

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed.
We post it as supplied by the authors.

Supplement to: Degenhardt L, Peacock A, Colledge S, et al. Global prevalence of injecting drug use and sociodemographic characteristics and prevalence of HIV, HBV, and HCV in people who inject drugs: a multistage systematic review. *Lancet Glob Health* 2017; published online Oct 23. [http://dx.doi.org/10.1016/S2214-109X\(17\)30375-3](http://dx.doi.org/10.1016/S2214-109X(17)30375-3).

Appendices for “Global prevalence of injecting drug use and sociodemographic characteristics and prevalence of HIV, HBV, and HCV in people who inject drugs: a multistage systematic review”

Contents

Appendix 1: GATHER and PRISMA checklists.....	3
1.1 GATHER checklist	3
1.2 PRISMA checklist	4
Appendix 2: Peer Reviewed Literature Search	6
2.1 Medline Search Strategy.....	6
2.2. Embase Search Strategy.....	7
2.3. PsycINFO Search Strategy	10
Appendix 3: Grey Literature Search.....	11
Table 3.1: Websites searched in the grey literature search	12
Appendix 4: First round email and social media requests for information.....	61
4.1 Example email	61
4.2 Example social media request	62
4.3 Twitter engagement statistics	62
Appendix 5: Classification system used in the assessment of study methodologies.....	63
Table 5.1: Classification approach for grading studies	63
Appendix 6: Selection of IDU prevalence estimates.....	64
Appendix 7: Selection and synthesis of HIV and hepatitis estimates.....	65
Table 7.1: Classification system used in the evaluation of study methodologies.....	65
Appendix 8: Decision rules and data extracted from studies of characteristics of people who inject drugs.....	67
Appendix 9: Method of estimating regional and global numbers.....	69
Appendix 10: Grade and sources for country-level estimates of the prevalence of injecting drug use	72
Appendix 11: Grade and sources for country-level estimates of HIV prevalence among people who inject drugs	79
Appendix 12: Grade and sources for country-level estimates of anti-HCV prevalence among people who inject drugs	92

Appendix 13: Grade and sources for country-level estimates of HBsAg prevalence among people who inject drugs	104
Appendix 14a: Source for country-level estimates of sociodemographic and risk characteristics of people who inject drugs	113
Appendix 14b: Source for country-level estimates of sociodemographic and risk characteristics of people who inject drugs	118
Appendix 15: People who provided data or advice regarding the reviews	158

Appendix 1: GATHER and PRISMA checklists

1.1 GATHER checklist

#	GATHER checklist item	Description of compliance	Reference
Objectives and funding			
1	Define the indicators, populations, and time periods for which estimates were made.	Narrative provided in paper and methods appendix describing indicators, definitions, and populations	Manuscript (Methods) and methods appendix
2	List the funding sources for the work.	Funding sources listed in paper	Summary (Funding)
Data Inputs			
<i>For all data inputs from multiple sources that are synthesized as part of the study:</i>			
3	Describe how the data were identified and how the data were accessed.	Narrative description of data seeking methods provided	Manuscript (Methods) and appendix
4	Specify the inclusion and exclusion criteria. Identify all ad-hoc exclusions.	Narrative about inclusion and exclusion criteria by data type provided	Methods appendix
5	Provide information on all included data sources and their main characteristics. For each data source used, report reference information or contact name/institution, population represented, data collection method, year(s) of data collection, sex and age range, diagnostic criteria or measurement method, and sample size, as relevant.	Included in appendix and will be accessible online	Appendix and online web page
6	Identify and describe any categories of input data that have potentially important biases (e.g., based on characteristics listed in item 5).	Discussed in limitations section and in methods appendix	Manuscript and appendix
<i>For data inputs that contribute to the analysis but were not synthesized as part of the study:</i>			
7	Describe and give sources for any other data inputs.	N/A	N/A
<i>For all data inputs</i>			

1.2 PRISMA checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	3-4
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	4
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, where it can be accessed, and, if available, provide registration information including registration number.	5
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	20, appendix
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	5, appendix
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Appendix
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	5-6
Data collection process	10	Describe method of data extraction (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	Appendix
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	Appendix
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	n/a
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	6-7, Appendix
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I ²) for each meta-analysis.	7-8, App.
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	App.
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	n/a
RESULTS			
Study selection	17	Give no. studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	19
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	Appendix
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	n/a
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	n/a
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	30-34, Appendix
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	Appendix
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	App.
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups	13
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	14-15
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	15

Section/topic	#	Checklist item	Reported on page #
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	2, 8

Appendix 2: Peer Reviewed Literature Search

Three peer reviewed literature databases were searched in this exercise: Medline, EMBASE, and PubMed.

Listed below are the different literature and search strategies and terminologies used for each of the different databases. Because different databases use different terminologies and require searching in different ways it was necessary to develop search strategies for each database.

These searches were developed in close consultation with a specialist drug and alcohol archivist and with a generalist university librarian with expertise across all the databases searched.

2.1 Medline Search Strategy

The search strategy was as follows:

- **IDU:** results were restricted to those articles containing terms from Search 1 and 2 (combined using ‘AND’) published 2008-Current and limited to population group: humans.
- **HIV:** results were restricted to those articles containing terms from Search 1 and Search 3 (combined using ‘AND’) published 2008-Current and limited to population group: humans.
- **Hepatitis:** results were restricted to those articles containing terms from Search 1 and Search 4 (combined using ‘AND’) published 2011-Current and limited to population group: humans.

Searches were conducted in April 2016 and updated in May 2017, the latter covering the period from 2016-Current.

Key-words are noted below in regular type, ‘MESH’ (Medical subject heading) terms in **bold**.

Search 1: Injecting drug use

IDU OR IDUs OR PWID OR “injecting drug” OR “intravenous drug” OR “injecting substance” OR “intravenous substance” OR “people who inject drugs” OR “injection drug use” OR **exp substance abuse, intravenous/**

Search 2: Epidemiology

“data collection” OR “population study” OR “population sample” OR “population survey” OR “population surveillance” OR “community sample” OR “rapid assessment” OR “situation\$ assessment” OR “prevalence”

OR “epidemiolog\$” OR “surveillance” OR “screening” OR “seroprevalence” OR “cohort” OR “RAR” OR “statistics” OR exp epidemiologic methods/ OR exp contact tracing/ OR exp data collection/ OR exp health surveys/ OR exp health care surveys/ OR exp interviews, psychological/ OR exp narration/ OR exp questionnaires/ OR exp medical records/ OR exp registries/ OR exp disease notification/ OR exp sentinel surveillance/ OR exp epidemiologic studies/ OR exp cohort studies/ OR exp longitudinal studies/ OR exp follow-up studies/ OR exp prospective studies/ OR exp cross-sectional studies/ OR exp seroepidemiologic studies/ OR exp hiv seroprevalence/ OR exp sampling studies/ OR exp focus groups/ OR exp delphi technique/

Search 3. HIV/AIDS

HIV or AIDS OR HIV/aids OR “Human Immunodeficiency Virus” OR “Human Immune Deficiency Virus” OR “Acquired Immunodeficiency Syndrome” OR “Acquired Immune Deficiency Syndrome” OR exp HIV/ or exp HIV-1/ or exp HIV-2/ or exp HIV infections/ or exp acquired immunodeficiency syndrome/ or HIV seropositivity/ or exp HIV seroprevalence/ or exp AIDS serodiagnosis/

Search 4: Hepatitis

Hepatitis OR exp hepatitis b/ OR exp hepatitis c/

Search 5: IDU and Epidemiology

Hepatitis OR exp hepatitis b/ OR exp hepatitis c/

2.2. Embase Search Strategy

The search strategy was as follows:

- **IDU:** results were restricted to those articles containing terms from Search 1 and 2 (combined using ‘AND’) published 2008-Current and limited to population group: humans.
- **HIV:** results were restricted to those articles containing terms from Search 1 and Search 3 (combined using ‘AND’) published 2008-Current and limited to population group: humans.
- **Hepatitis:** results were restricted to those articles containing terms from Search 1 and Search 4 (combined using ‘AND’) published 2011-Current and limited to population group: humans.

Searches were conducted in April 2016 and updated in May 2017, the latter covering the period from 2016-Current.

Key-words are noted in regular type, ‘EMTREE’ terms in **bold**.

