



**Karolinska
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**Summary of Sweden's first baseline study on
Blood borne Infections among Injecting Drug Users
(Stockholm County July 2007 to September 2008)**



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1. Summary

This Baseline study included **1145** persons who were tested for the blood-borne infections HIV, hepatitis B (HBV) and hepatitis C (HCV) between July 1, 2007 and August 31, 2008. Almost all participants were interviewed about their drug and sexual habits. Serum Antibodies against hepatitis A virus (HAV) were also analysed. Since HAV, however, contaminates via the oral route and not via injections, these data are not reported in this study.

Of the **1145 study participants**, **720** fulfilled the inclusion criteria, i.e., they reported to have injected a narcotic substance at least once during the last 12 months (**Active Injecting Drug Users**). The primary focus of the study is on this group.

In the study, **148** additional persons are included who had injected drugs, but not during the last 12 months (**Not Active Injecting Drug Users**). In addition, **182** persons who had never, or practically never, injected drugs were included (**Non Injecting Drug Users**). The latter group consisted of persons with social problems and other addictions, mostly alcohol use. They appeared in the same environments as the active narcotics injectors. Some of these persons were partners of injecting drug users.

Ninety-five persons were tested but gave incomplete answers or did not answer the interview questions (**Not or Incompletely Interviewed**).

The study has used active case-finding in order to contact drug users. A mobile team, consisting of physicians /nurses/nursing auxiliaries /biomedical analysts and the team leader, a psychologist, contacted, interviewed and tested drug users. The interviews and tests were conducted in parks, illegal camping places, night shelters, treatment centres and medical and social institutions. The size of the team was adjusted to the conditions prevailing at the study sites.

The study participants were notified of their test results through a personal encounter with a team doctor or nurse, who also advised them about safe sex and how to be cautious when injecting drugs. The ones who needed vaccination against hepatitis B were vaccinated. A medical consulting room for the above purpose was open daytime and evening 1-2 days per week. In addition, the mobile team worked on site in places frequented by drug users in order to notify them about test results and offers of vaccination. The mobile team also made appointments with drug users to meet in places of mutual consent. The mobile phone has been an invaluable means of reaching and maintaining contact with the drug users.

To date (June 2009), ninety percent of the 1145 persons have been notified of their test results and 75 % of the hepatitis B negative persons are undergoing, or have been fully vaccinated, i.e., received all three vaccinations.

The average age of the Active IDUs was 40 years; 73 % were men. Ninety-two percent of the Active IDUs were unemployed. More than 2/3 had been detained in custody and/or been imprisoned, women significantly less than men. The proportion of non-native Swedes was 17 %. These are persons born abroad or with one or both parents born in a country other than Sweden

The average age for starting drug use was 15. This applied to boys as well as girls. The debut drug was often cannabis/hashish/marijuana (in the study termed THC, the abbreviation for tetrahydrocannabinol, the active component in these substances). The injection drug use started, in general, four years later; three quarters of the injection drug users reported amphetamine as the debut drug and one fourth reported heroin. Poly drug use was frequent.

Risk behaviour was common in conjunction with injections (sharing of needles, pumps, solution, filters and wads) as well as with sexual activities (unprotected sex and several partners). Women were especially prone to these risky habits. Four percent of the women reported to have had at least 20 different sex partners in the past 12 months, as compared to one percent of the men.

In the Active IDU group, 171 (23%), i.e. the majority of the participants with a dominant heroin injection use, answered that they participated in a Methadone/Subutex/Suboxone program, the medication-assisted maintenance therapy for opiate dependency. A substantial number stated that they had injected drugs after entering the program.

Fifty-one of 720 (7.1%) Active IDUs and sixty-three (5.5%) of all tested persons (1145) were HIV positive. Somewhat less than one third, 17 persons, of the 63 HIV positive were newly diagnosed with HIV infection, i.e. their infection was revealed through the study.

All newly-diagnosed HIV positive persons were notified of their test results in a personal encounter with a medical doctor. All – with one exception – were escorted within 24 hours to the infection clinic, Karolinska University Hospital, Huddinge, where they had a pre-booked meeting with specialists at the unit for HIV and other blood borne infections.

