

Infectious Diseases Among Imprisoned - Risk Factors and Outcomes (Review)

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Original Article

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Abstract:

Of the estimated 10.2 million people incarcerated worldwide on any given day in 2014, it is estimated that 3.8% have HIV (389,000 living with HIV), 15.1% have HCV (1,546,500), 4.8% have chronic HBV (491,500), and 2.8% have active tuberculosis (286,000). The prevalence of HIV, hepatitis B virus, hepatitis C virus, and tuberculosis are higher in prisons than in the general population in most countries worldwide, mainly because of the criminalization of drug use and the detention of people who use drugs. Another important risk factor is sexual behavior, where MSM represent major risk for transmission of infectious diseases. Overcrowding and poor infrastructure are responsible for parasitic infections. Improving conditions in prisons, finding alternatives to detention and mostly available HAART and preventive programs for HIV, HCV and tuberculosis, could be the options how to lower the numbers of infected people.

Conflict of interest:

The authors whose names are listed in the title of the article certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, or other equity interest), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Introduction

The negative and mutually reinforcing nature of incarceration, substance use disorders, and blood-borne viruses such as HIV, hepatitis C virus, and tuberculosis is problematic and results in a concentration and interaction between these health and social conditions. Of the estimated 10.2 million people incarcerated worldwide on any given day in 2014, it is estimated that 3.8% have HIV (389,000 living with HIV), 15.1% have HCV (1,546,500), 4.8% have chronic HBV (491,500), and 2.8% have active tuberculosis (286,000). The few studies on incidence suggest that intra-prison transmission is generally low, except for large-scale outbreaks. However, there are several factors increasing risk of transmission of these diseases either during detaining, but after discharge as well. (1-4)

Risk factors for infectious diseases among imprisoned:

Commonest risk factor for many infectious diseases is sexual and addictive behavior. MSM are leaders in risky sexual behavior especially in long-term imprisonment; sexual behavior is linked to HIV, HBV and HCV as well. Another major risk factor is intravenous drug use. Despite strict conditions in prisons, it's more common than expected. Common drugs such as cocaine, heroin, marijuana, are rarely imported due to screening, but prisoners can produce their own "substances" similar to classic drugs. Contaminated syringes play the major role in the transmission of hepatitis B, C and HIV.

Another risk factor for infectious diseases is overcrowding. However, the spectrum of IDs linked to overcrowded prisons is different from those transmitted sexually or by blood. Typical IDs related to overcrowding are respiratory tracts infections; among them also tuberculosis and influenza. Despite of possibility of TB vaccination for neonates in some countries, in prisons, this vaccination is still not implemented; neither is flu vaccination. Unfortunately, prevention of TB is closely linked to the “deadly synergy” of both, TB and HIV, but other sexually transmitted diseases as well. Another risk factor for TB transmission is the fact that only 10% of imprisoned are receiving antiretroviral therapy. Absence of ARV therapy is a major risk factor for progressing to AIDS and developing opportunistic infections, such as TB, HBV, herpes zoster and others. Apart from TB, other infectious diseases linked to conditions in prison are leptospirosis, scabies and pediculosis. Ecto-parasites are sometimes directly linked to sexual behavior, too, but mostly to poor hygiene and infrastructure in some regions. (5-10)

Preventive Programs

The prevalence of HIV, hepatitis B virus, hepatitis C virus, and tuberculosis are higher in prisons than in the general population in most countries worldwide, mainly because of the criminalization of drug use and the detention of people who use drugs. Prisons are risk environments for these infections to be further concentrated, amplified, and then transmitted to the general community after prisoners are released. In the absence of alternatives to incarceration, prisons and detention facilities, there is the possibility to reduce these risks by promoting primary and secondary prevention strategies for these infections to improve prisoners' health and also to reduce risk throughout incarceration and on release. (1)

However, large gaps exist in the implementation of these strategies across all regions. Several studies showed that anti-HIV and anti-TB preventive programs are only successful, when combined together. Collaboration between the criminal justice and public health systems will be required for successful implementation of these strategies. (2)

