medicine’ (Bourke 2018, 718; Dirven 2024, 497). Nonetheless, it was hospital-based genitourinary medics who established a clear practice of HIV testing of rape victims. Writing in the *British Medical Journal*, the consultants at St Mary’s in London who had examined the 24-year-old rape survivor offered their experience as an instructive example. When the woman initially visited the clinic in May 1987, she was tested for gonorrhoea, chlamydia and HIV. The results for all of these tests were negative but, because her rapist had ‘told her that he was positive for HIV antibody’ the clinicians tested her for HIV three months later, after which time they were confident that HIV would be detectable. Following this second test, doctors informed the woman that she was HIV-positive. Taken together (and alongside a clinical history which indicated no other sexual contact, drug use or blood transfusions in the months leading up to her rape) those results revealed that she had contracted HIV as a result of her rape.

This link was key. Three other women had previously attended St Mary’s having survived acts of rape and were found to be HIV positive. Unlike with the woman who formed the basis of the St Mary’s article, these women had not had samples taken from them and stored following their initial visit to the clinic. As a result, clinicians (and by extension the criminal legal system) could not prove that these women’s rapists were the cause of their seroconversion to HIV. As the consultants from St Mary’s put it ‘HIV infection could not be definitely attributed to the assault’ (Murphy et al. 1989, 718).

A simple but important suggestion emerged from this paper: if rape survivors were willing to be tested for HIV, then those tests should be

taken as quickly as possible, despite the knowledge that HIV was unlikely to be visible in tests until three months after initial exposure. Those tests, and samples taken at that time, could be crucial evidence in proving whether a person's rapist had also transmitted HIV to their victim. Not only would this help rape survivors understand what had happened to them and allow clinicians to refer their patients for appropriate counselling, such practice was also potentially useful as a means of proving causality (that the rape led to HIV) in criminal legal settings. If it could be proven that a rapist had passed HIV to his victim, this was an exacerbating factor with the potential for a further charge of grievous bodily harm (though this would not occur until the early twenty-first century) (Dodds et al. 2009). With little formal advice, and the need to address both medical and criminal legal concerns, testing on first contact and three months later became a useful 'first step' in post-rape clinical practice, one which attracted international agreement soon after its publication (Foster and Bartlett 1989).²

The presence of HIV, and the challenges it posed in terms of its delayed presentation, was crucial in shaping the ways genitourinary medics dealt with victims of non-consensual sex, both medically and juridically. The consent of their patients to undergo such tests, however, appeared to be absolute. Let me return, though, to the question at the heart of this chapter: the emphasis on consent when testing people for HIV. It is clear that, for the genitourinary medics working at St. Mary's, their patients' consent was required in order to test for HIV. Yes, they impressed the medical and evidentiary value of not just one test but two, but the language they deployed in the *BMJ* indicates that this was a policy which operated consensually. Patients they encountered who had been raped 'should be *offered* a test for HIV' (emphasis added).

This had not always been the case. Beyond the work of police surgeons and genitourinary medics working with victims of rape, British physicians had been debating the 'need' for patient consent to undertake HIV tests. Mostly, these were confined to discussions of whether obtaining the consent of patients who had given blood samples for reasons other than HIV testing was necessary in research into the prevalence of HIV (Doll 1987; Gillon 1987). Such debates also took place between forensic medics

² Foster and Bartlett built on Murphy et al.'s contribution by arguing for the use of post exposure prophylaxes such as zidovudine.

who interacted with victims of rape and sexual abuse at the intersections of medical and criminal legal systems, including police surgeons.