Search 1: Injecting drug use

IDU OR IDUs OR IVDU OR PWID OR “injecting drug” OR “intravenous drug” OR “injecting substance” OR “intravenous substance” OR **exp intravenous drug abuse/ OR exp intravenous drug administration/**

Search 2: Epidemiology

prevalence OR epidemiology OR “data collection” OR survey OR surveillance OR screening OR seroprevalence OR cohort OR “population study” OR “population sample” OR “population survey” OR “population surveillance” OR “community sample” OR RAR OR “rapid assessment” OR “situation assessment” OR statistics OR **Exp community assessment/ OR Exp health survey/ OR Exp mandatory reporting/ OR Exp seroepidemiology/ OR Exp seroprevalence/ OR Exp biostatistics/ OR Exp health statistics/ OR Exp epidemiology/ OR Exp prevalence/ OR Exp epidemiological data/ OR Exp disease registry/ OR Exp feasibility study/ OR Exp field study/ OR Exp observational study/ OR Exp panel study/ OR Exp pilot study/ OR Exp prevention study/ OR Exp trend study/ OR Exp case finding/ OR Exp cohort analysis/ OR Exp exploratory research/ OR Exp multimethod study/ OR Exp quantitative analysis/ OR Exp sample size/ OR Exp medical record review/ OR Exp structured interview/ OR Exp observational method/ OR Exp questionnaire/**

Search 3: HIV

HIV OR AIDS OR HIV/AIDS OR “Human Immunodeficiency Virus” OR “Acquired Immunodeficiency Syndrome” OR “Acquired Immune Deficiency Syndrome” **exp human immunodeficiency virus/ or exp human immunodeficiency virus 1/ or exp human immunodeficiency virus 2/ or exp acquired immune deficiency syndrome/ or exp aids related complex/ or exp acquired immune deficiency syndrome/ or exp aids related complex/ or exp Human Immunodeficiency Virus Infection/ or exp human immunodeficiency virus prevalence/**

Search 4: Hepatitis

Hepatitis OR “hepatitis B virus” OR “hepatitis B” OR HBV OR “hepatitis B antibody” OR “hepatitis B antigen” OR “hepatitis C virus” OR “hepatitis C” OR HCV OR “hepatitis C antibody” OR “hepatitis A” OR “hepatitis A virus” OR “hepatitis A antibody” OR “hepatitis D” OR “hepatitis D virus” OR “hepatitis D antibody” OR “blood-borne virus” OR “blood borne virus” OR BBV OR **exp hepatitis/ OR exp hepatitis c virus/ OR exp hepatitis c/ OR exp hepatitis b virus/ OR exp hepatitis b/ or exp hepatitis A/ OR exp hepatitis A virus/**

2.3. PsycINFO Search Strategy

The search strategy was as follows:

- **IDU:** results were restricted to those articles containing terms from Search 1 and 2 (combined using 'AND') published 2008-Current and limited to population group: humans.
- **HIV:** results were restricted to those articles containing terms from Search 1 and Search 3 (combined using 'AND') published 2008-Current and limited to population group: humans.
- **Hepatitis:** results were restricted to those articles containing terms from Search 1 and Search 4 (combined using 'AND') published 2011-Current and limited to population group: humans.

Searches were conducted in April 2016 and updated in May 2017, the latter covering the period from 2016-Current.

Key-words in regular type, 'PsycINFO thesaurus' terms in **bold**.

Search 1: Injecting drug use

IDU OR IDUs OR IVDU OR PWID OR "injecting drug" OR "injection drug" OR "intravenous drug" OR "injecting substance" OR "intravenous substances" OR "people who inject drugs" **OR exp intravenous injections/ OR exp intravenous drug usage/ OR exp drug self administration/**

Search 2: Epidemiology

prevalence OR seroprevalence OR epidemiolog* OR socioepidemiolog* OR "population study" OR "population survey" OR "population surveillance" OR "community sample" OR "data collection" OR survey OR cohort OR "rapid assessment" OR RAR OR "situation assessment" OR statistics OR household survey OR national survey **OR exp epidemiology/ OR exp data collection/ OR exp questionnaires/ OR exp surveys/ OR exp statistical data/ OR exp statistical samples/ OR exp sampling experimental/ OR exp cohort analysis/ OR exp medical records/ OR exp longitudinal studies/ OR exp followup studies/ OR exp prospective studies**

Search 3: HIV

HIV OR AIDS OR HIV/AIDS OR "Human Immunodeficiency Virus" OR "Acquired Immunodeficiency Syndrome" OR "Acquired Immune Deficiency Syndrome" **exp HIV/ OR exp AIDS**

Search 4: Hepatitis

HBV or HCV or hepatitis OR "hepatitis B" or "hepatitis C" or **exp hepatitis**

Appendix 3: Grey Literature Search

A wide range of online databases and websites were searched for additional information to that collected in the peer reviewed literature (see Table 3.1 below for full list). These databases are crucial sources of information on the epidemiology of injecting drug use and blood-borne virus among injecting drug users because so much of the work in this area appear to be published only in the form of reports. In total, we search 212 websites and databases, including: 114 government organisation and substance use organisation websites; 61 HIV and harm reduction organisation websites, six viral hepatitis databases/organisations, 5 HIV databases, and 26 miscellaneous organisation websites and ongoing study sites. The full technical report of grey literature sources is published elsewhere.¹

Table 3.1: Websites searched in the grey literature search

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Government organisation and substance use organisation websites			
Asia Pacific ATS Information Centre (APAIC) http://www.apaic.org/	Searched website using 'Google Advanced Search' option. Used the terms: 1. Inject drug use 2. Explored SMART publications	1. 3 2. NA	1. 0 2. 6
4 April 2016			Total: 6
Bahrain: Ministry of Health http://www.moh.gov.bh/en/	Searched website using 'Google Advanced Search' option. Used the terms: 1. Inject drug use 2. Explored site for publications and resources. Health info > publications > Department: Pharmacy & Drug Control Directorate	1. 3 2. 2	1. 0 2. 0
4 April 2016			Total: 0
Bangladesh Ministry of Health and Family Welfare http://www.mohfw.gov.bd/	Searched website using 'Google Advanced Search' option. Used the terms: 1. Inject drug use Explored site for publications and resources. Found annual reports; in Bengali, script did not download to Microsoft word properly. Searched most recent document for দ্রব্য (drug). Search of document located 4 matches, translated these instances with google translate and the sections were not relevant.	1. 0	1. 0
4 April 2016			
Bhutan: Ministry of Health http://www.health.gov.bt/	Link to site not working, google search for Bhutan Ministry of Health turns up the same link. The page never loads after clicking on this link.	-	-
4 April 2016			

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Brunei Ministry of Health http://www.moh.gov.bn/	Searched website using search option. Used the terms: 1. Inject drug use Explored site for publications and resources, nothing relevant found.	1. 0	1. 0
4 April 2016			Total: 0
Dangerous Drugs Board: Republic of the Philippines http://www.ddb.gov.ph/	Searched website using 'Google Advanced Search' option. Used the terms: 1. Inject 2. Explored statistics section 3. Explored research section Unable to locate annual reports referenced in Tech Report	1. 0 2. NA 3. NA	1. 0 2. 13 3. 0
4 April 2016			Total: 13
Hong Kong Dept of Health http://www.dh.gov.hk/	Searched website using search option. Used the terms: 1. Inject drug use 2. Explored publications	1. 0 2. NA	1. 0 2. 2
4 April 2016			Total: 2
Iranian National Centre for Addiction Studies (INCAS) http://incas.tums.ac.ir/	Searched website using search option. Used the terms: 1. Injecting drug use 2. IDU 3. Needle OR syringe OR NSP 4. Methadone maintenance OR opioid substitution therapy 5. Voluntary counselling OR voluntary testing OR VCT 6. ART OR HAART OR antiretroviral 7. Condom 8. Hepatitis	1. 6 2. 9 3. 8 4. 7 5. 4 6. 0 7. 5 8. 5	1. 1 2. 1 3. 0 4. 0 5. 0 6. 0 7. 0 8. 0
4 April 2016			

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Total: 2			
Japan - Ministry of Health, Labour and Welfare http://www.mhlw.go.jp/index.html/	Searched website using 'Google Advanced Search' option. Used the terms: 1. Needle and syringe program 2. Opioid substitution treatment 3. Injecting drug user AND condom Explored statistics section and 2015 annual report, found nothing relevant	1. 12 2. 3 3. 6	1. 0 2. 0 3. 0
4 April 2016			Total: 0
Malaysian AIDS Council & Malaysian AIDS Foundation http://www.mac.org.my/	Searched website using 'Google Advanced Search' option. Used the terms: 1. Injecting drug use 2. Opioid substitution OR opioid maintenance 3. VCT OR voluntary testing OR voluntary counselling 4. ART OR HAART OR antiretroviral 5. Condom 6. hepatitis 7. Explored the resources page	1. 20 2. 0 3. 1 4. 19 5. 14 6. 3 7. NA	1. 2 2. 0 3. 0 4. 0 5. 0 6. 0 7. 4
5 April 2016			Total: 6
Maldives: Ministry of Health and family http://www.health.gov.mv/	1. Explored statistics and news sections 2. Research bulletins	1. 0 2. 3	1. 0 2. 0
5 April 2016			Total: 0
Myanmar: Ministry of Health http://www.moh.gov.mm/	Website search option links to general google search. 1. Explored publications section	1. 0	1. 0
5 April 2016	Annual reports and statistical reports make no mention of injecting drug use		

