hysteria.⁸ No study has examined the mental health problems of children who are regularly bullied, although clinical experience suggests that bullying may contribute to the referrals of some children to child psychiatrists. Similarly, coping mechanisms and factors that promote resilience have yet to be described.

Bullies also deserve attention. They are learning to achieve dominance over others through the misuse of power. Bullying may be one component of a more general pattern of antisocial and rule breaking behaviour that shows considerable stability over time. As adults, bullies are more likely to have criminal convictions and be involved in serious, recidivist crime.²

Schools can adopt several approaches to deal with bullies.⁹ These include developing a policy for the school, tackling bullying through classroom and curriculum material, training playground supervisors, and working directly with bullies and victims. A clear account of the nature and implementation of these approaches is given in a recently published handbook, *Tackling Bullying in your School*.⁹

As bullying is so common all doctors dealing with children are likely to see some who are regularly victimised at school by their peers. This bullying may be an important factor in the development and maintenance of symptoms and should be considered in their management. If bullying is regarded as a form of abuse then professionals have a duty to detect it, take it seriously, and ensure that it is dealt with to reduce the child's suffering and minimise the potential long term effects. Olweus argues that it is a child's fundamental democratic right to attend school without being bullied.² As with other forms of abuse, children are unlikely to disclose it spontaneously as they feel ashamed and embarrassed and fear recriminations. Eventually they may believe that they deserve the bullying that they are subjected to.

Doctors should therefore ask directly about bullying. If children say that they are being bullied, they should be believed and reassured that they have done the right thing in telling. Parents should be informed and advised to take the matter up with the school (teachers or governors) directly.

Children can be advised of simple measures to protect themselves—for example, ignoring name calling, making friends with a child who is not involved, and telling someone such as a teacher or playground supervisor.

Doctors and allied professionals need to know about bullying and what can be done. Research in Scandinavia² and Britain¹⁰ has shown that intervention programmes in schools can successfully reduce bullying by up to half; they can also reduce truancy and antisocial behaviours in general and can increase pupils' satisfaction with school life. Two new books about bullying at school have been published recently.^{9, 10} They summarise the Sheffield bullying project and provide the basis for the Department of Education's package for schools, *Bullying: Don't suffer in Silence—An Anti-Bullying Pack for Schools*.¹¹ Organisations such as Kidscape run training courses and have information packs and advice leaflets for parents and teachers.¹² To ignore bullying is to condemn children to further misery and may prejudice their academic achievements and adjustment in adult life.

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Imprisonment, injecting drug use, and bloodborne viruses

A threat of transmission but an opportunity for prevention

See pp 285, 289, 293

The possibility that imprisonment is a risk factor for HIV transmission has been much debated, even though the association between imprisonment, use of injecting drugs, and the transmission of another bloodborne virus, hepatitis B, was recognised more than 20 years ago.¹ In the past five years, clusters of cases of acute hepatitis B infection in imprisoned men in England and Wales have been regularly reported to Public Health Laboratory Service Communicable Disease Surveillance Centre. Nearly a fifth of 258 infections in known male adult injecting drug users reported in this time were diagnosed in prison.

Many injecting drug users have been imprisoned, and for some this will have been a repeated experience.² In England and Wales in any year, an estimated 15 000 prisoners³—or between one in 13 and one in seven prisoners⁴—will have a history of injecting drug use. In Australia, more than one in three prison entrants were reported as having such a history.⁵ Between a quarter and two thirds of prisoners who have ever injected drugs have done so within prison, where use of injecting equipment previously used by others is the norm. The reports from Scotland and Australia in this week's

journal emphasise that there is no room for complacency about the risks involved and illustrate the vulnerability of prisoners who inject drugs to infection with bloodborne viruses. At least eight HIV infections due to sharing of equipment by injecting drug users occurred within a Scottish prison during the first half of 1993,^{6, 7} and in Australia an incidence of 41 hepatitis C infections per 100 person years in young male prison re-entrants in 1991-2 is described.⁸

There is a paradox, however, at the heart of these observations. If most injecting drug users spend time in prison, and equipment sharing within prison is a major risk factor for HIV transmission, why did 10 years elapse between the recognition of AIDS in injecting drug users and the first report of an outbreak of HIV infection in prison and why has evidence of HIV transmission within prison been so slow to accumulate?⁹⁻¹¹ Why, if HIV transmission through injecting drug use in prison occurs frequently, has the seroprevalence in injecting drug users in the community not been rising?^{2, 8}

McKee and Power have suggested that imprisonment may reduce the overall risk of HIV transmission.¹² Although those who inject in prison are more likely to share equipment,^{3, 6}

they inject less frequently,^{2,6} prison geography may limit the size of sharing networks, and imprisonment interrupts drug injecting for most.³ Did the chance introduction of a highly infective drug injector with an acute HIV infection coupled with a particular pattern of equipment reuse catalyse the dramatic outbreak of HIV infection in Scotland?