4 CRISIS OF CONSENT

In the late 1980s, the emphasis on consent as part of HIV testing wavered. HIV/AIDS was now being spoken of as a ‘crisis’, heightening the emotionally charged responses to it. If police surgeons were embroiled in a culture of ‘terror and panic’ in 1985, as the *Police Surgeon* reviewer had noted that year, the United Kingdom more widely could be said to have caught up with them by 1987, which the historian Matt Cook identifies as the emotional epicentre of the epidemic (Cook 2017b). Indeed, Virginia Berridge characterises this period as one of ‘wartime response’ to the epidemic (Berridge 1996, 83–85). Historians have found utility in this bellicose metaphor in order to understand the urgency with which public health policy was created and to explain the hardening of public opinion against gay men in particular (Ibid; Cook 2017a). But perhaps there are other apt wartime comparisons to be made. Lawmakers have frequently used the sexual health of the armed services during or in anticipation of wartime as an excuse for passing coercive legislation which most often targeted sex workers (Cox 2007). If coercive policies designed to ‘protect’ the sexual health of the nation is a familiar feature of wartime, was the ‘wartime response’ to HIV/AIDS in Britain any different? As I now show, it was during this period of wartime response to AIDS that police surgeons wavered in their commitment to ensuring that tests and procedures relating to HIV were consensual. This departure from the insistence on consent was momentary and slight, but it reveals the cleavages in liberal consent policies which national emergencies and coercive carceral practices are able to exploit.

The April 1988 issue of *The Police Surgeon* sounded considerably more alarm at the ongoing HIV/AIDS epidemic than past issues had done. Three years had passed since audience members at the Association of Police Surgeon’s annual general meeting had requested ‘any advice on the subject of AIDS’ (‘Minutes’ 1986, 16), with the lacuna of information heightening the growing sense of unease. The introduction to Selwyn Goldthorpe’s article *AIDS and the Police Surgeon* was clear: given the alarming rise in the rates of infection, and the fact that the UK seemed to be just four years behind the numbers of cases being displayed in

the USA (where infection rates were considerably higher), HIV/AIDS ‘should affect the way all police surgeons work’ (Goldthorpe 1988, 64).

Goldthorpe was, at the time, a police surgeon working in Liverpool, a city in the North West of England which, as I have discussed elsewhere, was reckoning with the ‘arrival’ of HIV/AIDS in its midst around the time Goldthorpe was writing (Severs 2024a, 21–23; Wetherell 2025, 306–315). His article ran through a pragmatic list of working practices which, he argued, would reduce the risk of HIV transmission from ‘prisoner’ to ‘forensic examiner’. The crux of his argument was that, by identifying whether a ‘prisoner’ belonged to a category of person at highest risk of living with HIV, the police surgeon could change the ways they interacted with them to reduce their own risk of exposure to the virus. Goldthorpe identified nine ‘high risk groups’:

1. Prostitutes
2. Any drug addict that has shared a needle
3. Homosexuals
4. Haemophiliacs
5. Renal dialysis patients
6. The institutionalised, eg [sic.] prison
7. Tattooed
8. Multiple sexual partners
9. In contact with blood, eg [sic.] health workers, police (Goldthorpe 1988, 66).

Clearly, police surgeons were at routine risk of encountering members of these groups; physicians who recognised their own status as both healthcare professionals and part of the police service would have been justified in identifying themselves as a high-risk category in their own right. Generally, however, HIV/AIDS information articles, including this one, identified an external force (the prisoner) as the potential vector.

Goldthorpe concentrated most of his advice on work around needles. For many of his nine at-risk groups, needles were the most likely means of HIV entering the bloodstream, making this an unsurprising and pragmatic focus. He argued that there ought to be ‘education of the police, who must be wary of searching addicts’ pockets’ because, for the police,

‘Needle-stick injury is the commonest mode of transmission’.³ Because of this, coupled with the fact that Goldthorpe had found half of addicts have ‘used a needle at some stage’, he argued that ‘All addicts should be regarded as high risk’. To combat this risk, police officers and forensic examiners should ‘get the prisoner to turn out his own pockets’ before searching or examining them carefully because ‘needles or syringes may be strapped to the inguinal area, or lumbar-sacral recess’ (Goldthorpe 1988, 67).

Such practices were extensions of policies which predated the arrival of HIV/AIDS. They do reveal, however, the ways in which the context of crisis was having an impact on how forensic examination policy was being debated and implemented. Goldthorpe’s suggestion that his colleagues should consider all addicts to be at high risk of HIV suggests an alarming and potentially coercive homogeneity of thought at work, whereby alcoholics or non-IV drug users may have been subjected to unnecessarily invasive questions, examinations or procedures relating to HIV.