The prison setting therefore presents not only challenges, but also opportunities, for the prevention and treatment of HIV, viral hepatitis, and tuberculosis. At the same time, even when WHO guidelines recommend treatment for all patients, irrespective of CD4 count, coverage with antiretroviral therapy in some regions is less than 10% and is compounded both by suboptimal screening for diseases and low coverage of evidence based HIV prevention strategies (e.g., opioid agonist therapies with methadone or buprenorphine, or needle and syringe programs. (3) Effective treatment of opioid use disorders with opioid agonist therapies prevents blood-borne infections via reductions in injection in prison and after release. (4) But the most effective way of controlling these infections in prisoners and the broader community is to reduce the incarceration of people who inject drugs.

Table 1 Commonest infections in prisoners

Commonest Infectious Diseases in Imprisoned:

1. Related to substance/drug use and misuse
Blood born – hepatitis B, C, HIV, MRSA, Candida spp.
2. Related to sexual behavior
HIV, HCV – MSM, syphilis, gonorrhea, other STDs
3. Related to overcrowding and poor infrastructure

RTI: TB and, influenza, Pneumococcus
SSTI: Ecto-parasitosis, Scabies, Pediculi-
losis, etc.

4. Related to poor food and water supply
Hepatitis A, leptospirosis

References

1. ALTICE FL, AZBEL L, STONE J, BROOKS-POLLOCK E, SMYRNOV P, DVORIAK S, VICKERMAN P (2016). *The perfect storm: incarceration and the high-risk environment perpetuating transmission of HIV, hepatitis C virus, and tuberculosis in Eastern Europe and Central Asia*. *The Lancet*, 388 (10050), 1228-1248. doi:10.1016/s0140-6736(16)30856-x
2. DOLAN K, WIRTZ AL, BABAK M ET AL. (2016) *Global burden of HIV, viral hepatitis, and tuberculosis in prisoners and detainees*. *Lancet*; published online July 14. [http://dx.doi.org/10.1016/S0140-6736\(16\)30466-4](http://dx.doi.org/10.1016/S0140-6736(16)30466-4).
3. UNODC, WHO EUROPE (2013) *Good governance for prison health in the 21st century. A policy brief on the organization of prison health*. Copenhagen: World Health Organization.
4. JURGENS R, CSETE J, AMON J, BARAL S, BEYRER C (2010) *People who use drugs, HIV, and human rights*. *Lancet* 376: 475–85.
5. GILBERT M (2006). *Outbreak in Alberta of community-acquired (USA300) methicillin-resistant Staphylococcus aureus in people with a history of drug use, homelessness or incarceration* [Abstract]. *CMAJ*, 175. doi:10.1503/cmaj.051565
6. KREJCI E *The influence of hippotherapy on attention and memory of children with cerebral palsy in the long run* 2016 REHABILITÁČIA LIII, č. 1, ISSN 0375-0922, s. 55-61
7. BARTOSOVICI (2016) *Some aspects of the health status of homeless people*. *Clinical Social Work and Health Intervention*, 7(1), 39-47. doi:10.22359/cswhi_7_1_04
8. MCCORMICK B, & WHITE J (2016) *Hospital care and costs for homeless people*. *Clinical Medicine*, 16 (6), 506-510. doi:10.7861/clinmedicine.16-6-506
9. DUDOVA Z, TRILISINSKAYA I Y, JACKULIAKOVA T, JANKECHOVA M, SASVARY F, MATEL A, HAJJ ALI IA (2016). *Six month follow up in communicable versus non-communicable diseases in an Iraqi refugee camp*. *Clinical Social Work and Health Intervention*, 7(3), 38 - 41 doi:10.22359/cswhi_7_3_10
10. KALAVSKY E. (2013) *Do we need new ATB or new strategies*, *Neuroendocrinology Letters*. vol 33, suppl,1, 33-34
11. PADGETT DK, STRUENING EL, ANDREWS H (1995) *Predictors of emergency use by homeless adults in New York City: the influence of predisposing, enabling, and need factors*. *Soc Sci Med*:41:547-56.