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Total: 0			
Ministry of Public Health of Afghanistan http://www.moph.gov.af/	Website not in English. Searched website using 'Google Advanced Search' option. Used the terms: 1. Inject drug use 2. Explored archived reports and official documents section	1. 15 2. NA	1. 0 2. 1
5 April 2016	OST documents explored; provide policy information and recommendations only		Total: 0
Narcotics Division, Security Bureau Hong Kong http://www.nd.gov.hk/en/index.htm			
Searched website using search option. Used the terms: 1. Opioid substitution 2. Explored treatment and rehabilitation services section 3. Explored drug statistics section			1. 9 2. NA 3. NA
5 April 2016	Explored research section, some old documents look relevant, however download links are broken.		Total: 4
Nai Zindagi Trust Pakistan http://www.naizindagi.com/	1. Explored Publications	1. NA	1. 8
6 April 2016			Total: 8
National Statistics Institutes in Asia http://www.stat.fi/tup/tilvir/julkaisijat_aasia_tilastovirastot_en.html			
Website provided click through options to the statistics bureaus of a number of countries. Each country link was followed and searched using the term "inject drug use": 1. Afghanistan 2. Armenia 3. Azerbaijan 4. Bahrain 5. Bangladesh			1. 10 2. 31 3. 1 4. 0 5. 14
			1. 0 2. 0 3. 1 4. 0 5. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	6. Bhutan 7. Cambodia 8. Cyprus 9. East Timor 10. Georgia 11. Hong Kong 12. India 13. Indonesia 14. Japan 15. Korea 16. Kyrgyzstan 17. Lebanon 18. Macao 19. Malaysia 20. Maldives 21. Nepal 22. Palestine 23. Saudi Arabia 24. Singapore 25. Sri Lanka 26. Taiwan 27. Thailand 28. Turkey 29. Vietnam	6. 0 7. 0 8. 0 9. 0 10. 0 11. 55 12. 0 13. 0 14. 0 15. 0 16. 0 17. 0 18. 0 19. 0 20. 0 21. 0 22. 0 23. 0 24. 0 25. 2 26. 30 27. 2 28. 0 29. 0	6. 0 7. 0 8. 0 9. 0 10. 0 11. 0 12. 0 13. 0 14. 0 15. 0 16. 0 17. 0 18. 0 19. 0 20. 0 21. 0 22. 0 23. 0 24. 0 25. 0 26. 0 27. 0 28. 0 29. 0
6 April 2016	Countries listed on site but not here had broken click through links		Total: 1
Recovering Nepal http://www.recoveringnepal.org.np/	Searched website using 'Google Advanced Search' option. Used the terms: 1. Inject drug use	1. 0	1. 0
7 April 2016	Publications section of site empty		Total: 0
Oman: Ministry of Health http://www.moh.gov.om/	Searched website using 'Google Advanced Search' option. Used the terms 1. Injecting drug use AND needle OR syringe.		

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	<p>2. Injecting drug use AND methadone OR buprenorphine</p> <p>3. Injecting drug use AND antiretroviral therapy</p> <p>4. Injecting drug use and AIDS OR HIV</p> <p>5. Injecting drug use and condoms</p> <p>6. Injecting drug use AND hepatitis</p> <p>7. Explored statistical reports section and annual reports</p>	<p>1. 0</p> <p>2. 0</p> <p>3. 0</p> <p>4. 0</p> <p>5. 0</p> <p>6. 0</p> <p>7. NA</p>	<p>1. 0</p> <p>2. 0</p> <p>3. 0</p> <p>4. 0</p> <p>5. 0</p> <p>6. 0</p> <p>7. 0</p>
7 April 2016			Total: 0
Saudi Arabia Ministry of Health http://www.moh.gov.sa/en/index.php	Searched website using search option. Used the terms: <p>1. Injecting drug use</p> <p>2. People who inject drugs</p> <p>3. Needle OR syringe OR exchange program</p> <p>4. Methadone OR opioid substitution therapy OR maintenance</p> <p>5. Voluntary counselling OR voluntary testing OR VCT</p> <p>6. Antiretroviral OR ART OR HAART</p> <p>7. Condom</p> <p>8. Explored Open Data, Publications and Statistics and Indicators sections</p>	<p>1. 4</p> <p>2. 1</p> <p>3. 20</p> <p>4. 32</p> <p>5. 7</p> <p>6. 2</p> <p>7. 3</p> <p>8. NA</p>	<p>1. 0</p> <p>2. 0</p> <p>3. 0</p> <p>4. 0</p> <p>5. 0</p> <p>6. 0</p> <p>7. 0</p> <p>8. 0</p>
7 April 2016			Total: 0
Singapore Ministry of Health http://www.moh.gov.sg/	Searched website using 'Google Advanced Search' option. Used the terms: <p>1. Injecting drug use</p> <p>2. Needle syringe program</p> <p>3. Voluntary counselling AND injecting drug use</p> <p>4. Antiretroviral AND injecting drug use</p> <p>5. Condom AND injecting drug use</p> <p>6. Searched the publications and statistics page of the website</p>	<p>1. 14</p> <p>2. 9</p> <p>3. 24</p> <p>4. 4</p> <p>5. 10</p> <p>6. NA</p>	<p>1. 1</p> <p>2. 0</p> <p>3. 0</p> <p>4. 0</p> <p>5. 0</p> <p>6. 0</p>

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
7 April 2016			Total: 1
Syrian Arab Republic Ministry of Health http://www.moh.gov.sy/	Searched website using 'Google Advanced Search' option. Used the terms: 1. Inject OR Drug OR IDU 2. Explored statistics section	1. 6 2. NA	1. 0 2. 0
9 April 2016	Website not in English, domain "blocked," unable to access site		Total: 0
Tajikistan Ministry of Health http://www.health.tj/			
9 April 2016			
Thailand Ministry of Public Health http://www.moph.go.th/	Searched website using 'Google Advanced Search' option. Used the terms: 1. Injecting OR drug use OR IDU 2. Explored health situation and trend section	1. 0 2. NA	1. 0 2. 0
9 April 2016			Total: 0
Tunisia Ministère de la santé Publique http://www.santetunisie.rns.tn/	English site not working. Searched website using 'Google Advanced Search' option. Used the terms: 3. "Injectable" (Fr = Inject) OR "Drug"	1. 0	1. 0
9 April 2016	4. Explored health situation and trend section	2. NA	2. 0
			Total: 0
United Arab Emirates Ministry of Health http://www.moh.gov.ae/	Searched website using 'Google Advanced Search' option. Used the terms: 1. Injecting OR drug use OR IDU 2. Explored open data section	1. 0	1. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
9 April 2016		2. NA	2. 0
Australian Government Department of Health http://www.health.gov.au	1. Explored National Drug Strategy Household Survey	1. NA	1. 3
9 April 2016		Total: 0	
Alcohol Advisory Council of New Zealand (ALAC) http://www.alac.org.nz/LibraryCatalogue.aspx	Searched website using website search feature: 1. Inject drug use	1. 2	1. 0
9 April 2016		Total: 3	
DrugInfo Clearinghouse library – Australian Drug Foundation http://www.druginfo.adf.org.au	Searched website using website search feature: 1. Inject drug use 2. Explored publications section	1. 57 2. NA	1. 1 2. 0
9 April 2016		Total: 0	
Republic of Korea: Centers for Disease Control and Prevention http://www.cdc.go.kr/	Explored English section of website, no search option. Explored Korean site using search tool: 1. 주입 (inject) 2. 약 (drug)	1. 0 2. 3	1. 0 2. 0
9 April 2016		Total: 1	
Fiji: Ministry of Health http://www.health.gov.fj/	Used website search feature: 1. Inject drug 2. Explored publications section 3. Explored data repository	1. 2 2. NA 3. NA	1. 0 2. 0 3. 0
9 April 2016		Total: 0	

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
National Statistics Institute in Oceania http://www.stat.fi/tup/tilvir/julkaisijat_oceania_tilastovirastot_en.html	Website provided click through options to the statistics bureaus of a number of countries. Each country link was followed and searched using the term "inject drug use": 1. Australia 2. Fiji 3. Guam 4. Pacific Island Countries 5. New Caledonia 6. New Zealand 7. Northern Mariana Islands 8. Samoa 9. Vanuatu	1. 28 2. 0 3. 0 4. 0 5. 0 6. 2 7. 0 8. 0 9. 0	1. 0 2. 0 3. 0 4. 0 5. 0 6. 0 7. 0 8. 0 9. 0
9 April 2016			Total: 0
Samoa: Ministry of Health http://www.health.gov.ws/	Used website search feature: 1. Inject drug 2. Explored publications section	1. 0 2. NA	1. 0 2. 0
9 April 2016	Reports mention negligible levels of IDU in Samoa, but offer no further statistics		Total: 0
Caribbean Public Health Agency http://carpha.org/	Used website search feature: 1. Inject drug 2. Explored publications section	1. 15	1. 0
9 April 2016	Section on statistics not available to public access. Was unable to create an account to gain access. Mentions of substance abuse but no statistics.		Total: 0
Andorra: Ministry of Health and Welfare http://www.salutibenestar.ad	Site not in English. Search the following terms 1. Inyectar (Catalan = inject) 2. Drogar (Catalan = drug)	1. 0 2. 1	1. 0 2. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	3. Explored national plan against drug addiction 4. Explored publications	3. NA 4. NA	3. 0 4. 0
11 April 2016			Total: 0
Austria: Federal Ministry for Health & Women http://www.bmwf.gv.at	Explored English site. 1. Explored drug publications Some publications in German	1. NA	1. 6
11 April 2016			Total: 6
Belgium: Scientific Institute of Public Health http://www.iph.fgov.be	Explored English site using search option: 1. Inject drug use 2. Explored publications section.	1. 5 2. NA	1. 0 2. 0
11 April 2016	Only report from 2004-5		Total: 0
Bulgaria: Ministry of Health www.mh.government.bg	Website in Bulgarian, used google translate to navigate. Used website search option using term: 1. инжектирам (inject) 2. Explored official bulletin section using term лекарство (drug)	1. 0 2. NA	1. 0 2. 0
11 April 2016			Total: 0
Chile: Ministry of Health http://www.minsal.cl/	Website in Spanish, used google translate to navigate. Used website search option using term: 1. abuso de drogas (drug abuse) 2. Explored publications/reports section	1. 0 2. 0	1. 0 2. NA
11 April 2016			Total: 0
Croatia: Ministry of Health and Social Welfare http://www.mzss.hr/	Website in Croatian, used google translate to navigate. Used website search option using term: 1. droga (drug) 2. Searched within documents for "droga"	1. 25 2. 4	1. 0 2. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
11 April 2016			Total: 0
Cyprus: Ministry of Health http://www.moh.gov.cy	Searched English version of website. Used website search option using term: 1. drug	1. 6	1. 0
11 April 2016			Total: 0
New Zealand: Ministry of Health http://www.moh.govt.nz/	Used search option within publications section. Used the terms: 1. Inject drug use Used google advanced search option. Used terms: 2. Inject drug use AND AIDS 3. Inject drug use AND hepatitis	1. 56 2. 114 3. 114	1. 1 2. 2 3. 0
11 April 2016			Total: 3
Alcohol Concern (UK) http://www.alcoholconcern.org.uk/services/home	Used search option within website. Used terms: 1. Inject drug 2. Explore publication section	1. 1 2. NA	1. 0 2. 0
11 April 2016			Total: 0
Centre for Drug Research, University of Amsterdam, the Netherlands http://www.cedro-uva.org/index.html	Used search option within website. Used terms: 1. Inject drug Centre discontinued in 2004. No statistics/publications concerning data after then.	1. 9	1. 0
11 April 2016			
Czech Republic: Ministry of Health http://www.mzcr.cz/	Explored English version of site. Used site search tool. Used terms: 1. Inject drug	1. 0	1. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
<u>12 April 2016</u>	2. Vstříknout (inject) 3. Lék (drug)	2. 0 3. 19	2. 0 3. 0
			Total: 0
Czech Republic: National Institute of Public Health (NIPH) http://www.szu.cz	Explored English version of site. Used site search tool. Used terms: 1. Inject drug 2. Explore publications; no new data on diseases (HIV/AIDS) since 2008	1. 14 2. NA	1. 0 2. 0
<u>12 April 2016</u>			Total: 0
Department of Health, England http://www.dh.gov.uk/en/index.htm	1. Explored People Who Inject Drugs section of site 2. Explored publications section	1. NA 2. NA	1. 16 2. 1
<u>12 April 2016</u>			Total: 17
Denmark: Ministry of Health and Prevention http://www.sum.dk	Explored English version of website. Used website search tool. Used the terms: 1. injicere narkotika (inject drug) 2. Searched publications section	1. 1 2. NA	1. 1 2. 1
<u>13 April 2016</u>			Total: 2
Denmark: Statens Serum Institute http://www.ssi.dk	Searched website using google translate. Used the terms: 1. Narkotika (drug) 2. Searched publications section for term 'narkotika'	1. 3 2. 0	1. 0 2. 0
<u>13 April 2016</u>			Total: 0
Drug Misuse Information, Scotland www.drugmisuse.isdscotland.org	1. Explored the Drug > Data section	1. NA	1. 3
<u>13 April 2016</u>			

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Total: 3			
DrugWise (formerly DrugScope UK) http://www.drugwise.org.uk/ <u>13 April 2016</u>	1. Explored reports and drug sections	1. NA	1. 2
Total: 2			
Estonia: National Institute for Health Development http://www.narko.ee/ <u>13 April 2016</u>	Explored site using google translate. Used website search term. Used the terms: 1. uimasti (drug) 2. statistika (statistics) 3. HIV	1. 10 2. 4 3. 8	1. 0 2. 0 3. 0
Total: 0			
European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) http://www.emcdda.europa.eu/ http://www.emcdda.europa.eu/html.cfm/index403EN.html <u>14 April 2016</u>	1. Explored publications section using search term “inject drug use” after 2008 Explored links as best as possible. Majority of PDFs failed to load off of EMCDDA website so had to screen reports based solely on title and look for alternate sources for the PDFs.	1. 433	1. 160
Total: 160			
Finland: Ministry of Social Affairs and Health http://www.stm.fi/ <u>15 April 2016</u>	Explored English version of website. Used website search option. Used the terms: 1. pistää lääke 2. lääke 3. Explored publications section	1. 1 2. 94 3. NA	1. 0 2. 0 3. 0
Total: 0			

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
French Monitoring Centre for Drugs and Drug Addiction ("Observatoire Français des Drogues et des Toxicomanies": OFDT) http://en.ofdt.fr/publications	1. Explored publications section	1. NA	1. 11
<u>15 April 2016</u>			Total: 11
France: Institut de veille sanitaire http://www.invs.sante.fr	Explored English version of site. Used website search option. Used terms: 1. Inject drug use (2008-2014)	1. 14	1. 0
<u>15 April 2016</u>	Most documents on this site are from the peer-reviewed literature.		Total: 0
Germany: Robert Koch-Institut http://www.rki.de/EN/Home/homepage_node.html	Explored English version of site. Used website search option. Used terms: 1. Inject drug use 2. Explored publications section	1. 27 2. NA	1. 0 2. 0
<u>15 April 2016</u>	Most documents on this site are from the peer-reviewed literature.		Total: 0
Germany: The Federal Ministry of Health http://www.bmg.bund.de/en.html	Explored English version of site. Used website search option. Used terms: 1. Inject drug use	1. 2	1. 1
<u>15 April 2016</u>			Total: 1
Public Health England https://www.gov.uk/government/organisations/public-health-england	Exploration of website showed same documents as the Department of Health, England site. Searched above on 12 April 2016. A brief search of publications for the term "people who inject drugs" was undertaken. No new documents were located.		
<u>15 April 2016</u>			
Health Protection Scotland http://www.hps.scot.nhs.uk	Searched website using the following terms: 1. Inject drug use	1. 0	1. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	2. Drug misuse	2. 34	2. 5
<u>15 April 2016</u>	3. Search publications section	3. NA	3. 0
Total: 5			
Iceland: Directorate of Health http://www.landlaeknir.is/	Explored English version of site. Used website search option. Used terms: 1. sprauta lyfinu (inject drug)	1. 87	1. 0
<u>15 April 2016</u>			
Total: 0			
National Centre of Addiction Medicine Iceland http://www.saa.is	Explored English version of site. Used website search option. Used terms: 1. sprauta lyfinu (inject drug)	1. 1	1. 0
<u>15 April 2016</u>			
Total: 0			
Israel: Ministry of Health http://www.health.gov.il	Used google translate to explore website. Used website search. Used terms: 1. תרופה (drug)	1. 0	1. 0
<u>15 April 2016</u>			
Total: 0			
Italy: Istituto Superiore di Sanità http://www.iss.it	Used google translate to explore website.		
	1. Explored “drug” section of website.	1. NA	1. 0
<u>18 April 2016</u>			
Total: 0			
Life Quality Improvement Organisation (LET) Croatia http://www.udruga-let.hr	Only relevant documents were links to EMCDDA documents. No search option and all click through links for addiction were non-functional.		
<u>18 April 2016</u>			
Lithuania: Ministry of Health http://www.sam.lt/	Explored English version of site. Used website search option. Used terms: 1. inject 2. people who inject drugs	1. 7	1. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
<u>18 April 2016</u>		2. 4	2. 0
<u>18 April 2016</u>			Total: 0
Luxembourg: Direction de la Santé http://www.ms.etat.lu	Used google translate to explore website.		
1. Searched publications			1. NA
<u>18 April 2016</u>			Total: 7
Malta: Ministry of Social Policy http://www.sahha.gov.mt/pages.aspx	Explored website using search option. Used terms: 1. inject drug	1. 0	1. 0
<u>18 April 2016</u>			Total: 0
Ministry of Healthcare Armenia http://www.moh.am	Used google translate to explore website. Used search option with the following terms: 1. դեղ (drug)	1. 0	1. 0
<u>18 April 2016</u>			Total: 0
Ministry of Health of the Republic of Belarus (MH RB) http://www.minzdrav.by/	Used google translate to explore website. Used search option with the following terms: 1. лекарственный (drug)	1. 1	1. 0
<u>18 April 2016</u>			Total: 0
National Institute for Public Health & the Environment, Netherlands http://www.rivm.nl	Explored English version of website. Used search option with the following terms: 1. inject drug 2. Search publications for “inject drug”	1. 7 2. 42	1. 0 2. 0
<u>18 April 2016</u>	A lot of publications on site are from peer-reviewed literature. Grey literature reports on the site were all pre 2008.		Total: 0
National Statistics Institutes in Europe http://www.stat.fi/tup/tilvir/julkaisijat_eurooppa_tilastovirastot_en.html	Website provided click through options to the statistics bureaus of a number of countries. Each country link was followed and searched using the term “inject drug use”:		

