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HIV treatment as prevention: not an argument for continuing criminalisation of HIV transmission[1]

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Abstract

HIV prevention and treatment are undergoing impressive technological and practice changes. In-home rapid testing, prophylaxis before risky sex, and treatment as prevention give cause for remarkable optimism and suggest the possibility of an AIDS-free generation. These changes in HIV prevention and treatment might affect HIV policy in several different directions. One direction would be further entrenchment of the currently prevailing punitive approach. A different direction would be a shift away from use of the criminal law as a method for discouraging risky behaviour and towards a strategy aimed to encourage the use of the new treatment and prevention possibilities. When such abrupt technological changes are accompanied by sharp changes in regulatory regimes, they are identified in the public policy literature as a 'punctuated equilibrium'. A shift away from criminalisation in HIV policy, if sufficiently widespread and transformative, could reach the level of a punctuated equilibrium. This paper presents a critical assessment of the implications of the changes in available forms of treatment and prevention for the continued appeal of criminalisation as an approach to HIV policy. We conclude that criminalisation is less justifiable in the light of what might be circumstances ripe for a punctuated equilibrium.

HIV prevention and treatment are undergoing rapid technological and practice changes. In the US, the Food and Drug Administration (FDA) approved a test that yields rapid results completely in the privacy of the home. The test went on the market in October 2012 and is widely available in pharmacies throughout the country (OraSure Technologies, 2012). HIV prophylactics that allow patients to take protective measures against infection before entering into risky sex were also given market approval by the FDA in 2012. The most recent international AIDS congress was held in Washington, DC – enabled by the lifting on the ban on travel to the US by persons with HIV. The overall theme of AIDS 2012 was that treatment is prevention and through treatment the spread of HIV can effectively be halted. These changes together with ongoing advances in treatment are envisioned to herald the possibility of an 'AIDS-free generation' (Fauci and Folkers, 2012).

Taken together, these and other developments in HIV care represent a remarkable shift towards optimism. When such abrupt technological changes are accompanied by sharp changes in regulatory

1 This paper was presented at the ESRC seminar Criminalising Contagion: Legal and Ethical Challenges of Disease Transmission and the Criminal Law, at the University of Southampton, 10 January 2013. We are grateful to David Gurnham and to participants in the conference for comments on earlier versions of this paper.

regimes, they are identified in the public policy literature as a 'punctuated equilibrium' (Baumgartner and Jones, 1993). Punctuated equilibrium describes the adoption for a given policy area of new public policies that depart sharply from existing policy practices. Conventionally, public policies once established are noted for their persistence, not for their radical departures from past practices. And yet dramatic policy changes sometimes occur, spurred by the kinds of change now occurring in HIV prevention and treatment.

These changes in HIV prevention and treatment might affect HIV policy in several different directions. One direction would be further entrenchment of the currently prevailing punitive approach. A different direction would be a shift away from use of the criminal law as a method for discouraging risky behaviour and towards a strategy aimed to encourage the use of the new treatment and prevention possibilities. Such a shift, if sufficiently widespread and transformative, could reach the level of a punctuated equilibrium.

Much has been written about the comparative benefits of criminalisation and public health strategies for reducing the spread of HIV (e.g. Meier, Brugh and Halima, 2012; Weait, 2005; Wolf and Vezina, 2004; Bayer, 1991). Rather than taking on this fundamental debate, our goal in this paper is to assess the implications of the changes in available forms of treatment and prevention for the continued appeal of criminalisation as an approach to HIV policy. We conclude that criminalisation is less justifiable in the light of what might be circumstances ripe for a punctuated equilibrium.

The new world of HIV

In this section, we outline briefly several recent developments that represent a radical shift in the understanding of HIV. In place of inexorable spread, containment now seems a realistic goal. Testing and prophylaxis are more widely available and effective treatment can reduce transmission to quite low levels.

Testing: rapidly and at home

Testing for HIV can now occur in the convenience and privacy of the home. Home tests for HIV are now widely available for sale in the US. These tests, which give results in less than an hour, were approved by the US FDA in July 2012 and have been available for sale since October 2012 (McNeil, 2012a). In the UK, the National AIDS Trust has called for these tests to be approved (Gray, 2012).

