Reviewer's report

Title: Expanded syringe exchange and reduced HIV infection among new injection drug users in Tallinn, Estonia

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Reviewer: Anya Sarang

Reviewer's report:

This article presents important evidence supporting effectiveness of expanded access to clean syringes in a country with transitional economy, on HIV prevention among injecting drug users. Based on the results of cross-sectional RDS-based HIV prevalence studies and incidence studies in new injectors implemented from 2005 to 2009 it provides evidence for decreased incidence of HIV among recent initiators as well as decrease in proportion of recent initiators in the IDUs.

Minor essential revisions:

I suggest to include a factor of changes (and presumably growth) of ARV treatment availability into the context of reviewing shifts in HIV incidence.

Discretionary Revisions

I would suggest to use the term Needle and Syringe programs, rather than syringe exchange - to adhere to more recent terminology used by WHO etc

Background:

suggest to add some brief info on:
- drug scene in estonia (as in the methods its mentioned that seeds were selected based on the type of drugs)
- on wider structural context (entering EU, ecomonic transition, etc) for people who are not familiar at all with the regional context.
- changes in availability and accessibility of ARV treatment in tallinn in the reviewed period as this theme is dropped out from the analysis while it may be a significant factor for reduced transmission
- availability of HR services in Tallinn would also be useful (eg how many NSP sites, how are they spred geographically, OST etc)
- to support the statement „Estonia’s capacity to manage its response to HIV and AIDS has increased greatly over the past five years“ maybe provide a short illustration

Methods

p. 7 para 1 maybe mention why the questionnairs have been modified and how significant was the difference between the instruments used in different years (or
in limitations if it matters). Same goes for different methods of blood collection (dbs vs vein) if this may have influenced compatibility of the results?

p.9 Table 1. suggest to provide n of IDUs in ARV treatment.

p.9 para 3. methadone treatment available for only approximately 2% of the IDU population - compare against WHO/UNODC recomendation of 40% coverage (WHO Technical Guide) ? WHO, UNODC, UNAIDS

Technical Guide for countries to set targets for universal access to HIV prevention, treatment and care

http://www.who.int/hiv/pub/idu/idu_target_setting_guide.pdf

p.9 para 3 (and table 1) a coverage of 70 or more syringes per IDU per year.
Also if data on n % of population covered with NSP is available throughout the years, it will be interesting to see it as well.

The following statements may need referencing, if available:

P. 4 para 4 maybe reference discussions on level of coverage and various approaches to coverage estimation and refer to the tool that is now conveniently used for that (WHO/UNODC technical guide on target setting)

and also a target indicator of >60% IDUs who accessed an NSP once per month or more in the past 12 months suggested by WHO/UNODC (see technical guide)

P.5 para 2 in many HIV epidemic conditions, all or almost all new injectors will be HIV seronegative when they begin injecting

P.5 para 2 new injectors are often the most difficult subgroup to reach with HIV prevention services

P.5 para 2 they do not identify themselves as drug injectors

in the beginning of the paper the terms „syringe exchange“ and „harm reduction services“ are used interchangebly, also a term „combined programming“ is used in para 4 on page 4. Possibly, it would be good to clear terminology by adding a short explanation with the reference to the WHO technical guide, that harm reduction services include 9 core components, of which NSPs are one.

p. 11 para 1 This clearly contradicts the idea that providing syringe exchange will lead to an increase in people beginning to inject drugs. Maybe better to rephrase it to 'supports evidence from other settings that NSPs do not lead to increase in IDU (w refs)

p. 11 para 1 resistance to large- scale harm reduction remains strong eg Rhodes et al BMJ http://www.bmj.com/content/341/bmj.c3439.extract

Discussions

p. 12 para 2 There is a possible loss of HIV seropositives from the active new injector population, due to ceasing to inject (perhaps because of methadone and/or receiving antiretroviral therapy) – not clear how cease in injecting may be related to receiving of ARV?
discussion of coverage in relation of n of syringes provided to an IDU per year can also be set to support WHO/UNODC technical guide, which describes coverage as:

Low: <100 per IDU per year
Medium: >100–<200
High: >200
(based on studies in developed countries)

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests