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Unravelling the risk factors for HIV and hepatitis B and C transmission among injecting drug users in Luxembourg: a bio-behavioural survey using a respondent driven sampling approach

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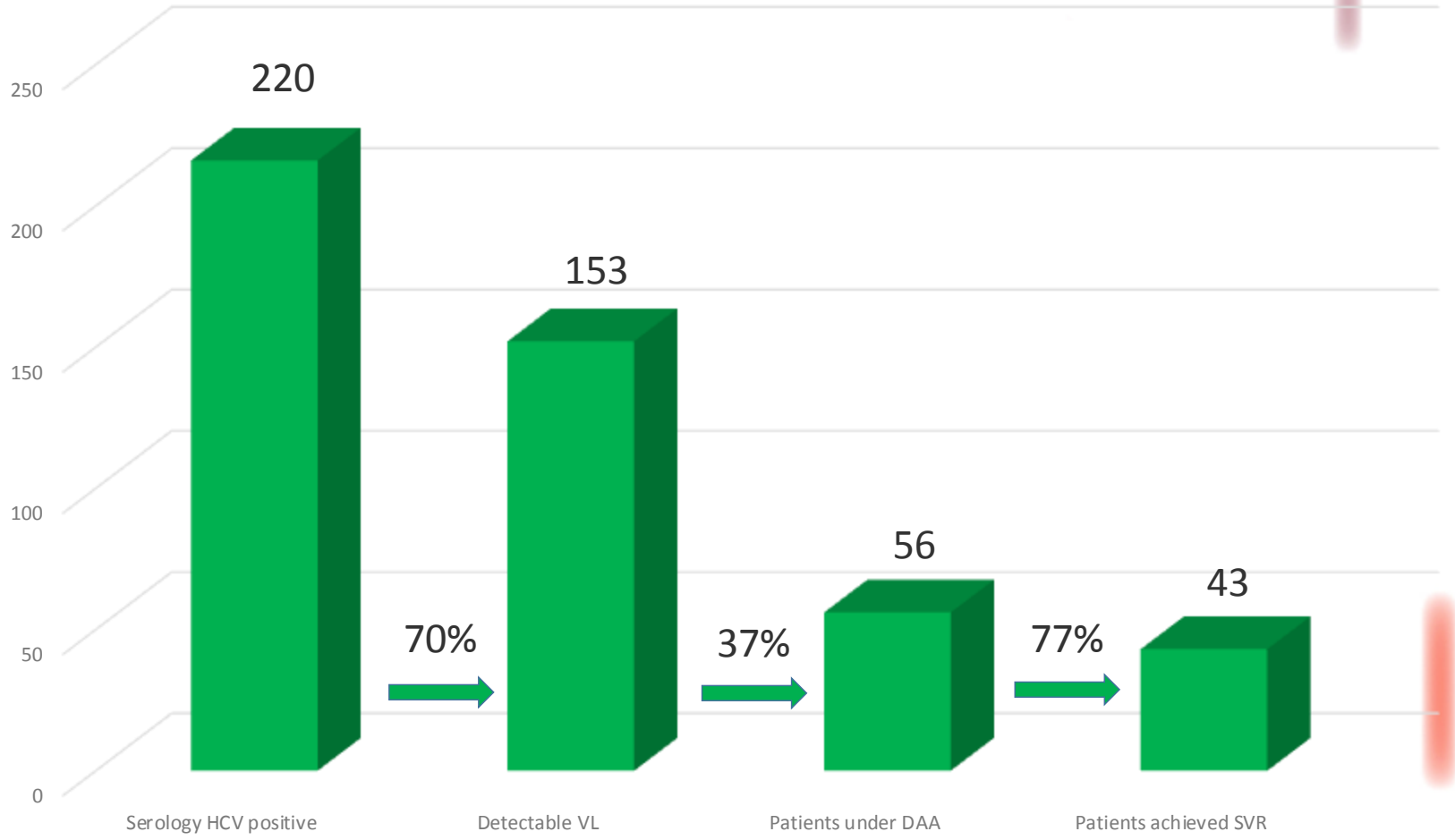
The HCV-UD outreach program

Expand screening and treatment among intravenous drug users

- ✓ 449 participants from 2015- 2019

HIV outbreak driven by cocaine injection (Arendt V et al, Plos one 2019) :
One third of women, effect of sexual transmission ?