For over ten years, rapid tests for HIV using blood samples or oral fluids have been marketed for use in clinical settings in the US (Centers for Disease Control and Pevention, 2002). Rapid tests are especially useful in patients who are less likely to return for results. The utility of these rapid tests was quickly established in areas of the world where the need for testing is high and mobile clinics are used to deliver care (Liang *et al.*, 2005; Pascoe *et al.*, 2009). To give one US example, Washington DC, with the highest rate of HIV infection in the US, has made concerted recent efforts to increase testing (District of Columbia Department of Health, 2012), with the goals of making testing routine and getting everyone between the ages of fourteen and eighty-four tested. In 2008, Washington distributed 80,000 rapid tests to health-care providers (Ganguli, 2008). Washington also makes free testing available both at health-care providers and across the city in locations such as the Department of Motor Vehicles (Stewart, 2010), where people are likely to be waiting in line and thus to have time available for testing. The result has been a decline in the number of new infections as well as apparent elimination of maternal-foetal transmission in the District; no infant births with HIV have been reported in the District since 2009 (Brown, Sun and Botelho, 2012).

HIV test kits that allowed individuals to collect samples at home and send them away for testing were introduced into the US market in the late 1990s. These kits had the disadvantage that the sample must be sent to a laboratory and that results were not immediately available, although they had the advantage of allowing the sample to be collected in a private setting. Individuals could also use these kits to be tested anonymously or under pseudonyms. The introduction of rapid-result, in-home testing brings a new dimension to testing privacy, however, as the individual is able to get results entirely alone, literally within minutes.

The OraQuick rapid HIV test is an assay that identifies the presence of antibodies to HIV1 or HIV2. It requires a gum swab and can be read within approximately twenty minutes. When used at home, it has a high degree of specificity; only one in 5,000 positive tests is a false positive. Problematically, it has a much lower degree of sensitivity, largely because persons can be infected with the HIV virus before antibodies can be detected.

These home tests offer far greater privacy and convenience than the rapid testing heretofore available. They can be performed anytime, anywhere, alone or even in the presence of a prospective partner. But they do have several disadvantages in comparison to the rapid tests previously available. As they will be performed without any involvement of trained personnel, they may be poorly performed or misinterpreted. Test validity may be lower when used under home conditions. Testing without the involvement of trained personnel may risk creating a false sense of security given the tests' high false negative rate. People at risk may fail to follow up with later testing, believing erroneously that they are safe from infection. The lack of adequate support for those testing positive is a concern that has been advanced in the UK against approval of the tests (Alimi, 2012). And the home tests cost money: the manufacturer's advertised price as of this writing of $39.99 with discounts for purchases of multiple kits (Orasure Technologies, 2012) is higher than the $17.50 currently charged by health-care providers because the company provides online support services. These concerns are all of moral importance, but our primary focus here is the possibility that the availability of home testing will change judgments about whether there is an obligation to be tested and the responsibilities of persons who know they are at risk but remain unaware of their HIV status.

Prophylaxis and risky sex

In July 2012, the US FDA approved emtricitabine/tenofovir ('Truvada') for pre-exposure HIV prophylaxis in high-risk individuals (Jay and Gostin, 2012). The drug must be taken daily and is not fully effective in preventing HIV transmission. However, the reported 75 per cent reduction in transmission rates among patients demonstrating good adherence to the therapy, and even the 44 per cent reduction among patients with poor adherence, represent significant improvements.

In an analysis of the ethical issues raised by this prophylaxis, Jay and Gostin (2012) consider the possibility that its availability might generate counter-productive behaviour, increasing the likelihood that people will behave unsafely. They also raise the concern that the prophylaxis may not be cost-effective, as it costs $10,000/year and would need to achieve corresponding savings by reducing the frequency of transmission. Equity is another concern for these authors: that the prophylaxis will be available disproportionately to those who are relatively privileged. Finally, there is the public health concern that the greater utilisation of Truvada will increase the probability of drug resistance, a concern potentially heightened if patients are non-compliant with dosage requirements. In their ethical analysis, Jay and Gostin (2012) do not consider whether the availability of a prophylaxis – even one of limited efficacy – has any implications for judgments about responsibility for transmission. This last is a critical issue for criminalisation policy, however.

Treatment as prevention (TasP)

Treatment for HIV reduces viral load, in many cases to almost undetectable levels. With reduced viral loads, individuals who are HIV+ are less efficient transmitters of the virus (Sayles *et al.*, 2012). As a

result, maternal-foetal transmission of the virus is now below 2 per cent in appropriately treated women (Siegfried *et al*., 2011). Transmission through sex is also greatly reduced, even among those who engage in risky behaviours such as anal penetration (Kelley *et al*., 2011). Exposure through needle sticks remains a problem, but here the availability of prophylaxis reduces risk considerably (Nwankwo and Aniebue, 2011).

