

Risk behaviours and prevalence of blood borne infections in young people seeking treatment or advice for drug use – the potential of dried blood spots.

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Poster 297

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Objectives

To evaluate the prevalence of blood borne infections among people aged 18-30 attending counselling or treatment for drug misuse.

Results

Engaging people who use drugs (PWUD) in prevention of and testing for HIV, Hepatitis B (HBV) and Hepatitis C (HCV) is important.

Besides diagnosing chronic infections, testing can provide an opportunity to discuss risk behavior, provide education and offer advice on prevention.

In Denmark there is limited knowledge of risk behaviors and prevalence of blood borne viruses (BBV) among young people – especially for the non injecting population.

A registry based study among people in treatment for drug use in Denmark 1996-2016 found that in people < 30 years of age with a history of injecting – but never on OST; the test uptake for HCV was 39.6% and anti-HCV prevalence only 1.8%. The prevalence of HIV and HBV exposure in the same group was < 1%.¹

The same study also demonstrated a significant testing lag of 6.5 years from first injection to first HCV test.

Implementing simple point of care testing in the youngest group of PWUD might improve test uptake and adding behavioral data can provide insight into potential for risk reduction and prevention.

Method

Prospective cohort study from 2017-2018 in people aged 18-30 years of age attending public drug treatment or counselling services in Funen Denmark.



Figure 1 – Information on testing: "Are you Sure, Be Safe, Get Tested with a Finger Prick".

A campaign focused on non-stigmatizing information on testing for blood borne viruses was developed. People were offered to participate in testing and/or the study by their counsellor. After testing, immunization for Hepatitis A and B was offered free of charge to all participant in standard of care (Not part of the immunization program in Denmark). Study was approved by the regional ethics board.

Measures

Questionnaire on:

- Socio-demographics
- Drug related behaviours including injecting
- Non-drug related risks (sex, travel, tatoos)
- Prior testing or immunization for HIV/Hepatitis.
- Knowledge of transmission pathways for BBV

Dried blood spot (DBS) test

DBS were analysed for

- HIV-Ab/Ag,
- HBs-Ag, HBs-Ab
- HCV-Ab

If anti test was positive then reflex test for viral RNA/DNA. Positive results were confirmed by venous blood test.

Results

From January 2017 to December 2018, a total of 180 individuals participated in the study and 174 had available DBS results (one person withdrew consent and 4 DBS were excluded for poor quality). Only 20% reported prior testing.

Baseline Demographics (respondents)	Number (% of cohort)
Gender (self reported) Female (177)	52(26.4)
Median age (180)	23
Country of birth (176)	Denmark 158(89.9)
Mothers Country of birth (175)	Denmark 150(85.7)
Self declared civil status (176)	Single 99 (56.3)
	Partner/not living with 63 (35.8)
	Living with partner 9 (5.1)
	Other/no answer 5 (2.8)
Living (176)	Stable housing 156 (88.6)
Income (176)	Student 59 (33.5)
	Employed 32 (18.2)
	Un employed (seeking) 29 (16.5)
	Not working/studying 42 (23.9)
	No answer/don't know 14 (8.0)
Prior imprisonment (176)	Yes 26 (14.8)
Center (180)	Low risk 159 (88.3)
	High Risk(OST center) 21 (11.7)
Ever on OST (121)	Yes (Self reported) 11 (9.1)
Admitted to hospital for drug use (177)	Yes (Self reported) 25 (14.1)
Admitted to psychiatric care use (177)	Yes (Self reported) 20(11.5)

Table 1: Baseline Cohort

Reported behaviors

Behavior/drug use (respondents)	N(% of respondents)
Unprotected sex (176)	165(93.8)
Transactional sex (176)	37 (21.0)
Cocaine (176)	141 (79.7)
Year of first use, median(IQR)	4% reported injecting 2014 (2010-2016)
Amphetamines (176)	130(73.4)
Year of first use, median(IQR)	5% reported injecting 2013 (2009-2015)
Heroin (176)	9 (5.1)
Year of first use, median(IQR)	88% reported injecting 2008 (2008-2010)
Prescription Opioids (176)	55 (33.1)
Year of first use, median(IQR)	0% reported injecting 2014 (2010-2015)
Ever injected "drugs" (175)	10(5.7)
Year of first use, median(IQR)	2010 (2008-2012)

Table 2. Reported behaviours in cohort

Prevalence of Chronic Blood Borne Infections

Among 174 DBS samples available for analyzes

- 0% anti-HIV+
- 0% HBs-Ag +
- 1.7% (n=3) anti-HCV+
- 1.1% (n=2) HCV-RNA+

All cases of HCV were among people on OST with a history of injecting and previously diagnosed. Chronic HCV prevalence among PWID was 20% (2 of 10)

Hepatitis B protection

Among all tested 30 individuals (17%) had a detectable level of anti-HBs but only 7% with protective level. All were offered confirmative venous testing and booster immunization if level less than 10 IU/ml in venous sample.

All 162 anti-HBs negative/low level subjects were referred for immunization with an accelerated regime

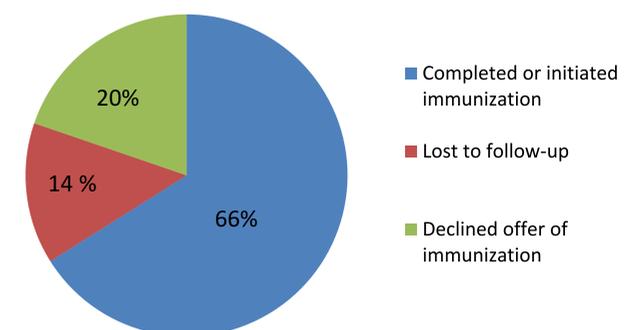


Figure 2. Outcome of 162 individuals considered for immunization

Conclusion

This study investigated an important population for primary prevention of BBV. We found

- Prior test uptake for BBV was low among PWUD < 30 years engaged in this study.
- DBS provides comprehensive screening limiting use for multiple tests.
- Injecting drugs was infrequent and mainly associated with Heroin use of non recent initiation.
- No evidence of injection of prescription opioids
- Hepatitis C infection found only in PWID
- Linkage to immunization had a high uptake
- No evidence of spread of HBV or HIV infection

Disclosures

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References

1. Øvrehus et al, Test uptake and hepatitis C prevalence in 5483 Danish people in drug use treatment from 1996 to 2015: a registry-based cohort study, Addiction March 2019

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