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	1. Albania	1. 0	1. 0
	2. Andorra	2. 0	2. 0
	3. Austria	3. 0	3. 0
	4. Belarus	4. 0	4. 0
	5. Belgium	5. 0	5. 0
	6. Bosnia and Herzegovnia	6. 1	6. 0
	7. Bulgaria	7. 0	7. 0
	8. Croatia	8. 0	8. 0
	9. Czech Republic	9. 0	9. 0
	10. Denmark	10. 0	10. 0
	11. Estonia	11. 0	11. 0
	12. Finland	12. 27	12. 0
	13. France	13. 5	13. 0
	14. Gibraltar	14. 0	14. 0
	15. Greenland	15. 0	15. 0
	16. Hungary	16. 0	16. 0
	17. Iceland	17. 1	17. 0
	18. Ireland	18. 0	18. 0
	19. Italy	19. 1	19. 0
	20. Kosovo	20. 0	20. 0
	21. Latvia	21. 0	21. 0
	22. Lithuania	22. 0	22. 0
	23. Luxembourg	23. 0	23. 0
	24. Macedonia	24. 0	24. 0
	25. Malta	25. 0	25. 0
	26. Monaco	26. 0	26. 0
	27. Moldova	27. 0	27. 0
	28. Montenegro	28. 0	28. 0
	29. Netherlands	29. 0	29. 0
	30. Norway	30. 0	30. 0
	31. Poland	31. 0	31. 0
	32. Portugal	32. 1	32. 0
	33. Romania	33. 0	33. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
<u>18 April 2016</u>	34. Russia 35. San Marino 36. Serbia 37. Slovakia 38. Slovenia 39. Spain 40. Sweden 41. Switzerland 42. Ukraine 43. UK	34. 0 35. 0 36. 0 37. 12 38. 2 39. 2 40. 5 41. 0 42. 12 43. 20	34. 0 35. 0 36. 0 37. 0 38. 0 39. 0 40. 0 41. 0 42. 3 43. 0
<u>Netherlands: Ministry of Health, Welfare and Sport http://english.minvws.nl/en/</u>	Countries listed on site but not here had broken click through links Explored site using google translate option. Used search terms: 1. injecteert drugs		Total: 3 1. 2 1. 1
<u>19 April 2016</u>			Total: 1
<u>Nordic Centre for Alcohol and Drug Research http://www.nad.fi/index.php?lang=en&id=publications</u>	Explored site using google advance search using the following search terms: 1. pistää lääke (inject drug) 2. inject drug	1. 0 2. 0	1. 0 2. 0
<u>19 April 2016</u>	Explored publications section, nothing relevant found.		Total: 0
<u>Norway: Directorate of Health http://www.shdir.no/</u>	Link not functional.		
<u>19 April 2016</u>			
<u>Norwegian Institute of Public Health (NIPH) http://www.fhi.no</u>	Explored site using google translate option. Used search terms: 1. injisere narkotika	1. 39	1. 0
<u>19 April 2016</u>			Total: 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Poland: National Institute of Public Health, National Institute of Hygiene http://www.pzh.gov.pl/en/	Explored site using google advance search using the following search terms: 1. inject drug 2. wstrzyknąć lek (inject drug)	1. 0 2. 0	1. 0 2. 0
<u>19 April 2016</u>			Total: 0
Russian Federation: Ministry of Health and Social Development http://www.mednet.ru/en.html	Explored site using google advance search using the following search terms: 1. inject drug 2. вводят препарат (inject drug)	1. 1 2. 1	1. 0 2. 0
<u>19 April 2016</u>			Total: 0
Norwegian Institute for Public Health https://www.cristin.no/as/WebObjects/cristin.woa/2/wa/fres?erNordisk=1&erUkje nt=1&inst=7499&visParametre=1&action=sok&erNasjonalt=1&la=en&hkat=TIDSSKRI FTPUBL&hkat=FOREDRAG&hkat=BOK&hka t=RAPPORT&hkat=BOKRAPPORTDEL&hkat =OVERSETTELSESARB&hkat=MEDIEBIDRA G&hkat=KOMMERSIALISERIN&hkat=UTSTI LLING&hkat=KUNST_PRODUKSJON&hkat= PRODUKT&hkat=INFORMASJONSMATR&erInternasjonal=1&ar fra=2000&erNorsk=1&sort=ar&bs=50	Tried to work search option, tried “inject drug,” “drug,” and “inject.” Search results indicated that there were no results, but this seems unlikely. Assuming the search feature is presently broken.		
<u>19 April 2016</u>			
Slovenia: Ministerstvo za zdravje http://www.mz.gov.si/	Explored English version of website. Used search terms: 1. inject drug 2. injicirati zdravilo (inject drug)	1. 2 2. 0	1. 1 2. 0
<u>20 April 2016</u>			Total: 1
Slovakia: Ministerstvo zdravotníctva	Explored English version of website. Used search terms:		

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
http://www.health.gov.sk/Index.aspx <u>20 April 2016</u>	1. inject drug 2. aplikovať drogu (inject drug)	1. 9 2. 9	1. 0 2. 0
 Spain: Instituto de Salud Carlos III	Explored English version of website. Used search terms:		Total: 0
http://www.isciii.es <u>20 April 2016</u>	1. inject drug 2. inyectarse drogas	1. 0 2. 0	1. 0 2. 0
 Sweden: Ministry of Health and Social Affairs	Explored site using search option. Used the terms:		Total: 0
http://www.government.se/government-of-sweden/ministry-of-health-and-social-affairs/ <u>20 April 2016</u>	1. inject drug 2. drug	1. 0 2. 33	1. 0 2. 0
 Switzerland: Federal Office of Public Health (FOPH)	Used google advanced search option. Used terms:		Total: 0
http://www.bag.admin.ch/index.html?lang=en <u>20 April 2016</u>	1. inject drug use 2. Explored 'drug' section of website	1. 0 2. NA	1. 0 2. 1
 Turkey: Ministry of Health	Used google advanced search option. Used terms:		Total: 1
http://www.saglik.gov.tr <u>20 April 2016</u>	1. ilaç enjekte 2. inject drug	1. 0 2. 0	1. 0 2. 0
 African Development Bank Group (African Development Bank, The African Development Fund and The Nigeria Trust Fund)	Used google advanced search option. Used terms:		Total: 0
http://www.afdb.org/en/	1. inject drug 2. Drug addiction	1. 11 2. 3	1. 1 2. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
<u>21 April 2016</u>	Explored publications and annual reports section. Found nothing relevant to injecting drug users.		
AIDS Foundation South Africa http://www.aids.org.za/index.htm	Used google advanced search option. Used terms: 1. inject drug 2. inject 3. drug 4. needle	1. 1 2. 1 3. 5 4. 0	1. 0 2. 0 3. 0 4. 0
<u>21 April 2016</u>	Explored publications and annual reports section. Found nothing relevant to injecting drug users.		Total: 1
Egypt: Ministry of Health and Population http://www.mohp.gov.eg/	Used google advanced search option. Used terms: 1. عقار (drug) 2. إدمان (addiction)	1. 23 2. 0	1. 0 2. 0
<u>21 April 2016</u>	Explored publications and annual reports section. Found nothing relevant to injecting drug users.		Total: 0
Mauritius: Ministry of Health and Quality of Life http://health.govmu.org/English/the-ministry/Pages/default.aspx	Used google advanced search option. Used terms: 1. Inject drug 2. Drug 3. Drug abuse 4. Explored publications section	1. 0 2. 16 3. 5 4. NA	1. 0 2. 0 3. 0 4. 4
<u>21 April 2016</u>	Explored publications and annual reports section. Found nothing relevant to injecting drug users.		Total: 0
Mauritius National Agency For The Treatment And Rehabilitation of Substance Abusers (NATRESA) http://natresa.govmu.org/English/Pages/default.aspx	Used google advanced search option. Used terms: 1. Inject drug 2. Inject 3. Explored statistics section	1. 0 2. 4 3. NA	1. 0 2. 0 3. 2
<u>21 April 2016</u>	Explored publications and annual reports section. Found nothing relevant to injecting drug users.		Total: 4
21 April 2016	Explored publications and annual reports section. Found nothing relevant to injecting drug users.		Total: 2