Growing enthusiasm about TasP dominated the 2012 world AIDS Congress. The AIDS 2012 Promotional Video stated that the Congress came at 'a defining moment in the history of AIDS'. In the words of the video, AIDS 2012 reflected a 'renewed sense of hope and optimism that it is possible to turn the tide'. A goal of the Congress was to create a 'blueprint for the beginning of the end' of AIDS (AIDS 2012, 2012). In her speech at the Congress, then-Secretary of State Clinton promised a 'blueprint' for 'an AIDS free generation' (Johnson, 2012); the blueprint was released in November 2012 (US Department of State, 2012). The end of AIDS has also been widely proclaimed in the press; for example, a 2011 cover story of *The Economist* was 'The end of AIDS?' – opining that it was possible if the world only had the will (The Economist, 2011[2]).

Changing ethical and public policy paradigms?

Palaeontologists have advanced the argument that although the pace of biological mutations is usually considered to be very slow moving, nonetheless there are eras characterised by the introduction of disruptive conditions that greatly accelerate the mutation rate (Gould, 2007). The result is an abrupt departure from the existing palaeontological record. Such eras of accelerated mutation are described as punctuated equilibria. This concept of long periods of stability or slow change followed by an abrupt era of rapid change has gained significant support and has been imported into a wide range of other disciplines, including public policy (Baumgartner and Jones, 1993; True, Jones and Baumgartner, 2007; Loch and Huberman, 1999; Grudin, 2012). Scholars of punctuated equilibrium recognise that new approaches to existing technologies or practices may have been available for long periods of time, but that what is needed for their adoption is a persuasive mix of conditions. These conditions include the perceived improved quality of the 'new' technology or practice and its acceptance by advocacy groups. Such favourable conditions can bring about the technology's rapid adoption, with resulting widespread changes to existing behaviours, practices and policies. Our argument in this paper is that the introduction of the new testing and prevention technologies for HIV that we have described has implications not only for existing testing regimes but also for the locus of responsibility for transmission and ultimately for HIV/AIDS regulatory regimes in a number of countries.

In general, existing public policy regimes survive, and when they change they change incrementally, often over extended periods of time. But it has long been observed that on occasion there are dramatic shifts in public policy. Evolutionary public policy-making is, for a time, replaced by a dramatic new policy direction that may in turn endure for a period of time. The likelihood of such novel policy adoption is increased if the existing policy set has provoked growing frustration with existing policy practices.

We speculate that at present conditions may be ripe for a punctuated equilibrium in HIV policy. Frustration has been long-standing that individuals – too many individuals who are judged by public health officials as at risk for HIV transmission – do not avail themselves of HIV testing for various reasons ranging from discounting the risk to the fear of public exposure if they test positive for HIV. These levels of frustration on the part of public health officials have contributed to recurring educational campaigns to inform the public of the risks of HIV and the need for testing. They may

2 Available at: <http://www.economist.com/node/18774722>.

also have contributed to judgments that those who know that they are at risk but who do not test are behaving recklessly – so recklessly as to warrant criminalisation of behaviours that risk transmission. The introduction of do-it-yourself (DIY) HIV testing challenges the monopoly of clinic testing and reduces the risks of violation of personal privacy. At the same time, DIY testing provides individuals with needed information to make decisions that affect themselves and others independently of the medical and public health communities. Partners may even watch one other being tested before deciding to engage in risky sex (McNeil, 2012b). The greater availability and efficacy of prophylaxis and treatment both for individuals' health and as a means of preventing spread significantly increases both the public health importance and the individual health advantages of being tested.

In the remainder of this paper, we explore whether the impressive changes in HIV prevention and treatment have justificatory implications for criminalisation as an approach to deterring HIV transmission. Our concern is that the changes may be taken to further entrench policy approaches that are punitive. At present, the trend in US criminal law is towards increasing efforts to criminalise HIV transmission by persons at known risk. A superficial read of the changes in HIV prevention and treatment might suggest that this increasing criminalisation trend is appropriate: persons who fail to become aware of their HIV status or to employ TasP are putting others at serious and unjustifiable risk, risk that cannot even be justified in terms of individual self-interest. After all, in many areas of the US, and in now most areas of high prevalence, it is not difficult to learn HIV status. With OraQuick, learning HIV status is even more convenient, albeit not cheaper. Publicity about the importance and availability of testing is widespread. The argument favouring criminalisation would then be that people who do not get tested are failing to take a very simple step that could reduce the probability that they will be vectors of disease – and that they should be punished for such irresponsible behaviour. Coupled with this attribution of blame is the empirical judgment that threats of punishment are effective deterrents.

