

## Thirty years of harm reduction in the Netherlands: HCV elimination in drug users ahead.



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### *Amsterdam, the capital of ...*

Amsterdam is a famous city for many reasons, not least for its drug use. In the eighties, Amsterdam had the name the “magic centre of the world where drug use is tolerated”. It attracted many adventurous young adults, also from abroad, and the trade in heroin was enormous. Soon, Amsterdam faced a serious heroin epidemic. More than half of the people who used heroin injected, there were hundreds of overdoses each year and Amsterdam also became the capital of HIV/AIDS. The city’s reaction was a pragmatic harm reduction strategy and efforts increased to curb the HIV and AIDS epidemic. Methadone had already been prescribed since 1968 and this was scaled up substantially. Needle and syringe exchange programs were widespread and drug consumption rooms were opened, also offering information on prevention of drug-related infectious diseases, and providing condoms. HIV tests were offered to people who used drugs and they had access to treatment as all other high risk groups. Although treatment outcomes were worse in drug users, among other reasons given, was a delay in starting antiretroviral treatment.

Despite this early and adequate reaction, at that time there was still the mysterious “nonA-nonB hepatitis virus”, later called hepatitis C, had a real opportunity to spread among the drug injecting population. The hepatitis C virus (HCV) is many times more infectious than HIV and in the Netherlands, the number of people who inject drugs (PWIDs) were infected with HCV was at least 10 times higher than with HIV. By 2017 virtually all PWIDs with HIV have been identified, most PWIDs with chronic hepatitis C are still unaware of their infection. While we have managed to decrease the number of AIDS deaths during the last thirty years, the number of hepatitis (B and C) deaths only increased. However, despite these negative trends thanks to a combination of supporting conditions, it is likely that the title of this article (HCV elimination in PWIDs) is within reach.

### *Low incidence, high prevalence*

A major contributing factor is the decreasing popularity of heroin use. The people who used heroin from the eighties still constitute the majority of the current Dutch heroin population. They have grown older (the mean age of heroin users in addiction care in 2015 was 48 years, while only 4% was under the age of 30), almost all are in some contact with health care professionals (being prescribed methadone or medical heroin treatment or sheltered living or day activity programs) and have ceased injecting. Furthermore, they have not been replaced by other people injecting different drugs. The total number of PWIDs in the whole of the Netherlands is now less than 1,000, which is

extremely low compared to surrounding countries like the UK and Germany. The few who still inject, have access to clean needles and syringes. It appears as the perfect explanation as to why, after many years, only a handful of acute hepatitis C cases have been notified among PWIDs.

However, the HCV prevalence among people who have ever-injected is high, ranging from 30-80%, depending on the region and subgroup studied. Estimates suggest that there are between 7000-8000 chronic HCV carriers among PWIDs, most of them infected decades ago and therefore likely to have progressed into serious stages of liver damage. This is just over a quarter of the total HCV population (28% PWID [people who inject(ed) drugs]; 41% migrants; 5% HIV-positive MSM [men having sex with men]; 2% haemophilia patients and 25% "other"; 28,000 in absolute numbers)<sup>1</sup>.

#### *Joined actions*

Recently, the Dutch Health Council advised to screen these high risk groups for hepatitis C (and B), and not to screen the total population. Among the high risk groups, PWIDs in methadone treatment are the "low hanging fruit". Finding them is straightforward and because of the high HCV prevalence, testing has a high yield. But the problem encountered in the Netherlands involves the next step. Even in the era of oral easy to use, direct acting antivirals (DAA), with have sustained virological response of greater than 95%, HCV treatment is still the responsibility of specialists in hospital. Collaboration between the addiction services and hospitals is almost completely absent. In the absence of referral, traced HCV patients are piling up in addiction care. Therefore two national projects were organised in which local teams, composed of addiction care and hospital personnel, designed their local "hepatitis C care path", in which the responsibilities of both groups were agreed upon and signed by the management, in order to ensure continuation after finishing the project phase.

In the mean time, other barriers were also tackled. The Minister of Health decided that from November 2015 onwards, DAA treatment would be reimbursed for all HCV patients with a treatment indication, irrespective of the fibrosis stage and irrespective of the mode of transmission. This implies that PWIDs are just as eligible for treatment as other high risk groups. A National Hepatitis Plan was formulated, entailing the whole field from increasing awareness, organisation of screening and retracing earlier identified HCV patients with no or failed earlier treatment, organisation of diagnostics, treatment and registration, to monitoring and a research agenda. A steering group has been installed to ensure the timely execution of the Plan.

#### *Projections for the future*

A modelling study from the pre-DAA period, with projections for 2030, tested different treatment scenarios and predicted that for the whole HCV population in the Netherlands, without changes in treatment, the HCV prevalence would already decrease by 45%, due to the low incidence and the already successful treatment structure.<sup>2</sup> However, with increased efficacy (which is the current real world situation with DAAs), treatment uptake and diagnosis, the HCV prevalence would decrease by 85% and hepatocellular carcinoma and liver-related deaths would decrease by 67% and 65% respectively. While for migrants and the high risk group "other" the increased diagnosis needed for this scenario is a real challenge, for Dutch PWIDs the scaling up of treatment will likely result in HCV elimination in a couple of years. Then we will have the unique situation that this marginalised population will suddenly be frontrunners in the target of HCV elimination.

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<sup>1</sup> Vriend, H.J., Van Veen, M.G., Prins, M., Urbanus, A.T., Boot, H.J., Op de Coul, E.L. (2013). Hepatitis C virus prevalence in The Netherlands: migrants account for most infections. *Epidemiol Infect* 141 (6): 1310-1317.

<sup>2</sup> Willemse SB, Razavi-Shearer D, Zuure FR, Veldhuijzen IK, Croes EA, van der Meer AJ, van Santen DK, de Vree JM, de Knecht RJ, Zaaijer HL, Reesink HW, Prins M, Razavi H. The estimated future disease burden of hepatitis C virus in the Netherlands with different treatment paradigms. *Neth J Med*. 2015 Nov;73(9):417-31.