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved																																																																																										
National Statistical Institutes in Africa http://www.stat.fi/tup/tilvir/julkaisijat_afrinkka_tilastovirastot_en.html	<p>Website provided click through options to the statistics bureaus of a number of countries. Each country link was followed and searched using the term “drug” (or appropriate language equivalent):</p> <table> <tbody> <tr><td>1. Algeria</td><td>1. 0</td><td>1. 0</td></tr> <tr><td>2. Benin</td><td>2. 1</td><td>2. 0</td></tr> <tr><td>3. Botswana</td><td>3. 0</td><td>3. 0</td></tr> <tr><td>4. Burkina Faso</td><td>4. 4</td><td>4. 0</td></tr> <tr><td>5. Cameroon</td><td>5. 0</td><td>5. 0</td></tr> <tr><td>6. Cape Verde</td><td>6. 1</td><td>6. 1</td></tr> <tr><td>7. Central African Republic</td><td>7. 0</td><td>7. 0</td></tr> <tr><td>8. Congo</td><td>8. 0</td><td>8. 0</td></tr> <tr><td>9. Cote d'Ivoire</td><td>9. 4</td><td>9. 1</td></tr> <tr><td>10. Djibouti</td><td>10. 4</td><td>10. 0</td></tr> <tr><td>11. Egypt</td><td>11. 0</td><td>11. 0</td></tr> <tr><td>12. Equatorial Guinea</td><td>12. 0</td><td>12. 0</td></tr> <tr><td>13. Gabon</td><td>13. 0</td><td>13. 0</td></tr> <tr><td>14. Gambia</td><td>14. 0</td><td>14. 0</td></tr> <tr><td>15. Ghana</td><td>15. 0</td><td>15. 0</td></tr> <tr><td>16. Guinea</td><td>16. 2</td><td>16. 0</td></tr> <tr><td>17. Guinea-Bissau</td><td>17. 3</td><td>17. 0</td></tr> <tr><td>18. Kenya</td><td>18. 37</td><td>18. 0</td></tr> <tr><td>19. Lesotho</td><td>19. 8</td><td>19. 0</td></tr> <tr><td>20. Liberia</td><td>20. 1</td><td>20. 1</td></tr> <tr><td>21. Malawi</td><td>21. 0</td><td>21. 0</td></tr> <tr><td>22. Mali</td><td>22. 0</td><td>22. 0</td></tr> <tr><td>23. Mauritania</td><td>23. 0</td><td>23. 0</td></tr> <tr><td>24. Mauritius</td><td>24. 0</td><td>24. 0</td></tr> <tr><td>25. Morocco</td><td>25. 33</td><td>25. 1</td></tr> <tr><td>26. Mozambique</td><td>26. 4</td><td>26. 0</td></tr> <tr><td>27. Namibia</td><td>27. 0</td><td>27. 0</td></tr> <tr><td>28. Niger</td><td>28. 4</td><td>28. 0</td></tr> <tr><td>29. Nigeria</td><td>29. 15</td><td>29. 0</td></tr> <tr><td>30. Rwanda</td><td>30. 3</td><td>30. 0</td></tr> </tbody> </table>	1. Algeria	1. 0	1. 0	2. Benin	2. 1	2. 0	3. Botswana	3. 0	3. 0	4. Burkina Faso	4. 4	4. 0	5. Cameroon	5. 0	5. 0	6. Cape Verde	6. 1	6. 1	7. Central African Republic	7. 0	7. 0	8. Congo	8. 0	8. 0	9. Cote d'Ivoire	9. 4	9. 1	10. Djibouti	10. 4	10. 0	11. Egypt	11. 0	11. 0	12. Equatorial Guinea	12. 0	12. 0	13. Gabon	13. 0	13. 0	14. Gambia	14. 0	14. 0	15. Ghana	15. 0	15. 0	16. Guinea	16. 2	16. 0	17. Guinea-Bissau	17. 3	17. 0	18. Kenya	18. 37	18. 0	19. Lesotho	19. 8	19. 0	20. Liberia	20. 1	20. 1	21. Malawi	21. 0	21. 0	22. Mali	22. 0	22. 0	23. Mauritania	23. 0	23. 0	24. Mauritius	24. 0	24. 0	25. Morocco	25. 33	25. 1	26. Mozambique	26. 4	26. 0	27. Namibia	27. 0	27. 0	28. Niger	28. 4	28. 0	29. Nigeria	29. 15	29. 0	30. Rwanda	30. 3	30. 0		
1. Algeria	1. 0	1. 0																																																																																											
2. Benin	2. 1	2. 0																																																																																											
3. Botswana	3. 0	3. 0																																																																																											
4. Burkina Faso	4. 4	4. 0																																																																																											
5. Cameroon	5. 0	5. 0																																																																																											
6. Cape Verde	6. 1	6. 1																																																																																											
7. Central African Republic	7. 0	7. 0																																																																																											
8. Congo	8. 0	8. 0																																																																																											
9. Cote d'Ivoire	9. 4	9. 1																																																																																											
10. Djibouti	10. 4	10. 0																																																																																											
11. Egypt	11. 0	11. 0																																																																																											
12. Equatorial Guinea	12. 0	12. 0																																																																																											
13. Gabon	13. 0	13. 0																																																																																											
14. Gambia	14. 0	14. 0																																																																																											
15. Ghana	15. 0	15. 0																																																																																											
16. Guinea	16. 2	16. 0																																																																																											
17. Guinea-Bissau	17. 3	17. 0																																																																																											
18. Kenya	18. 37	18. 0																																																																																											
19. Lesotho	19. 8	19. 0																																																																																											
20. Liberia	20. 1	20. 1																																																																																											
21. Malawi	21. 0	21. 0																																																																																											
22. Mali	22. 0	22. 0																																																																																											
23. Mauritania	23. 0	23. 0																																																																																											
24. Mauritius	24. 0	24. 0																																																																																											
25. Morocco	25. 33	25. 1																																																																																											
26. Mozambique	26. 4	26. 0																																																																																											
27. Namibia	27. 0	27. 0																																																																																											
28. Niger	28. 4	28. 0																																																																																											
29. Nigeria	29. 15	29. 0																																																																																											
30. Rwanda	30. 3	30. 0																																																																																											

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	31. São Tomé and Príncipe 32. Seychelles 33. Senegal 34. South Africa 35. Sudan 36. Swaziland 37. Tanzania 38. Togo 39. Tunisia 40. Uganda (narrowed search to “inject drug”) 41. Zambia (narrowed search to “inject drug”) 42. Zimbabwe	31. 0 32. 0 33. 23 34. 0 35. 1 36. 9 37. 1 38. 13 39. 0 40. 7 41. 5 42. 7	31. 0 32. 0 33. 2 34. 0 35. 0 36. 0 37. 1 38. 2 39. 0 40. 0 41. 0 42. 0
<u>22 April 2016</u>			Total: 9
Nicaragua: Ministerio de Salud http://www.minsa.gob.ni/	Used google translate and advanced search to explore website. Used the terms: 1. Drogen (drug) Most links from this search were broken	1. 8	1. 0
<u>23 April 2016</u>	Explored health statistics section, found nothing relevant.		Total: 0
South African Ministries of Health http://www.doh.gov.za	Used google advanced search to explore website. Used the following terms: 1. Inject drug 2. Drug 3. Explored documentation > HIV	1. 0 2. 12 3. NA	1. 0 2. 0 3. 0
<u>23 April 2016</u>			Total: 0
South African Community Epidemiology Network on Drug Use (SACENDU) http://www.mrc.ac.za/adarg/sacendu.htm	No search option on site and google advanced search only brought up the single link back to the pages main site. 1. Browsed publications, technical report section	1. NA	1. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
<u>23 April 2016</u>			Total: 0
Sudan: Ministry of Health http://www.fmoh.gov.sd/	Used google translate and advanced search to explore website. Used the terms: 1. Inject drug 2. عقار (drug)	1. 2 2. 2	1. 0 2. 0
<u>23 April 2016</u>			Total: 0
National Statistics Institutes in the Americas http://www.stat.fi/tup/tilvir/julkaisijat_a_merikka_tilastovirastot_en.html	Website provided click through options to the statistics bureaus of a number of countries. Each country link was followed and searched using the term "drug" (or appropriate language equivalent): 1. Anguilla 2. Argentina 3. Aruba 4. Bahamas 5. Barbados 6. Belize 7. Bermuda 8. Bolivia 9. Brazil 10. Virgin Islands 11. Canada 12. Chile 13. Colombia (search narrowed to "inyectar droga") 14. Costa Rica (search narrowed to "inyectar droga") 15. Cuba 16. Dominican Republic 17. Ecuador 18. El Salvador 19. Greenland 20. Haiti	1. 0 2. 0 3. 0 4. 0 5. 0 6. 0 7. 66 8. 0 9. 0 10. 0 11. 70 12. 48 13. 18 14. 5 15. 0 16. 4 17. 0 18. 11 19. 2 20. 3	1. 0 2. 0 3. 0 4. 0 5. 0 6. 0 7. 0 8. 0 9. 0 10. 0 11. 0 12. 0 13. 0 14. 0 15. 0 16. 0 17. 0 18. 0 19. 0 20. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	21. Mexico (search narrowed to "inyectar droga") 22. Nicaragua 23. Panama 24. Paraguay 25. Peru (search narrowed to "inyectar droga") 26. Puerto Rico 27. Suriname 28. Trinidad and Tobago 29. Uruguay 30. Venezuela	21. 16 22. 4 23. 27 24. 15 25. 45 26. 0 27. 2 28. 0 29. 6 30. 3	21. 0 22. 0 23. 0 24. 1 25. 0 26. 0 27. 0 28. 0 29. 0 30. 0
26 April 2016			Total: 1
Honduras: Secretaria de Salud http://www.salud.gob.hn	Used google translate and advanced search to explore website. Used the terms:		
27 April 2016	1. Drogen (drug) 2. HIV	1. 5 2. 14	1. 0 2. 0
			Total: 0
Inter-American Drug Abuse Control Commission (CICAD) http://www.cicad.oas.org/Main/default_E_NG.asp	Used google advanced search to explore website. Used the terms:		
27 April 2016	1. Inject drug 2. HIV 3. Hepatitis 4. Explored publications and annual reports section	1. 0 2. 0 3. 0 4. NA	1. 0 2. 0 3. 0 4. 0
			Total: 0
Inter-American Observatory on Drugs http://www.cicad.oas.org/OID/ http://www.oas.org/en/information_center/publications.asp	Links to website above. Explored 'drug data indicators per country section' section. Looked through each country listed. Drug data not supplied for typical drugs of injection (heroin, methamphetamine etc.) No data on injecting drug use.		
27 April 2016			Total: 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Panama: Ministerio de Salud http://www.minsa.gob.pa/	Used google translate and advanced search to explore website. Used the terms: 1. Inyectar droga + HIV (inject drug + HIV) 2. Inyectar droga + hepatitis (inject drug + hepatitis) 3. Explored indicators and statistics sections	1. 5 2. 28 3. NA	1. 0 2. 0 3. 0
<u>27 April 2016</u>			Total: 0
Paraguay: Ministerio de Salud Pública y Bienestar Social http://www.mspbs.gov.py/	Used google translate and advanced search to explore website. Used the terms: 1. Inyectar droga 2. Explored epidemiological bulletins and documentation	1. 36 2. NA	1. 0 2. 1
<u>27 April 2016</u>			Total: 1
Uruguay: Ministerio de Salud Pública http://www.msp.gub.uy/	Used google translate and advanced search to explore website. Used the terms: 1. Inyectar droga Attempted to explore publications section, but all relevant options were empty (STI, epidemiology)	1. 18	1. 0
<u>29 April 2016</u>			Total: 0
CDC Behavioural Risk Factor Surveillance System (BRFSS) http://www.cdc.gov/brfss/	No information on illicit drug use.		
<u>29 April 2016</u>			
Bureau of Justice Statistics www.bjs.gov	All drug and BBV statistics relate only to prison populations. No general population data.		
<u>29 April 2016</u>			
CDC Centers for Disease Control and Prevention (US) http://www.cdc.gov/	1. Explored “people who inject drugs and viral hepatitis” section 2. Explored “HIV and people who inject drugs” section	1. NA 2. NA	1. 7 2. 7