Still further support for increasing criminalisation might seem to be provided by treatment as prevention, coupled with the increasingly ready availability of treatment. In the US, treatment is widely available – although more complicated to obtain for those who lack any access to health insurance. Those who are worst off with respect to insurance are undocumented immigrants working in jobs that do not provide insurance. Persons in this group are not eligible for Medicaid and will not be eligible for Medicaid or any premium subsidies under the Affordable Care Act. If they mistakenly apply for Supplemental Security Income (SSI) or other government benefits, there is a risk of reporting to the Department of Homeland Security; however, caseworkers are not permitted to ask the immigration status of parents applying for their citizen-children. Nonetheless, even undocumented persons do have some possibilities for accessing HIV treatment services – from the charitable recognition that they are victims of disease, together with the prudential recognition that they might be vectors of disease to others (AIDS Legal Council of Chicago, 2010). Ryan White funds may be used for treatment of undocumented immigrants, and advocates envision this programme as continuing to fill in gaps in access to HIV care even after health reform is more fully implemented (Valdesseri, 2012; Nye County, 2012). Emergency departments also must give a screening exam and stabilising care to anyone, without asking immigration status; for some undocumented persons, emergency rooms are the only source of care (Brown, 2009).

The US is not alone in pursuing treatment as prevention. In the UK, the National AIDS Trust (NAT) held a consensus conference in 2011 designed to 'transform' the UK's approach to HIV towards treatment as prevention (NAT, 2011). The NAT has been very active in publicising the risks created if people who may not be eligible for National Health Service (NHS) care do not receive HIV care (NAT, 2007). Groups such as the Terrence Higgins Trust (2012) publicise the availability of prophylaxis and treatment without charge through the NHS, and the NHS itself encourages evidence-based treatment and prophylaxis (NHS, 2012). In many areas of the world, as

HIV treatment has become more widely available the focus has shifted from short course anti-retroviral therapy designed to reduce risks of maternal-foetal transmission to more general prevention strategies (UNAIDS, 2012). In a recent paper, Meier *et al.* (2012) describe and defend the human right to prevention not just in the sense of individual treatment but in the sense of treatment as collective prevention for all.

But does the paradigm shift in testing and prevention support the apparent trend towards criminalisation? As an initial suggestion that it might not, we note that the paradigm has implications not for those who might be infection vectors but also those who might be infection victims (Battin, Francis, Jacobson and Smith, 2009). After all, those who recognise that they might be engaging in risky sex have new options available to them, too. They can insist that their prospective partner take a rapid test and that they see the results – indeed, they could even purchase a rapid test and bring it with them to an encounter they anticipate might result in risky behaviour (McNeil, 2012b). Or, if they anticipate frequent risky sex, they could themselves take prophylaxis – not perfectly effective, to be sure, but better than unprotected sex. Rapid tests could also be available in risky employment settings, such as the sex film industry (McNeil, 2012c).

Admittedly, these strategies impose burdens on potential victims: the bravery to request a test; a request that might be met with abuse or violence; or the expense and side effects of prophylaxis. But they are available and might be especially encouraged for those who engage in patterns of risky behaviour that make them not only victims but also likely to become new vectors as well. Despite these protective possibilities, this strategy is not available to those who do not know or recognise that they might be at risk, a concern to which we return later in this paper.

In what follows, we argue that it is a mistake to link the new HIV paradigms of testing and prevention as treatment with support for the criminalisation of transmission, for three reasons. First, what evidence there is suggests that criminalisation of individuals who are HIV positive and engage in behaviours with a high risk of transmission does not increase the likelihood of testing and treatment. Second, the assumption that if testing and treatment are more readily available, individuals act with culpable recklessness if they do not use these resources rests on a problematic view of individual responsibility in infectious disease transmission. Finally, the individual who might transmit disease is also a victim; that vectors are also disease victims argues for mutual support of both those who are at risk and those who pose risks, rather than individualised blame. These reasons support a policy shift away from rather than towards criminalisation.

Trends to criminalising HIV transmission

Across the globe there are recent trends towards increasing criminalisation of HIV transmission. This trend has been aimed at individuals who engage in behaviour believed to be risky. It includes statutes aimed at individuals who have transmitted disease to multiple unsuspecting partners and prosecutions under these statutes. It also includes the use of general criminal statutes, such as those prohibiting reckless endangerment, to prosecute those who have transmitted HIV. Although these strategies are clearly different – a statute may be taken to announce a firmer state policy against criminalisation – both convey a condemnatory attitude on the part of the state. This is especially so if the prosecutions draw significant publicity.

