Methadone reduces risk of HIV transmission in people who inject drugs, say experts

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(Medical Xpress)—People who inject drugs (PWID) can significantly reduce their risk of HIV infection with the use of opiate substitution treatments such as methadone, as suggested by an international team of researchers in a paper published today on *bmj.com*.

Injection drug use (IDU) is a major risk factor for the transmission of HIV and AIDS and HIV / AIDS accounts for nearly one fifth of the burden of disease among people who inject drugs. It is estimated that around five to ten per cent of HIV infections worldwide are due to IDU. Methadone and buprenorphine are the main forms of drug prescribed for addicts and are frequently prescribed as opiate substitution therapies (OST). There is good evidence to suggest that OST reduces drug-related mortality, and some of the behaviours associated with injecting risk, but

to date there has been no quantitative estimate of the effect of OST in relation to HIV transmission.

Authors from around the world (US, Canada, Europe and Australia) therefore carried out a review and pooled analysis of several published and unpublished studies from multiple countries (including USA, Canada, UK, the Netherlands, Austria, Italy, Thailand, Puerto Rico and China) to determine the association between OST and HIV transmission amongst people who inject drugs. The nine studies looked predominantly at males between 26 and 39-years-old and totalled 819 incidences of HIV infection with 23,608 person-years of follow-up.

After analysing these studies, authors found that OST was associated with a 54 per cent reduction in risk of HIV infection among PWID. There were differences between the studies, including different background rates of HIV infection: this made it impossible to calculate an "absolute risk reduction" for HIV infection that would translate to all settings. And not all studies reported adjustments to the intervention to take account of other factors that might influence the association between OST and HIV infection. But the impact of OST on HIV was strong and consistent in further analyses in the paper. There was weak evidence to suggest that longer duration of OST exposure may be associated with greater benefit.

Matthew Hickman, the study's Principal Investigator and Professor in Public Health and Epidemiology at the University of Bristol said: "Increases in HIV incidence have been reported among people who inject drugs in a number of different countries in recent years and there is now strong evidence demonstrating the association between OST and the reduced risk of HIV transmission."

There are several countries where OST remains illegal or severely restricted. The authors say that this study calls for a global scale up of

harm reduction interventions in order to reduce the transmission of HIV among people who inject drugs – especially in countries with high rates of HIV.

An accompanying editorial praises MacArthur and colleagues for showing the extent to which OST reduces the transmission of HIV. Linda Gowing from the Discipline of Pharmacology at the University of Adelaide argues however that questions do still remain as further evidence is needed regarding other forms of OST such as buprenorphine. She argues also that as the benefits of OST may be lost when treatment stops, especially if this is not voluntary or relapse to injecting drug use occurs, then policy makers should focus on maximising retention and uptake of people onto OST.

More information: www.bmj.com/cgi/doi/10.1136/bmj.e5945

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