THE LANCET

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The Lancet: Mass imprisonment of drug users driving global epidemics of HIV, hepatitis, and tuberculosis

- Up to half of all new HIV infections over next 15 years in eastern Europe will stem from inmates who inject drugs
- Scaling up opioid substitution therapy in prisons and after release could prevent over a quarter of new HIV infections among injecting drug users over 5 years

The War on Drugs, mass incarceration of drug users, and the failure to provide proven harm reduction and treatment strategies has led to high levels of HIV, tuberculosis, and hepatitis B and C infection among prisoners—far higher than in the general population. With an estimated 30 million people passing in and out of prisons every year, prisoners will be key to controlling HIV and tuberculosis epidemics worldwide, according to a major six-part Series on HIV and related infections in prisoners, published in The Lancet and being presented at the International AIDS Conference in Durban, South Africa.

“Prisons can act as incubators of tuberculosis, hepatitis C, and HIV and the high level of mobility between prison and the community means that the health of prisoners should be a major public-health concern. Yet, screening and treatment for infectious diseases are rarely made available to inmates, and only around 10% of people who use drugs worldwide are being reached by treatment programmes”, says lead author of the Series and President of the International AIDS Society Professor Chris Beyrer, John Hopkins Bloomberg School of Public Health, Baltimore, USA. “The most effective way of controlling infection in prisoners and the wider community is to reduce mass imprisonment of injecting drug users.” [1]

High prevalence of HIV among prisoners

Worldwide, between 56% and 90% of people who inject drugs will be incarcerated at some point. In parts of Europe, over a third of inmates inject drugs (38%), in Australia (55%) it is more than half. This is in stark contrast with injecting drug use the general population (0.3% in EU and 0.2% in Australia).

Data presented in the Series show that with growing numbers of injecting drug users in prison, the prevalence of infectious diseases has also increased (Paper 1 and Paper 3, table 1). For example:

- Levels of HIV infection are 20 times higher among prisoners in western Europe than the civilian population (4.2% vs 0.2%), and around three times higher among prisoners in eastern and southern Africa (15.6% vs 4.7%) and north America (1.3% vs. 0.3%).
- While most prisoners are men, women and girls are the fastest growing imprisoned group worldwide, and in most regions of the world, levels of HV infection are higher in female inmates than male prisoners including eastern Europe and central Asia (22% vs 8.5%).
- High rates of hepatitis C are also seen among prisoners, with 1 in 6 inmates in parts of Europe and the USA carrying hepatitis C virus.
- Prevalence of active tuberculosis is higher in prisons than the general population in all settings. One study demonstrated that prevalence was 40 times higher in one prison in Brazil than the general population.

Moreover, new estimates produced for the Series suggest that up to half of all new HIV infections over the next 15 years in eastern Europe will stem from increased HIV transmission risk among inmates who inject drugs; and imprisonment could be responsible for three-quarters of new tuberculosis infections among people who inject drugs, and around 6% of all yearly tuberculosis infections (Paper 6).
High rates of injecting drug use in some settings, lack of access to condoms, unsanitary conditions, and gross overcrowding have made prisons and detention centers high risk environments for spread of these infections. Almost half of countries in sub-Saharan Africa report that prisons are at 150% capacity or higher. Increased frequency and duration of imprisonment increase individual risk for these infections, particularly HIV and tuberculosis.

But these health issues do not remain confined to prisons. With around 10.2 million people imprisoned worldwide at any given time (nearly 2.2 million in the USA alone), and an estimated 30 million passing in and out of prison each year, substantial numbers of undiagnosed and untreated infections in prison can spread to the community when prisoners return home. Treatment interruptions upon release threaten former prisoners and their communities.

**Unmet health needs in prisons**

The Series brings together a wealth of evidence to show that countries can reduce and even reverse infectious disease transmission by scaling up proven harm reduction and treatment strategies in prisons like opioid agonist therapy (OAT), antiretroviral therapy (ART), hepatitis B vaccination, condom distribution, and sterile needle and syringe exchange.

Modelling conducted for the Series suggests that reducing mass incarceration of people who use drugs, in this case lowering the number of prisoners who inject drugs by 25%, could result in a 7–15% drop in new cases of HIV among injecting drug users in the community over 5 years. Similarly, scaling up OAT (e.g., methadone and buprenorphine) to all those in need in prison, and after release, could prevent over a quarter (28%) of new HIV cases in people who inject drugs in just 5 years [2] (Paper 1).