In the US, an initial spur towards criminal statutes directed specifically at HIV was the *Report of the Presidential Commission on the Human Immunodeficiency Virus Epidemic* (Presidential Commission, 1988, pp. 130–31). The Commission recommended criminalisation of 'knowingly' acting in a manner that creates a 'significant risk of transmission to others'. At present, about half of the US states have such 'knowing exposure' statutes. A few states have adopted statutes that enhance penalties for those engaged in behaviour that facilitates transmission, such as procuring a prostitute who is known to

be HIV + , but in the main these statutes focus on individual behaviour that is known or should be known to put others at risk (Francis and Francis, 2012).

Some of the US criminalisation statutes incorporate defences that may be affected by the changes in HIV prevention and treatment. For example, some states allow as defences that the defendant had some reason to believe that the risk had been lessened. Some states define the offence as 'unprotected' sex, or allow a defence for the use of protection such as a condom.[3] Idaho makes it a defence that a physician had told the alleged offender that s/he was not infectious.[4] As publicity becomes more widespread that 'treatment is prevention', a possible interpretation of these defences is that they extend to individuals who believed that they were not at risk of transmission because their viral load had been significantly reduced by their compliance with recommended treatment. On the other hand, those who fail to be tested, or those who do not access or comply with available treatment, might be considered to be more reckless than they previously would have been.

In the UK, the leading case of *R v. Dica*[5] represented the first statement of the standards for application of the Offences Against the Person Act for reckless transmission of HIV (Weait, 2005). The case concluded that the criminal law could be used to prosecute reckless transmission of HIV but that the trial judge should have allowed a defence of consent to the risk of harm. The UK came late to the use of the criminal law of reckless endangerment to prosecute HIV transmission. Chalmers (2008, p. 123) argues that the explanation is a history of opposition to and eventual repeal of the nineteenth-century Contagious Diseases Act that allowed women suspected of prostitution to be compelled to undergo medical examinations. More successful prosecutions followed *Dica* (Weait and Azad, 2005) to the extent that Chalmers (2008, p. 124) argues that the paradigm has shifted from regarding criminalisation as needing justification to regarding the failure to criminalise as needing justification. Nonetheless, the scope of the understanding of reckless endangerment as applied to disease transmission, and defences to the offence, remains unclear (Chalmers, 2008) and there is evidence that people with HIV who are at high risk of transmission have limited knowledge of the criminal law in this area (Dodds, Bourne and Weait, 2009).

Although prosecutions remain rare, recent data suggest that they are increasing, particularly in North America and in Scandinavia. (Global Network of People Living with HIV/AIDS, 2010, p. 6) Canada's first conviction for murder for HIV transmission was the high-profile case of Johnson Aziga. Aziga had infected a number of women, two of whom died from AIDS, and was sentenced to life in prison without the possibility of parole for twenty-five years. In addition, the Crown prosecutor requested that Aziga be declared a 'dangerous offender' who could not be released until the Canadian parole board declares he is no longer a threat, a request granted by the Canadian court. The prosecutor's request was based on the belief that Aziga could not be trusted to warn potential partners, despite his promises to do so, because of his history of deception (Toronto Globe and Mail, 2011/2012). In theory, similar reasoning could be applied to cases of individuals who promise to adhere to treatment guidelines but seem likely to be non-compliant.

Moreover, the US approach to criminalisation by HIV-specific statute has been influential worldwide, particularly in sub-Saharan Africa. The US Agency for International Development's AWARE project (US AID, 2008) has encouraged statutes based on the US model. These statutes have proliferated, although one was recently repealed in Sierra Leone (Global Network of People Living with HIV/AIDS, 2010, p. 15). UNAIDS has been highly critical of these statutes, urging countries to limit criminalisation to cases of actual, intentional transmission and to prosecute

3 For example, Minnesota has as an affirmative defence that the person 'took practical means to prevent transmission as advised by a physician or other health professional', Minn. Stat. §609.2241 (2010).

4 Idaho Code Ann. §39-608(3)(b) (2011).

5 *R v. Dica* [2004] 3 All ER 503.

them, if at all, under general criminal laws rather than HIV-specific statutes. (UNAIDS, 2008, pp. 15–16) Among the UNAIDS criticisms of criminalisation are that many people do not understand the significance of their HIV status and many others are threatened with violence if they disclose this status. In these circumstances, it is difficult to argue that either retributive or deterrence goals of punishment would be well served. It is impossible to predict at this point whether significant changes in the availability of HIV testing and treatment, together with the growing support for TasP, might lead to changes in these judgments in areas of the world where HIV treatment has heretofore been scarce or non-existent.