Continuum of HCV care 2015-2018



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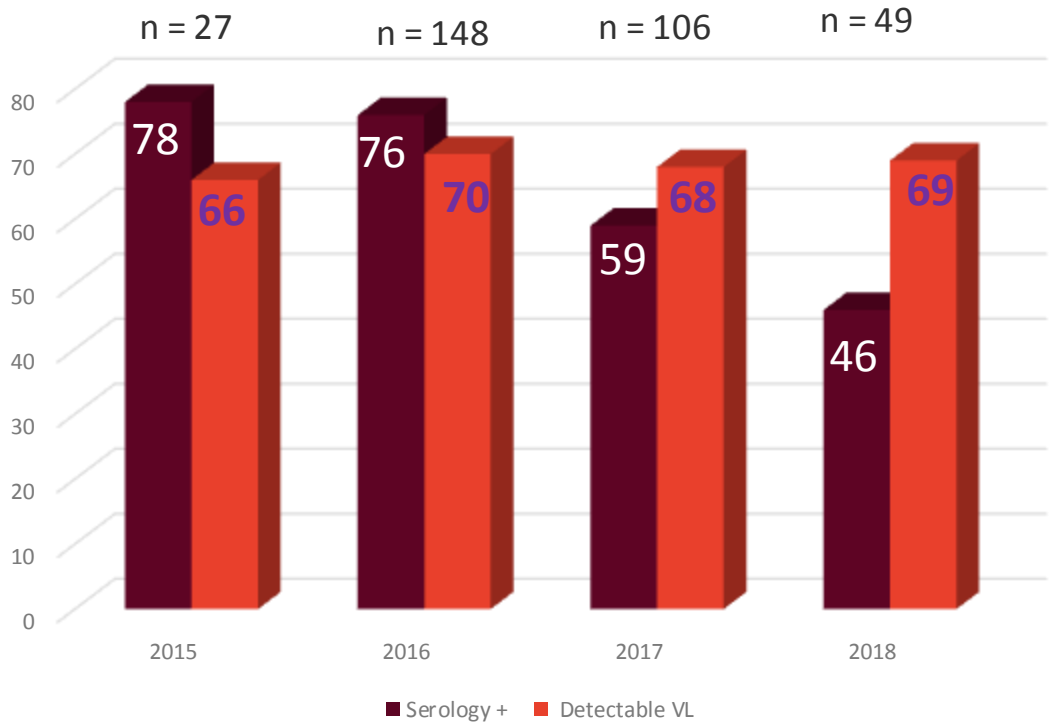
Evolution of HCV antibodies and viral load among the participants



hard-to reach people who inject and/or snort drugs in Luxembourg ?

n = total number of participants tested for HCV
% of positive serology among the participants
% of VL detectable among the HCV positive patients

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Objectives of the Respondent Driven Sampling approach

Primary objectives

- To seek and screen hard-to-reach and high-risks injecting and/or snorting drug users in Luxembourg for HIV, hepatitis B and C infections.

- To obtain insight in the population and network of (injecting) drug users in Luxembourg, in and outside of the reach of services

Secondary objectives

- To increase diagnostic coverage, linkage to care and treatment for HIV, HBV and HCV

- To investigate the current drug pattern, the number of injections, risk behaviours (including sharing and injecting in group settings), and the ability to obtain and use adequate supplies of sterile injection equipment

- To differentiate sexual transmission from transmission via injection

- To assess the feasibility of pre-exposure prophylaxis (PrEP).

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Inclusion criteria

Current and former people who inject and/or snort drugs from HCV-UD

Age 18 or older

Reside and/or attend frequently drug treatment facilities for at least 6 months in Luxembourg.

Current drug users : someone who injected a drug for non-medical purposes at least once in the last 12 months.

Former/'ever' users: any person who has once in their lifetime injected and/or snorted a drug for non-medical purposes.
Note: *former* users on opioid substitution treatment (OST) under certified supervision.

Recall period: EMCDDA preferred recall period of either 4 weeks or 12 months is used to optimize European comparison.

Additional criteria for seeds: clinical/lab data (HCV Ab positive, with HCV viral load and no treatment, for case finding)

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Design of the respondent driven sampling approach

Sampling procedure

The study targets a hidden and hard to reach population; no sampling frame exists and the population is engaged in illegal behaviour. At the same time, the target population is well connected through their social network, driven by the consumption of illicit drugs. Therefore, a relatively novel form of chain-referral sampling is applied: respondent driven sampling (RDS).

The RDS sampling method includes four essential elements.

Documentation of who recruited whom must be tracked through a coupon system;

Recruitment must be rationed with no more than three coupons allowed per 'seed',

Information on personal network size must be gathered and recorded;

Recruiters and recruits must know one another (have a pre-existing relationship).

Selection of the seeds

- ✓ HIV/HCV risk profile, based on high infectious disease transmission risk, as reported to HCV-UD. Diversity based on sex, age groups, type of drug use, and country of origin is ensured

- ✓ Central role in the network of IDUs in Luxembourg, based on network clusters in the HIV and HCV phylogenetic analysis (the biggest clusters HCV genotype 1a and 3 and the most recent infections

- ✓ Accessibility, based on judgement by study nurse/staff at the low-threshold facilities (study sites), easy to reach

- ✓ HCV-UD participants are asked to recruit additional participants from their network that are not yet taking part in the study: all people who bring a new participants will receive 10 euros (food coupon); People can only be recruited with a coupon once.

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Methodology

Recruitment sites :

- Consumption facilities in Luxembourg and Esch sur Alzette,
- Jugend-an-Drogen-Hellef,
- Centre Hospitalier de Luxembourg,
- 6 medical doctors prescribing OST in Luxembourg

Sample size:

We aim to recruit 100 participants in the drug treatment sites.
The recruitment of seeds and new participants will be evaluated after two recruitment waves.
Recruitment waves are planned for ~1 month periods
Difficulties with the COVID-19 restrictions, 2 nurses, 2 days per week, pilot study ongoing

Data collection: data collection tools based on acknowledged European standards (ref: EMCDDA DRID) and the experience from similar studies performed (ref: DRUCK, ARISTOTLE).

European Monitoring Centre for Drugs and Drug Addiction (2013), DRID Guidance Module: Example questionnaire for bio-behavioural surveys in people who inject drugs, EMCDDA. Lisbon.

Thank you for your attention

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