Of the newly diagnosed HIV positive persons, one claimed that he had never injected drugs. Three stated that they had not injected drugs during the past 12 months and two persons had uncertain drug use history.

Participants in the Baseline study		HIV Positive participants		
Category	Number	Newly diagnosed	Already known	Total
Active Injecting Drug Users	720	11	40	51
Not Active Injecting Drug Users	148	3	6	9
Non Injecting Drug Users	182	1	0	1
Not or Incompletely Interviewed	95	2	0	2
Total	1145	17	46	63

In the Active IDU group, 82 % were HCV positive as compared to 11 % of the interviewees who stated that they had never injected. The majority of the Active IDUs (50%) had been infected with HBV and one percent of the group were chronic carriers of the virus, i.e. contagious. Eleven percent had been vaccinated against HBV before being tested within the study. The remaining HBV negative Active IDUs (38 %) were offered vaccination and so were the 84% HBV negative persons in the group that had never injected drugs.

The age of the IDUs, the time for their drug debut and how long they had been injecting drugs correlated significantly ($p < 0.01$) to the degree of the infections with HIV, HBV and HCV. Surprisingly, there was no significant correlation between the extent of risk behaviour relating to injection habits (sharing needles and pumps) and infection with HIV, HBV or HCV. IDUs who knew of their HIV infection shared needles and pumps

less and used condoms more often than other IDUs. Thus, awareness of being infected seemed to result in a more careful lifestyle.

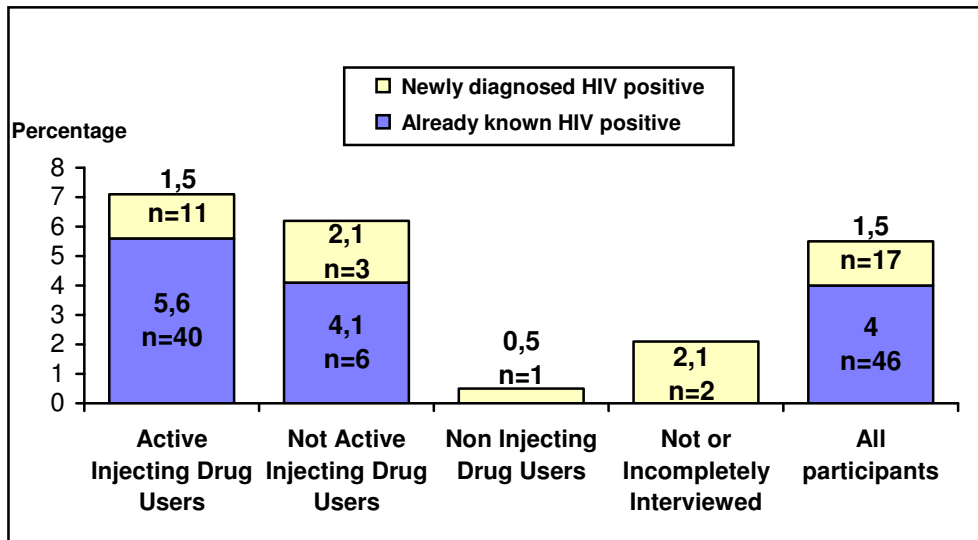
For HCV (but not for HIV and HBV) there was a significantly higher risk ($p < 0.01$) of becoming infected for those who shared paraphernalia (solution, filter, wads).

Since the narcotic debut generally starts at lower teen-age, preventive measures are needed very early in life. Generally, it took four years before the young drug user started injecting drugs. This interval needs to be used intensively by the community to prevent the conversion to injection drug use.

Regular testing of IDUs and preventive information together with notification of test results ought to have an effect on the spread of blood-borne infections, at least of HIV. The more laborious notification process is just as important as the testing process in this regard.

In May 2009, 1018 (90 %) of the tested persons had been notified of their test results, 530 of these needed vaccination against hepatitis B.

Results of HIV test (n=1142)



Vaccination against hepatitis B (n=530)