Criminalisation and incentives to test

To the extent that deterrence rather than blame is a goal of the criminal law, criminalisation of HIV transmission requires evidence-based justification. Yet the long-standing public health judgment is that criminalisation is more likely counter-productive in reducing the spread of HIV (Burris and Weait, 2011). This judgment is based on the estimate that threats of punishment for knowing transmission will discourage those who believe that they may be at risk from taking action to know their risk, if it has any effect at all. The question addressed in this paper is whether the availability of the new technologies we have described, coupled with treatment as prevention, calls into question the empirical judgment that threats of punishment create incentives that are problematic for diminishing spread.

Of course, we do not yet know what the consequences will be of these technological changes. That is, we do not yet know whether they will yield further support for the public health as opposed to the criminalisation approach. Nonetheless, although judgments here must be speculative, there is some reason for thinking that they provide continuing support for the public health approach. To the extent that barriers to testing diminish, and testing is easier and less threatening, testing frequency would be expected to increase. Normalisation of testing – that testing is just something available to anyone – has the potential to make getting tested more familiar and less ominous. So does the ready availability of treatment – as it means that a positive HIV test is an option that will have clearly better consequences than remaining ignorant of HIV status. The shadow of punishment, by contrast, threatens to darken these positive incentives. Punishing transmission carries the judgment that HIV is a terrible thing and that those who transmit it are to be condemned. This message will be reinforced if the new technologies of HIV testing and prevention lead to augmented calls for criminalisation. Thus there may be reason to think that criminalisation as deterrence is at cross-purposes with ongoing efforts to create positive attitudes towards testing and treatment. At this point in time with HIV, the calls for testing and treatment are not hollow or remote but have real potential to enter the lives of everyone at risk of HIV. So we hypothesise that criminalisation is exactly the wrong strategy at this more propitious juncture.

In an earlier paper, we argued that if any criminalisation of HIV transmission is justifiable, it should be directed at transmission facilitation rather than at the individuals who are at risk to transmit (Francis and Francis, 2012). Our central point was that the law has been misguided in focusing on punishment of the diseased individual as wrongful transmitter. In addition to failing to meet deterrence goals of the criminal law, such individual criminalisation ignores the moral importance of the fact that likely vectors of HIV transmission are also victims of disease (Battin *et al.*, 2009). Instead, we argued that deterrence and retributivist goals would be better served – if they are served by any criminalisation in this area – by a focus on 'transmission-facilitation' activities that enhance the scale of disease transmission. Our examples were human trafficking (especially sex trafficking), furthering prostitution without regard to the HIV status of the prostitute or client, and intentional or reckless activities to discourage disease treatment or prevention. Perhaps because prosecutions of individual transmitters have been so infrequent, we

could find no apparent evidence of the likelihood that it has a deterrent effect. The argument presented in this paper reinforces these concerns about the deterrence value of criminalisation.

Although any judgments here must be speculative, we hypothesise that testing and treatment would not be significantly encouraged by increased emphasis on criminalisation. Indeed, it seems far more likely that the incentives provided by ready access to treatment – the ability to improve individual health at the same time as reducing any risks to partners – would overwhelm any further impetus provided by criminalisation. If the changed world of HIV testing and treatment is to strengthen the argument for criminalisation, it must be because persons who do not get tested or treated are thought to be more blameworthy under present circumstances than they would have been previously.

Treatment as prevention, blame and criminalisation

To this point, we have argued that if the new paradigm of HIV provides increased support for the criminalisation of transmission, it must be because it is now judged more blameworthy to engage in sex that risks transmission. But why should this be so? Two related reasons might be advanced for this conclusion. On the one hand, it might be thought that as barriers to testing and treatment come down, failure to take advantage of what is available becomes less excusable. On the other hand, given that early testing and treatment may now be judged clearly beneficial to the individual, ignoring them might seem far riskier and unreasonable. In what follows, we consider whether either provides a reason for blame that would support criminalisation.

With at-home testing and more widely available treatment, some barriers to testing and treatment have contracted. As described above, tests are easy to find, comparatively cheap, and available in settings that are private and that do not carry any stigma of HIV/AIDS. In these conditions, it is fair to say that certain 'external' barriers to testing have fallen. But this is not the same as the removal of all barriers to testing. Knowledge of HIV status may remain personally devastating – and socially risky. It has long been understood and remains true today that knowledge of HIV status may place women at risk of violence from their sexual partners (Carpenter, 2012; Rothenberg and Paskey, 1995). Confronting the fear and stigma attached to HIV is critical to reducing these more amorphous but no less influential barriers. Yet criminalisation sends a very different rhetorical message – a message that may ironically stand in the way of lowering barriers, if it reflects and fosters the stigma attached to HIV.