This is despite the article suggesting that forensic examiners may happen ‘upon the realisation that a person belongs to a “high risk” group’. The word ‘realisation’ is significant here, as it suggests a lack of clinical testing to reach such a conclusion. A patient’s risk of HIV might be identified based on taking a detailed medical and/or sexual history or drawn from knowledge of their medical (or, indeed, criminal) record. But prejudiced assumptions may also have led police surgeons to such a ‘realisation’. This is particularly significant given the fraught relationship between the police and several groups who were at especially high risk of contracting HIV during this period. Goldthorpe’s article came just two years after the Chief Constable of Greater Manchester Police, James Anderton, suggested that drug users, sex workers and gay men with HIV were ‘swirling around in a human cesspit of their own making’ (Thomas 1993, 25–26). That he did so at a police seminar on AIDS further underlines the cultures of prejudice and fear, rather than evidence-based practices, within some British police forces during this period. Goldthorpe’s article did not share Anderton’s explicit homophobia, far from it, but it does suggest that some police surgeons may have relied on assumption

³ That this referred specifically to the police is clear from figures taken just a few years after Goldthorpe’s article was published which showed IV drug use was responsible for just 5% of HIV/AIDS cases in the UK, whereas sex between men accounted for 70% (Thomas 1993, 23).

or prejudice when identifying whether their patient/prisoners were at risk of having HIV.

For police surgeons, there were other means of ascertaining the HIV status of one's patient/prisoner. Of course, one could simply ask them. Doctors routinely asked their patients about their medical history, and the duty of care to those in their custody required police custody officers to enquire after their charges' physical and mental health following Code C of the 1984 Police and Criminal Evidence Act (Rekrut-Lapa and Lapa 2014, 69). As the experience of John Campbell with which this chapter opened demonstrates, such conversations could and did involve a discussion of HIV status. But when confronted with patients who, unlike Campbell, were unwilling or resisted coercion to undergo an HIV test, there were occasionally routes to discovering their HIV status which police surgeons were uniquely able to exploit. Goldthorpe revealed to his readership of fellow forensic examiners that 'on occasions' he had 'found the hospital willing to divulge to another doctor such details', namely 'the HIV status of the prisoner'. Of course, this was only possible 'if these are known already', that is, if the 'prisoner' had already undergone an HIV test previously (Goldthorpe 1988, 67).

Goldthorpe's suggestion here is a striking example of the crisis of consent police surgeons were experiencing around the issue of HIV testing. Once again, a close reading of the language employed begins to reveal its potentially coercive potential. To *divulge* something is to reveal a piece of sensitive information. From the Latin *vulgare* (to make known), modern definitions of the word emphasise the secret nature of the fact being broadcast. In Goldthorpe's context, the secret in question was the HIV status of his patient/prisoner, and the mechanism to make it known was the exploitation of the medical fraternity, exploitation which was required because his patient/prisoners had refused to reveal their HIV status to him. Asking the hospital to reveal the HIV status of the person they were dealing with was, as pitched by Goldthorpe at least, a last resort. Not only did this seem to stretch the physicians' professional obligation to confidentiality (something not mentioned by Goldthorpe), it explicitly used the police surgeon's medical qualification as a means to override this imperative. In other words, the police surgeon's medical expertise was being used directly as a tool of the criminal legal system to ascertain confidential medical information.

However, Goldthorpe's is a useful article through which to read the crisis of consent precisely because the consent of the patient/prisoner was

emphasised. Goldthorpe was explicit on this point, telling his readers that patients were under ‘no obligation to consent’ to HIV testing (Ibid, 68). This further emphasises the importance of sexual violence cases as the theatres in which police surgeons rehearsed their arguments about HIV testing, as explored above. Discussing sexual assault cases, Goldthorpe’s emphasis was more clearly directed at victims of rape being dealt with by his genitourinary medical colleagues rather than the alleged rapists whose care and evidence he had been responsible for. The need for consent, then, was absolute for victims in medical care, but was less definitive for those in the care of police surgeons or prison doctors. John Campbell’s was not a sexual assault case, but it nonetheless underscores the fact that patient/prisoners could not always rely on their right not to consent to medical testing. Recall that Campbell was initially reluctant to undergo an HIV test but, having already done so previously, was told that ‘you *have* to have another test’ (emphasis added).