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
29 April 2016			Total: 14
Canadian Centre on Substance Abuse (CCSA) http://www.ccsa.ca/Pages/default.aspx	<ol style="list-style-type: none"> 1. Searched in publications for “inject drug” 2. Searched in publications for “hepatitis” 3. Searched in publications for “HIV” 	1. 17 2. 30 3. 49	1. 2 2. 0 3. 0
2 May 2016			Total: 2
Canadian Community Epidemiology Network on Drug Use (CCENDU) http://www.ccsa.ca/Eng/collaboration/CCENDU/Pages/default.aspx	Links to CCSA website above. Searches from CCSA search included CENDU reports. Nothing new to explore.		
2 May 2016			
Community Epidemiology Work Group (CEWG) (part of the National Institute on Drug Abuse - NIDA) - now National Drug Early Warning System (NDEWS) https://www.drugabuse.gov/related-topics/trends-statistics/national-drug-early-warning-system-ndews	<ol style="list-style-type: none"> 1. Explored trends and statistics section of publications 2. Explored HIV or AIDS section of publications <p>Searched through abstract database with the term “injecting” for years</p> <ol style="list-style-type: none"> 3. 2009 4. 2010 5. 2011 6. 2012 7. 2013 8. 2014 9. 2015 10. 2016 	1. 6 2. 2 3. 4 4. 2 5. 8 6. 1 7. 1 8. 2 9. 2 10. 0	1. 0 2. 0 3. 3 4. 0 5. 4 6. 0 7. 0 8. 0 9. 0 10. 0
2 May 2016			Total: 7
DAWN: Drug Abuse Warning Network (US) http://www.samhsa.gov/data/	Explored data section of website. Explored the following sections:		
	<ol style="list-style-type: none"> 1. Heroin 2. Injecting drug use 3. Infectious disease 	1. NA 2. NA 3. NA	1. 0 2. 0 3. 0
2 May 2016			

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	Report mentions of injecting drug use focus on whether the participant ever has injected, not whether they are an IDU.		Total: 0
Monitoring the Future http://monitoringthefuture.org/	1. Explored monographs and reports section	1. NA	1. 0
2 May 2016	Report mentions of injecting drug use focus on whether the participant ever has injected, not whether they are an IDU.		Total: 0
National Centre on addiction and Substance Abuse at Columbia University (CASA) http://www.centeronaddiction.org/	Explored website using google advanced search. Used term: 1. Inject drug 2. Explored reports on “illegal drug addiction”	1. 10 2. 21	1. 0 2. 0
2 May 2016			Total: 0
National Centre for Health Statistics (NCHS) http://www.cdc.gov/nchs/fastats/drug-use-illegal.htm	1. Explored illegal drug use section	1. NA	1. 0
3 May 2016	All data refers to “illegal” drug use. No mention of what drug or method of use.		Total: 0
Office of National Drug Control Policy (ONDCP) https://www.whitehouse.gov/oncp	Used google advanced search option. Used the term: 1. Injecting drug use 1. Explored policy and research section	1. 5 2. NA	1. 0 2. 0
3 May 2016	Data sets indicate which drug is concerned, but not method of use.		Total: 0
Public Health Agency of Canada http://www.phac-aspc.gc.ca/index-eng.php?utm_source=VanityURL&utm_medium=URL&utm_campaign=publichealth.gc.ca	1. Explored publications on “diseases and conditions”	1. NA	1. 3

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
3 May 2016			Total: 3
SAMHSA (United States Substance Abuse and Mental Health Administration) http://store.samhsa.gov/home http://www.samhsa.gov/data/node/20	Same database searched above on May 3 for the DAWN Drug Abuse Warning Network (US) search.		
3 May 2016	HIV and harm reduction organisations		
AVERT http://www.avert.org/professionals/hiv-around-world/global-statistics	1. Explored "fact sheets" section 2. Explored "people who inject drugs" section 3. Explored "needle and syringe programs" section	1. NA 2. NA 3. NA	1. 0 2. 0 3. 0
4 May 2016	All information is sourced from UNODC/WHO etc. These documents are collected directly from these websites for the purpose of this literature search. See UNODC, WHO search entry for these documents.		Total: 0
FHI360 http://www.fhi360.org/	1. Explored annual reports 2. Searched for "injecting drug use prevalence, resource, publication, 2009-2016" 3. Search for "injecting drug use biological behavioral survey, 2009-2016, publication"	1. NA 2. 106 3. 67	1. 0 2. 13 3. 0
4 May 2016			Total: 13
Global Network of People Living with HIV/AIDS http://www.gnpplus.net/	Used google advanced search. Used term: 1. Injecting drug use 2. Inject drug 3. Explored publications section	1. 10 2. 19 3. NA	1. 2 2. 0 3. 0
4 May 2016			Total: 2
HIV in the Arab World http://arabhiv.blogspot.com/	Used google translate to explore website. Used search term: 1. عقار (drug)	1. 1	1. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
4 May 2016			Total: 0
HIV InSite http://hivinsite.ucsf.edu/InSite	All IDU indicator data provided is sourced from UNAIDS. All other resources found are from the peer-reviewed literature.		
4 May 2016			
Human Rights Watch www.HRW.org	Used google advanced search. Used terms: 1. “injecting drug use AND prevalence, year: 2009-2016, type: reports, topic: health”	1. 124	1. 2
4 May 2016			Total: 2
International AIDS Society Conference Proceedings http://www.iasociety.org/	1. Explored abstract archive by search “injecting drug use AND HIV” filtered 2009-present. 2. Explored abstract archive by search “injecting drug use AND hepatitis” filtered 2009-present. 3. Explored abstract archive by search “injecting drug use” filtered 2009-present. Further filtered titles to contain “injecting drug user”	1. 16 2. 0 3. 126	1. 3 2. 0 3. 16
6 May 2016			Total: 19
Harm Reduction International http://www.ihra.net/	1. Explored resource library using term “injecting drug use” and filtered results by year: 2008-present	1. 222	1. 4
6 May 2016			Total: 4
Sistema de Vigilancia Epidemiológica de las Adicciones, Mexico http://www.salud.df.gob.mx/portal/index.php/programas-y-acciones/10-ssp/56-sistema-de-vigilancia-epidemiologica-de-las-adicciones-sisvea	Used google translate and google advanced search to explore website. Used terms: 1. Inyectar droga (inject drug) 2. Explored SISVEA (epidemiological surveillance study) section of website	1. 13 2. NA	1. 0 2. 0
6 May 2016	<u>SISVEA looks only at illicit drug use, no mention of whether survey participants are injecting, smoking, etc.</u>		Total: 0
The Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM) http://www.theglobalfund.org/en/	Used google advanced search. Used terms: 1. Inject drug	1. 8 2. 7	1. 0 2. 6

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
6 May 2016	<p>2. grant AND performance AND report AND grant AND performance AND report AND "Percentage of people who inject drugs who are living with HIV"</p> <p>3. grant AND performance AND report AND "number of people who inject drugs"</p> <p>4. Explored publications/reports section</p> <p>5. Explored data section</p>	3. 2 4. NA 5. NA	3. 1 4. 4 5. 0
			Total: 11
UNAIDS http://www.unaids.org/en/	Took reports only as UNAIDS country report data extraction is taken elsewhere.	1. NA	1. 4
7 May 2016			Total: 4
United Nations Development Programme (UNDP) http://www.undp.org/	<p>1. Used search term "injecting drug user" AND prevalence</p> <p>2. Searched in publications and reports for "injecting drug user"</p>	1. 154 2. 1	1. 7 2. 0
9 May 2016			Total: 7
United Nations Population Fund (UNFPA) http://www.unfpa.org/	Used google advance search. Used terms" <p>1. "inject drug user"</p>	1. 21	1. 0
9 May 2016	<p>2. Searched publications for "inject"</p>	2. 7	2. 1
			Total: 1
Armenia: National Centre for AIDS Prevention http://www.armaids.am/main/index.php	Explored English version of website and google advanced search. Used term: <p>1. Inject drug</p> <p>2. Explored statistics section</p>	1. 3 2. NA	1. 0 2. 1
9 May 2016			
			Total: 1
Asian Development Bank	Explored website using google advanced search. Used terms:		