On the side of treatment, benefits are clear and availability has become widespread. So treatment is prudential, at least leaving aside the risks of having HIV status known such as those discussed in the preceding paragraph. But it is less clear that the conclusion follows that failure to treat should lead to judgments of increased blame for transmissions, much less judgments that warrant criminalisation. Ex hypothesi, in today's world the reasons patients might have for avoiding treatment would not be prudential. But what might these reasons be: fear or mistrust of medicine? Fear of side effects? Inability or failure to understand and implement complex treatment regimens? These would surely be explanations for why some resist treatment that might clearly be beneficial to them. But these explanations stem from the victim-hood of the potential transmitter, their condition of not being in control of what is happening to them. Criminalisation may worsen this powerlessness rather than supporting the HIV positive person as someone in need but stigmatised, threatened and afraid.

Indeed, the new technological world of HIV brings important changes to judgments about the blameworthiness of HIV transmission on both the vector and the victim side. On the vector side, it is increasingly less prudential to be unaware of HIV status and to remain untreated and thus more infectious. But it is unclear why the observation that people are damaging themselves by not getting tested or treated should contribute to the judgment that they are more blameworthy

for transmitting disease to others. Instead, there is a sense in which they are doubly victims, victims not only of disease but also of their failures to protect themselves. People in these circumstances are imposing on themselves a very sad misjudgment, albeit a misjudgment with potentially damaging consequences for others as well. Punishment doubles their victimisation, and it does so in circumstances in which prophylactic and treatment mechanisms have become more widely available to those they might infect. This is not to diminish the responsibility of the transmitter for damage inflicted on others. It is to question whether this responsibility should be translated into a special case for the criminalisation of HIV transmission against a background of available statutes that would criminalise intentionally using an infectious agent to inflict physical harm on another. Instead, we would conclude that the more defensible approach is to regard the widespread availability of testing and TasP as an invitation to encourage such positive behaviours in the overall effort to reduce the spread of HIV.

On the victim side, HIV is a less devastating condition than it was even a few years ago. This is not to say that being HIV positive is benign – HIV remains a serious disease – but it is to question whether the new world of HIV should be taken to augment the blameworthiness of those who transmit under circumstances in which they have been reckless about knowing their HIV status or treating their disease. We will return to the different question of those who intentionally transmit HIV to another in order to do them harm at the end of our discussion.

In a recent paper, Burris and Weait (2011, p. 3) suggest that 'the moral case for criminalization is polluted at its core by fear of HIV or disdain for those who are infected with it'. In response, they develop an account of what is required to create a moral community that is both safe and just. Their account begins by granting the moral judgment that those who know they are infected – whether with HIV or with other contagious diseases – have responsibilities to reduce their transmission risks. Burris and Weait then ask what justice would require of everyone in a community of sexual interrelationships. Justice would require each to bear their fair share in co-operating to reduce risks, they argue. Understanding these responsibilities is complex, however. Burris and Weait employ the idea of a veil of ignorance, drawn from John Rawls (1971), to ask what responsibilities for sexual behaviour each would want to have undertaken by all if they did not know their HIV status. Reasoning hypothetically from behind such a veil of HIV-status-ignorance, all would understand that criminalisation does not reduce transmission on the part of those who do not know their status. Even with the widespread availability of testing, there will be cases in which people continue not to know; some of those will be cases of deliberate refusal to test and others will be false negative cases in which an exposure was too recent to yield a positive result. In other situations, people will know their status, but Burris and Weait argue that responsibility should not devolve solely to them to avoid transmission in the manner that criminalisation would place the responsibility. Their justification for shared responsibility even in such cases is that what all will want is a sexual community in which everyone is encouraged to undertake universal precautions as a means to reduce transmission risk. Behind the veil of ignorance, they contend, all would prefer universal responsibility rather than a regime of blame attached only to those who are HIV positive and know their status.

Burris and Weait state that this may be a tenuous argument when treatment is widely available, not very burdensome, and highly likely to reduce transmission risks. They write: '[t]he growing evidence that treatment with ARV medicines significantly reduces the likelihood of transmission is likely to influence the ethical discussion in the future. We will not here address whether there is a moral obligation to get treatment as soon as possible in order to protect others, in spite of personal preferences and perhaps even at the cost of personal health. The efficacy of treatment does raise more questions about disclosure as a moral obligation' (Burris and Weait, 2011, p. 11). We have already addressed the general argument that those who do not know their status or who do not treat are more blameworthy under present circumstances and hence that punishment of

them is more justifiable. In the passage just quoted, Burris and Weait make the additional point that what is blameworthy is the failure of disclosure, subjecting others to risky sex without their consent.