Differences in the course of infectivity of HIV, hepatitis B virus, and hepatitis C virus could substantially affect the relative risks of transmission of these viruses in prison. Only 5% or 10% or so of people who acquire hepatitis B infection in adult life will remain positive for hepatitis B surface antigen for longer than six months, but a small proportion of these will remain positive for hepatitis B e antigen and therefore be continuously and highly infective. The current evidence suggests that the risk of infection with hepatitis C virus after a single percutaneous exposure to infected blood is considerably lower than the risk of infection with hepatitis B, though a greater proportion of those infected will remain infective.¹³ We know little, as yet, about how the viral load alters as hepatitis C infection progresses from acute to chronic.

HIV infection persists in virtually all cases, but the periods of maximal infectivity—during the acute and the late phases—are probably short relative to the duration of infection. These differences, together with the restriction of contact networks which imprisonment may impose, could produce a divergence in transmission risks, increasing those for hepatitis B and hepatitis C viruses while reducing HIV risk. The effect on HIV transmission could, however, be quite different given an influx of entrants with acute HIV infection or a steady increase in the proportion of imprisoned injecting drug users in the later stages of HIV infection.

Measuring the incidence of HIV infections acquired in prison through injecting drug use is difficult, as acute HIV infection is often asymptomatic (and therefore likely to pass undetected) and neither the pattern of repeated short prison sentences nor the frequency of diagnostic HIV testing in injecting drug users at risk are conducive to detecting new infections. Given these limitations, deciding whether imprisonment increases or decreases HIV transmission is difficult. It is worth noting, however, that the report of the Scottish outbreak provides the first evidence of new HIV transmission in injecting drug users from Glasgow since the late 1980s.⁶ Furthermore, the prevalence of infections with hepatitis B virus and HIV in injecting drug users in England and Wales remains stable⁴—which may imply continuing transmission, despite the widespread adoption of safe injecting techniques by injecting drug users in the community. Is this “stability” dependent on—and maintained by—amplification of transmission within prison? If so, interruption of transmission within prisons might lead to falling seroprevalence in the community and benefit all those at risk.

Compare like with like

The observation that a quarter of the Scottish inmates who injected had begun while in prison,⁷ which suggests that imprisonment must increase the overall risks for transmission of bloodborne viruses, should be interpreted with caution. If men who are at risk of becoming injecting drug users spend a substantial part of their young adult life in prison, the rate at which young men in prison become drug injectors may be no different from that for men of the same age outside prison. Nevertheless, the observation highlights the accessibility of drugs and injecting equipment in prison. Moreover, the finding that a constant 1–2% of prison entrants will begin to inject drugs during the course of what may be a relatively brief stay in prison has important implications for those trying to design and implement prevention policies. Selective

interventions aimed solely at those known to be drug injectors at prison entry will miss a major opportunity for prevention.

Preventive measures promoted in the community are not transferable wholesale into prisons. Prison populations turn over rapidly, which may limit the effectiveness of ad hoc prevention initiatives. The counselling exercise designed to prevent further spread of HIV infection in the Scottish prison reached only a third of the 636 inmates who had passed through the prison when transmission was occurring, despite the fact that 60% of the current inmates accepted counselling.⁵ The recommendations about cleaning injection equipment, which require washing in soapy water, contact with full strength household bleach for at least 30 seconds, and rinsing in water,¹⁴ may be more difficult to implement in prison. Although 31 of the 32 injectors counselled in Scotland said that they always cleaned equipment before use, they used methods unlikely to be effective.

The amount of effort that went into the investigations in Scotland and Australia may have been more important to their success than the method of investigation chosen. Given sufficient commitment and adequate resources, participation of four fifths of prisoners can be achieved, whether for voluntary unlinked anonymous saliva testing to determine HIV seroprevalence, as in Scotland,¹⁵ or voluntary named confidential testing for markers of previous hepatitis B infection as part of a vaccination programme in England (D Telford and V Hollyoak, personal communications). This suggests that prisoners would, given enough encouragement, be equally willing to participate in coordinated multi-disciplinary prevention programmes if these were intensive and well organised.

Uncertainty may remain about whether imprisonment causes injecting drug use or increases overall transmission of bloodborne viruses, but there is no doubt that it provides an opportunity to capitalise on access to those at risk. If the efforts applied to studying transmission could be redirected to developing and evaluating appropriate and acceptable preventive measures, and creative use made of the high turnover rate, this could have a substantial impact on the reservoir of bloodborne viral infections in the population.

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