Although such interventions have proved successful in prisons and are required by international human rights law (Paper 4, panel), they are severely underfunded and are often impeded by discrimination and restrictive prison rules in all countries—both in high- and low-income countries. The fact that in many countries, prison health services are isolated from national public health programmes and the ministry of health has exacerbated the issue.

The authors reviewed six of the fifteen key interventions for the prevention and treatment of infectious diseases in prisons recommended by WHO/UNOCD: information (education, communication), counselling and testing, sterile needle exchange, OAT, condom provision, and ART. Yet, globally, only eight countries (Moldova, Armenia, Kyrgyzstan, Germany, Luxembourg, Portugal, Spain, and Switzerland) provide all six interventions (Paper 3, figure 2).

In 2014, only 43 countries offered OAT in at least one prison and less than 1% of prisoners worldwide who need it actually receive this treatment. In western Europe, only a third (10 of 29) of surveyed countries reported hepatitis C screening programmes for prisoners; and in 2012, ART was available to prisoners in just 43 countries worldwide.

But, several countries have achieved success. For example, in Iran, where more than 60% of prisoners are incarcerated for drug-related crimes, HIV prevalence among injecting drug users in prisons reduced from 18.2% in 2003 to 2.3% in 2007 due to a combination of voluntary HIV testing, OST, condoms, and needle and syringe exchange programmes (Paper 3 and appendix for case studies of Iran and Spain).

**Urgent reform to drug laws and prison healthcare needed**

“The response to the HIV, tuberculosis, and hepatitis epidemics in prisons has been slow and piecemeal, and the majority of governments continue to ignore the strategic importance of prison health care to public health”, says Professor Beyrer. “Most strategies for dealing with infectious diseases in prisons focus on a zero-tolerance approach to drug users. The fact that infection rates are still climbing confirms that this approach does not work.” [1]

He adds, “Reforming laws and policies that criminalise drug use and sexual behaviours will be crucial to reducing prison populations that put large numbers at risk of potentially life-threatening infections, and which can be more effectively prevented and treated in community settings. Non-violent drug-offenders, especially women, should be offered treatment as an alternative.”[1]
The authors make several recommendations to improve access to health care for prisoners—leading with the urgent
need to recognise the contribution of prison health to health inequalities, and to make prison health a priority by
convincing governments that health policy must be based on the best available evidence. Other recommendations
include addressing the fundamental right of prisoners to a minimum standard of health care at least equivalent to
the wider community; and to increase cooperation and coordination between criminal justice and public health
systems.

In an accompanying Comment, Series authors Professor Chris Beyer, Professor Adeeba Kamarulzaman from the
University of Malaya, Kuala Lumpur, Malaysia and Professor Martin McKee from London School of Hygiene &
Tropical Medicine, London, UK as well as co-authors from The Lancet HIV in Prisoners Group call for urgent reform.
They write, The Nelson Mandela Rules provide benchmarks to achieve meaningful reform in access to health care for
those detained. We can, and should, do better to reduce both the numbers of those incarcerated and the length of
their sentences, and to improve prevention, treatment, and post-release linkage to care for prison-associated
infectious diseases. Meeting community standards of care in correctional settings, especially in low-income and
middle-income countries, will require political will, financial investment, and support from medical and humanitarian
organisations across the globe, but it can and must be done. Global control of HIV, viral hepatitis, and tuberculosis
will not be achieved without addressing the unmet health needs of prisoners.”

In a Comment introducing the Series, Dr Pam Das, Senior Executive Editor and Dr Richard Horton, Editor-in-Chief at
The Lancet say, “As Archbishop Desmond Tutu’s message “Don’t forget the prisoner” reaffirms, we have a moral and
human imperative to provide treatment to prisoners since we have limited their ability to access care except through
prison health. Only by fully including them and other marginalised populations in the global HIV/AIDS response, will
the fast-track to accelerate the fight against HIV and to end the AIDS epidemic by 2030 become a reality.”

NOTES TO EDITORS:
[1] Quotes direct from authors and cannot be found in text of papers.
which varies substantially between and within countries (figure 7).

For interviews with lead author of the Series Professor Chris Beyrer, John Hopkins Bloomberg School of Public
Health, Baltimore, USA, please contact Nick Thompson E) nthomso1@jhu.edu M) +27623268013 or Mandy
Surgue, Senior Manager, Communications International AIDS Society mandy.sugrue@iasociety.org M)
+41 79 539 08 83

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Lancet press office E) pressoffice@lancet.com T) +44 207 424 4249