Without further research in this area, such as oral history interviews with police surgeons and patient/prisoners, historians must rely on informed conjecture when suggesting how coercively HIV testing was administered in criminal legal settings. In doing so, it is important to note that, when discussing sexual assault cases, Goldthorpe did emphasise the importance of consent. ‘Should semen be involved’ in sexual assault cases he dealt with, Goldthorpe wrote that ‘I try to obtain, by consent, HIV and hepatitis B tests from the suspect, and phone my colleagues dealing with the other party’ (that is, the victim, whose genitourinary referral he most likely made). A suspect might be persuaded to consent ‘when it is explained that all that is required is a small blood sample’, but Goldthorpe noted that ‘this must be viewed in the light of any subsequent court proceedings and possible sentence’. Put another way, the blood sample may not be a major medical procedure, but it could make all the difference if it proved that a defendant had transmitted HIV to a complainant. As discussed above, this became a vital point for genitourinary medics to consider when they engaged with victims of rape and sexual assault.

Goldthorpe’s article demonstrates the ways in which the primacy of consent, which had previously held firm and which he himself seemed to emphasise, could waiver in the face of HIV/AIDS anxieties. As HIV/AIDS became more endemic throughout the UK, the right of patient/prisoners to consent to be tested for the virus was questioned as an absolute by police surgeons. To be sure, there were areas of medical work within and outside of criminal legal settings in which patients’ consent was

not required. After the powers of the Public Health (Control of Disease) Act 1984 was extended to HIV/AIDS cases in 1985, medics were able to detain HIV positive patients in hospitals against their wishes, a ‘draconian’ power which was only used once (Berridge 1996, 71). However, obtaining blood samples consensually remained best practice when testing for HIV. Indeed, Goldthorpe’s article demonstrated the ethical dance which the crisis of consent forced several police surgeons to perform, as the worsening HIV/AIDS epidemic increased the tension police surgeons experienced between the medical and juridical demands of their work.

Goldthorpe’s revelation that police surgeons were using their medical status to obtain their patient/prisoners’ HIV status suggested a less liberal element to this approach. Certainly this was more revealing of the ways in which the epidemic was altering police surgeons’ thinking about the confidentiality of their patient/prisoners’ medical information. There may have been some instances in which patients simply did not know the results of their previous HIV test (as in Campbell’s case), and police surgeons were able to obtain them. However, whilst this remains a point of conjecture, it is not unreasonable to argue that on other such ‘occasions’, police surgeons were overriding their patient/prisoners’ explicit lack of consent to provide them with that information. Where HIV was an issue for those in custody, consent and confidentiality’s primacy was being questioned in illiberal and potentially coercive carceral settings.

5 CONCLUSION

Despite a crisis of consent in the mid-1980s, consent was a consistent feature in police surgeons’ thinking about the HIV test. That crisis reveals the impacts of the culture of panic and anxiety which the HIV/AIDS epidemic, and the government’s ‘wartime response’ to it, engendered amongst some police surgeons. More broadly, however, the picture of continuity which this chapter has painted—one in which the consent of the patient was underscored—has demonstrated the ways in which police surgeons and other medics dealing with cases which were both medical and criminal, formed liberal responses to the epidemic. Cases of non-consensual sex were crucial to the establishment of liberal medical policies around testing. Examining the formulation of this policy further reveals that the limits of that liberal response were felt most acutely within the criminal legal system: it was in the genitourinary units, rather than the police surgeons’ examining suites, where patients’ consent to HIV testing

appears to have been most absolute. Unsurprisingly, it was in the coercive environment of the prison or custody suite that medics' emphasis on consent to an HIV test was most likely to waiver. The consistency of that emphasis, however, may further historical understandings of the distance police surgeons sought to place between themselves as medics and their 'police work' during this period. That distance, though, did not remove police surgeons' potential to use their medical status to override the consent and confidentiality of patients in their care. Indeed, the cases discussed in this chapter contribute to the growing body of scholarship which understands carcerality as a key factor in the erosion of its inhabitants' right to consent.