Obligations to disclose HIV status have been the subject of much discussion. A primary argument for the obligation to disclose is that it protects those who might not recognise that the sex in which they are engaging carries an HIV risk. The image that is invoked is the unsuspecting wife of a bisexual husband who is put in harm's way by her spouse's extra-marital activities. (These examples are typically gendered and emphasise the vulnerability of the wronged wife; Winston and Landesman, 1989.) This image is distinguished from circumstances in which both partners are engaging in behaviour that they know to be risky, such as frequent one-night-stands. Some HIV-specific statutes in the US have been constructed to make disclosure of HIV status a defence to the offence of reckless transmission, on the theory that the partner's decision to engage in sex represents informed consent (Francis and Francis, 2012). The contrast between the innocent and unwitting partner, and the partner who knowingly undertakes risky sex, seems only to be heightened by the availability of the OraQuick at-home test. After all, just as someone who anticipates risky sex might bring a condom along to the evening, someone who anticipates risky sex might now bring an OraQuick test along (McNeil, 2012b).

This analysis leaves open the question of criminalisation in the case of transmission to an unsuspecting victim. In 1998, the Supreme Court of Canada held that failure to disclose HIV status before sexual activity constituted fraud if there was a significant risk of serious bodily harm (Mackinnon and Crompton, 2012).[6] In such cases, is the non-disclosure, hence lack of consent to the risk, more blameworthy because it is now coupled with the failure of prudence evidenced by the lack of testing or treatment? To the extent that it can no longer be excused by the judgment that testing and revealing would put the HIV positive person at risk without concomitant advantages of available treatment, it arguably is more blameworthy. Nonetheless, there are several reasons why a criminalisation strategy would not be warranted. One is the public health concern raised earlier in this paper that criminalisation perpetuates stigma and hence may undercut incentives for testing and treatment. Another, voiced by Mackinnon and Crompton (2012), is that criminalisation expresses condemnation of all those who are HIV positive, both privileged and marginalised.

Supporting this point is a distributive justice concern about any augmentation of emphasis on criminalisation. In the US at least, there are significant divides on lines of race and class, with fear, stigma and even physical threats of partner violence reportedly far more significant among some Americans groups than other identified American populations (Carpenter, 2012; Centers for Disease Control and Prevention, 2012; Public Agenda, 2009). Some hypothesize that continuing stigma and fear are fed by policies that single out people who are HIV+ for special treatment, from the refusal to permit people who are HIV+ to practise certain occupations to the decision to criminalise.[7] If criminalisation policies reinforce stigma in subgroups where it is most apparent – and where HIV infection rates are highest as well – it will contribute to the inequality of HIV in a manner that is problematic.

Our discussion to this point has set aside cases in which the transmitter of HIV intentionally or recklessly uses his/her disease to cause harm to another. In such cases, HIV is the weapon – just as a knife or another infectious agent might be. Such cases, as we have previously argued (Francis and Francis, 2012), can continue to be prosecuted under reckless endangerment statutes. Our only point here is that the new technologies and available treatment for HIV should further efforts to encourage their use, and not be the impetus for the increasing criminalisation of transmission.

6 *R v. Cuerrier*, [1998] 2 SCR 371, 162 DLR (4th) 513.

7 Public Agenda, 'Impressions of HIV/AIDS in America: A Report of Conversations with People Throughout the Country. Available at: <http://www.publicagenda.org/files/pdf/HIV-AIDS-May-2009.pdf>.

Conclusion

Today's world is arguably a new world of HIV: a world of private testing, readily available prophylaxis, and beneficial treatment as prevention. Special criminalisation of HIV belongs to a world in which HIV brought special fears: it was novel, deadly, apparently untreatable, and transmitted in ways that were not well understood at least at the outset. We have suggested that continuing or augmenting such criminalisation may foster attitudes of fear and stigma that attach to this earlier era.

But there are greater risks. The new world of HIV carries the opportunity for a punctuated equilibrium in HIV policy. We might envision HIV policy shifts towards infrastructure to encourage testing and treatment and away from policies that treat people who are HIV positive differently because they are viewed as especially dangerous vectors of disease. By moving away from criminalisation, we may help this new world of HIV come to pass.

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