

# **A SYSTEMATIC REVIEW AND META-ANALYSIS OF THE PREVALENCE AND INCIDENCE OF HEPATITIS C VIRUS INFECTION IN MEN WHO HAVE SEX WITH MEN**

Fengyi Jin<sup>1</sup>, Gregory J Dore<sup>1</sup>, Gail Matthews<sup>1</sup>, Niklas Luhmann<sup>2</sup>, Virginia Macdonald<sup>2</sup>, Sahar Bajis<sup>1</sup>, Rachel Baggaley<sup>2</sup>, Bradley Mathers<sup>2</sup>, Annette Verster<sup>2</sup>, Andrew E Grulich<sup>1</sup>

<sup>1</sup>The Kirby Institute, University of New South Wales, Sydney, Australia; <sup>2</sup> Global HIV, Hepatitis and Sexually Transmitted Infections Programmes, World Health Organization, Geneva, Switzerland

## **Background:**

We conducted a global systematic review of hepatitis C virus (HCV) prevalence and incidence in men who have sex with men (MSM) to guide community education and public health policy.

## **Methods:**

A literature review was conducted of studies published between January 2000 and October 2019. Pooled HCV estimates in MSM were stratified by HIV status and by injecting drug use. Pooled prevalence was also compared with HCV estimates in the general population and presented as prevalence ratios (PR). In HIV-negative MSM, incidence estimates were stratified by use of HIV PrEP.

## **Results:**

Of 1156 publications identified, 196 were assessed to be eligible. Overall, the pooled HCV prevalence in MSM was 3.3% (95% CI: 2.7-3.9) and was highest in Africa (5.8%) and South-East Asia (5.0%). Globally, it was 1.4% (95% CI: 0.9-2.1) in HIV-negative and 6.3% (95% CI: 5.2-7.6) in HIV-positive MSM. Compared with the general population, HCV prevalence was slightly raised in HIV-negative MSM (PR=1.48, 95% CI: 1.06-1.89) but markedly raised (PR=6.40, 95% CI: 5.32-7.48) in HIV-positive MSM. Pooled HCV prevalence was substantially higher in MSM who had ever (30.2%, 95% CI: 22.0-39.0) or currently (45.6%, 95% CI: 21.6-70.7) injected drugs than in those who never injected (2.7%, 95% CI: 1.9-3.7). In HIV-negative MSM, the pooled HCV incidence was 0.12 (95% CI: 0-0.72) and 14.80 (95% CI: 9.65-20.95) per 1,000 person-years in those not on PrEP and those on PrEP, respectively. HCV incidence was 8.46 (95% CI: 6.78-10.32) per 1,000 person-years in HIV-positive MSM.

## **Conclusion:**

MSM populations globally have a higher burden of HCV infection than the general population, and this difference is larger in HIV-positive MSM. HCV prevention, testing and treatment services should be globally offered to MSM populations and notably those most at risk, including HIV-positive MSM, PrEP users and MSM reporting injecting and non-injecting drug use.

**Disclosure of Interest Statement:**

The Kirby Institute is affiliated with the Faculty of Medicine, University of New South Wales and funded by the Australian Government of Health and Ageing. The views expressed in this publication do not necessarily represent the position of the Australian Government. This study was commissioned and paid for by the World Health Organization (WHO). Copyright in the original work on which this article is based belongs to WHO.