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REFERENCES

PRIMARY SOURCES

- Book Review: Herpes, AIDS and Other Sexually Transmitted Diseases. Derek Llewellyn-Jones. 1985. *The Police Surgeon* 28: 79–80.
- Minutes of the 34th Annual General Meeting held at the Golden Valley Hotel, Cheltenham on 15th May 1985'. 1986. *The Police Surgeon Supplement* 20: 16–17.
- Recording HIV Status on Police Computers. 1992. *British Medical Journal* 304: 1243.
- Burges, H., and J. E. Hilton, eds. 1978. *The New Police Surgeon: A Practical Guide to Clinical Forensic Medicine*. London: Hutchinson Benham.
- Cancer Research Campaign Working Party in Breast Conservation. 1983. Informed Consent: Ethical, Legal, and Medical Implications for Doctors and Patients Who Participate in Randomised Clinical Trials. *British Medical Journal (Clinical Research Edition)* 286: 1117–1121. <https://doi.org/10/1136/bmj.286.6371.1117>

- Doll, Richard. 1987. A Proposal for Drug Prevalence Studies of AIDS. *British Medical Journal (Clinical Research Edition)* 294: 244. <https://doi.org/10.1136/bmj.294.6566.244>
- Foster, Ilene, and John G. Bartlett. 1989. Rape and Subsequent Seroconversion to HIV. *British Medical Journal* 299: 1282.
- Gillon, Raanan. 1987. Testing for HIV Without Permission. *British Medical Journal (Clinical Research Edition)* 294: 821–823. <https://doi.org/10.1136/bmj.294.6575.821>.
- Goldthorpe, S. B. 1988. AIDS and the Police Surgeon. *The Police Surgeon* 33: 64–69.
- Hillman, Richard, Nigel O'Mara, and David Tomlinson. 1991. Adult Male Victims of Sexual Assault: An Underdiagnosed Condition. *International Journal of STD & AIDS* 2: 22–24.
- Hilton, J. E. 1986. AIDS and the Police. *The Police Surgeon* 30: 120–123.
- John Campbell interviewed by Wendy Rickard 30th September 1996, British Library Sound Archive: C743/09, tape 4 (F5463), side A.
- Mason, J. K. 1992. Recording HIV Status on Police Computers. *British Medical Journal* 304: 995–996.
- Murphy, S. V., J. R. W. Harris. Kitchen, and S. M. Forster. 1989. Rape and Subsequent Seroconversion to HIV. *British Medical Journal* 299: 718.
- Roberts, Raine. 1986. STD—When Should the First Check Be Made? *The Police Surgeon Supplement* 21: 31.
- Roberts, Raine. 1987. St Mary's Centre. *The Police Surgeon Supplement* 22: 46–47.
- Tobias, J. S. and R. L. Souhami. 1993. Fully Informed Consent Can Be Needlessly Cruel. *British Medical Journal* 307: 1199–1201. <https://doi.org/10.1136/bmj.307.6913.1199>.

SECONDARY SOURCES

- Berridge, Virginia. 1996. *AIDS in the UK: The Making of Policy, 1981–1994*. Oxford: Oxford University Press.
- Bourke, Joanna. 2007. *Rape: A History from 1860 to the Present*. London: Virago.
- Bourke, Joanna. 2018. Police Surgeons and Victims of Rape: Cultures of Harm and Care. *Social History of Medicine* 31 (4): 711–731.
- Cook, Matt. 2017a. AIDS, Mass Observation, and the Fate of the Permissive Turn. *Journal of the History of Sexuality* 26: 239–272.
- Cook, Matt. 2017b. “Archives of Feeling”: The AIDS Crisis in Britain 1987. *History Workshop Journal* 83: 51–78.

- Cox, Pamela. 2007. Compulsion, Voluntarism, and Venereal Disease: Governing Sexual Health in England after the Contagious Diseases Acts. *Journal of British Studies* 46: 91–115.
- Day, Emma. 2023. *In Her Hands: Women's Fight against AIDS in the United States*. Berkeley, CA: University of California Press.
- Dirven, Pauline. 2024. Detached from Sympathy, Unconscious of Trauma: The Impact of the Forensic Virtues of Impartiality and Detachment on Rape Examinations in Britain 1924–1978. *Social History of Medicine* 37: 494–515. <https://doi.org/10.1093/shm/hkad097>.
- Dodds, Catherine, Adam Bourne, and Matthew Wait. 2009. Responses to Criminal Prosecutions for HIV Transmission Among Gay Men with HIV in England and Wales. *Reproductive Health Matters* 17: 135–145.
- Elizabeth, Hannah J. 2022. Recovering Mothers' Experiences of HIV/AIDS Health Activism in Edinburgh, 1983–2000. In *Histories of HIV/AIDS in Western Europe: New and Regional Perspectives*, ed. Janet Weston and Hannah J. Elizabeth, 164–191. Manchester: Manchester University Press.
- Laite, Julia. 2012. *Common Prostitutes and Ordinary Citizens: Commercial Sex in London, 1885–1960*. Basingstoke: Palgrave Macmillan.
- Lee, Sandra S-J., Mildred J. Cho, Stephanie A. Kraft, Nina Varsava, Katie Gillespie, Kelly E. Ormond, Benjamin S. Wilfond, and David Magnus. 2019. “I Don't Want to be Henrietta Lacks”: Diverse Patient Perspectives on Donating Biospecimens for Precision Medicine Research. *Genetics in Medicine* 21: 107–113.
- Levin, Benjamin. 2023. After The Criminal Justice System. *Washington Law Review* 98 (3): 899–946.
- Reed, Jeremy. 2013. *The Dilly: A History of the Piccadilly Rent Boy Scene*. London: Peter Owns.
- Rekrut-Lapa, Tatyana, and Alexander Lapa. 2014. Health Needs of Detainees in Police Custody in England and Wales. Literature Review. *Journal of Forensic and Legal Medicine* 27: 69–75.
- Rusterholz, Caroline and Laura Kelly. 2025. Depo-Provera, Class, Race, and the Domiciliary Family Planning Services in Glasgow and Haringey, 1970–1983. *Historical Journal* 68, 216–238.
- Severs, George J. 2024a. *Radical Acts: HIV/AIDS Activism in Late-Twentieth Century England*. London: Bloomsbury Academic.
- Severs, George J. 2024b. Male Rape: Survivors, Support and the Law in Late Twentieth-Century England and Wales. *History Workshop Journal* 97: 196–220.
- Slagstad, Ketil and Anne Kveim Lie. 2022. Selling Sex in the Age of HIV/AIDS: Activism, Politics, and Medicine in Norway, 1983–90. In *Histories of HIV/AIDS in Western Europe: New and Regional Perspectives*, ed. Janet Weston and Hannah J. Elizabeth, 27–58. Manchester: Manchester University Press.

- Thomas, Philip A. 1993. The Nuclear Family, Ideology and AIDS in the Thatcher Years. *Feminist Legal Studies* 1: 23–44.
- Thomlinson, Natalie. 2016. *Race, Ethnicity and the Women's Movement in England, 1968–1993*. Basingstoke: Palgrave Macmillan.
- Ware, Cheryl. 2019. *HIV Survivors in Sydney: Memories of the Epidemic*. Cham: Palgrave Macmillan.
- Weston, Janet. 2019. Sites of Sickness, Sites of Rights? HIV/AIDS and the Limits of Human Rights in British Prisons'. *Cultural and Social History* 16 (2): 225–240.
- Weston, Janet. 2022. Responding to HIV/AIDS in European Prisons, 1980s–2000s. In *Histories of HIV/AIDS in Western Europe: New and Regional Perspectives*, ed. Janet Weston and Hannah J. Elizabeth, 82–108. Manchester: Manchester University Press.

ONLINE SOURCES

- Laurie, Graeme. 2017, February 6. Obituary: Professor Ken Mason, Medical Jurisprudence Pioneer. *The Scotsman*. <https://www.scotsman.com/news/obituary-professor-ken-mason-medical-jurisprudence-pioneer-1456658>. Accessed on 12 September 2023.

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