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
http://www.adb.org/ 9 May 2016	1. Inject drug 2. Drug 3. Explored publications and statistics	1. 0 2. 40 3. NA	1. 0 2. 1 3. 0
			Total: 1
Asia Foundation http://asiafoundation.org/ 9 May 2016	Explored site using google advanced search. Used terms: 1. Inject drug 2. Drug AND prevalence 3. Explored publications	1. 2 2. 38 3. NA	1. 0 2. 0 3. 0
			Total: 0
Asian Harm Reduction Network http://idpc.net/profile/asian-harm-reduction-network-ahrn 9 May 2016	Explored site using google advanced search. Used terms: 1. "Injecting drug user" 2. Explored publications using search term: injecting drug user	1. 12 2. 77	1. 1 2. 5
			Total: 6
Cambodia National AIDS Authority http://www.naa.org.kh/ 10 May 2016	Explored website using google translate and google advanced search. Used term: 1. Inject drug 2. Explored publications	1. 0 2. 3	1. 0 2. 0
			Total: 0
China AIDS Info http://www.china.org.cn/english/features/aids/112999.htm 10 May 2016	Explored English version of website. Used search term: 1. Inject 2. Drug 3. Explored statistics section – statistics all pre 2008	1. 1 2. 1 3. NA	1. 0 2. 0 3. 0
			Total: 0
HIV/AIDS Asia Regional Program (HAARP)			

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
http://dfat.gov.au/about-us/publications/Pages/hiv-aids-asia-regional-program-outcomes-and-dfat-lessons-assessment-reports.aspx	1. Explored HAARP assessment reports	1. NA	1. 6
10 May 2016			Total: 6
India: National AIDS Control Organisation http://naco.gov.in/NACO/	Explored website using google advanced search. Used term 1. Inject drug	1. 5	1. 0
10 May 2016	2. Explored publications and statistics	2. NA	2. 8
			Total: 8
Indonesia: National AIDS Commission http://www.aidsindonesia.or.id	Explored website using google translate and google advanced search. Used terms: 1. Drug 2. Menyuntikkan (inject) 3. Explored reports section. Reports in Indonesia. Downloaded and searched within reports for "obat" (drug), "menyuntikkan" (inject). Found no mention of these words in relation to IDU.	1. 10 2. 0 3. NA	1. 0 2. 0 3. 0
10 May 2016			Total: 0
Korsang – Cambodia http://www.korsang-ks.org/website/	Explored website using google advanced search. Used term: 1. Inject drug 2. PWID	1. 0 2. 6	1. 0 2. 0
10 May 2016			Total: 0
National Center for AIDS/STD Control and Prevention, CDC China (NCAIDS) http://www.chinaaids.cn/english/aboutncaids/	Attempted to search website using google advanced search. Searches led to blocked links. Click through links all block on publications section.		
10 May 2016			
Nepal: National Center for AIDS and STD Control	Explored website using google advanced search. Used term: 1. Inject drug	1. 40	1. 6

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
http://www.ncasc.gov.np			
10 May 2016 Philippine National AIDS Council	Link broken. Unable to find site for this organisation through google search.		Total: 6
http://www2.doh.gov.ph/pnacwebsite/index.htm			
10 May 2016 AIDS Society of the Philippines	Explored website using google advanced search. Used term: 1. Inject drug 2. Explored publications 3. Explored programs of annual meetings	1. 1 2. NA 3. NA	1. 0 2. 1 3. 0
10 May 2016 Thai Office of the Narcotics Control Board (ONCB)	Google Chrome indicated potential malicious software on attempt to enter site. Site not further attempted for entry.		Total: 1
http://www.oncb.go.th/			
11 May 2016 Caribbean Harm Reduction Coalition (CHRC)	Used google advanced search to explore website. Used term: 1. Inject drug	1. 1	1. 0
www.caribbeanharmreductioncoalition.holidayplanet.com			
11 May 2016 Cuba Centro Nacional de Prevención ITS/VIH/SIDA	Explored website using google translate and google advanced search. Used term: 1. Inyectar droga (inject drug) 2. Explored publications, "drug use in Cuba"	1. 4 2. NA	1. 0 2. 0
http://www.sld.cu/servicios/sida/			

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	3. Explored “key populations”	3. NA	3. 0
11 May 2016			Total: 0
Dominican Republic: Consejo Presidencial del SIDA http://www.conavihsida.gob.do/	Explored website using google translate and google advanced search. Used term: 1. Inyectar droga (inject drug) 2. publicaciones droga (publications drug)	1. 0 2. 4	1. 0 2. 0
11 May 2016	Publications and statistics sections empty.		Total: 0
Jamaica: National AIDS Committee http://www.nacjamaica.org/	Used google advanced search to explore website. Used term: 1. Inject drug 2. Drug	1. 0 2. 0	1. 0 2. 0
11 May 2016	Attempted to explore publications and presentations sections but most links broken.		Total: 0
Correlation - European Network of Social Inclusion and Health http://www.correlation-net.org	Used google advanced search to explore website. Used term: 1. Inject drug prevalence 2. Explored publications section – all links to WHO and EMCDDA	1. 18	1. 0
11 May 2016			Total: 0
Eurasian Harm Reduction Network http://www.harm-reduction.org	1. Explored drug use and HIV/HCV sections of website 2. Explored reports	1. NA 2. NA	1. 3 2. 3
11 May 2016			Total: 6
France: Conseil national du sida http://www.cns.sante.fr/	1. Searched documents for “drogues” (drug). Most documents pre 2008.	1. 10	1. 0
11 May 2016			Total: 0
Georgia: AIDS & Clinical Immunology Research Centre http://aidscenter.ge/index_eng.html	1. Explored publications section. Documents are information for public rather than statistics.	1. NA 2. 17	1. 0 2. 5

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
12 May 2016 Ireland: Health Protection Surveillance Centre http://www.hpsc.ie/	2. Used google translate and google advanced search to search for "ნარკოტიკების" (drugs) 1. Searched through publications for "epi-insight" AND "injecting drug users" AND prevalence. (epi-insight is a monthly publication by the organisation).	1. 61	Total: 5 1. 0
12 May 2016 Lithuania: AIDS Centre http://www.ulac.lt/en	Some surveillance data on site but all pre 2008. Used google advanced search to explore website. Used terms: 1. Inject drug 2. drug		Total: 0 1. 0 2. 25 1. 0 2. 0
12 May 2016 Poland: National AIDS Centre http://aids.gov.pl/	Used google advanced search to explore website. Used terms: 1. Inject drug Epidemiology section provides information on transmission via IDU only.	1. 9	Total: 0 1. 0
12 May 2016 Portugal: Fundacao Portuguesa A Comunidade Contra a SIDA http://www.fpccsida.org.pt/	Used google advanced search to explore website. Used terms: 1. Droga (drug)	1. 12	Total: 0 1. 0
12 May 2016 Republic of Moldova: National Coordination Council on HIV/AIDS and TB http://www.ccm.md/ro/stirile	Used google translate and advanced search to explore website. Used terms: 1. Injectarea (injecting) 2. Droguri (drugs)	1. 1 2. 60	Total: 0 1. 0 2. 2
13 May 2016 Romania: Comisia Nationala de Lupta Anti-SIDA http://www.cnlas.ro/	Used google translate to explore site. 1. Explored statistical data section	1. NA	Total: 2 1. 3
13 May 2016 Romania: Centrul Roman HIV SIDA	Used google translate and google advanced to explore site. Used term:		Total: 3

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
(Romanian HIV/AIDS center) http://hivromania.ro/www/ 13 May 2016	1. Droguri (drug) 2. Explored resources and articles section	1. 9 2. NA	1. 0 2. 0
			Total: 0
The UK Harm Reduction Alliance (UKHRA) www.ukhra.org 13 May 2016	Used google advanced search. Used terms: 1. "injecting drug user" 2. Inject drug	1. 2 2. 19	1. 0 2. 0
			Total: 0
Ukraine: Ministry of Health Committee on HIV/AIDS http://www.moz.gov.ua/ua/portal/ 13 May 2016	Used google translate and google advanced search to explore website. Used terms: 1. Лекарственный (drug)	1. 8	1. 0
			Total: 0
Brazil: Programa Nacional de DST e Aids http://www.aids.gov.br 13 May 2016	Explored English version of website. Used search term: 1. Inject drug 2. Explored data, studies, research and epidemiological bulletin	1. 2 2. NA	1. 1 2. 0
			Total: 1
Canadian Harm Reduction Network http://www.canadianharmreduction.com/ 13 May 2016	Used google advanced search. Used terms: 1. Inject drug 2. "injecting drug user" AND hepatitis 3. "injecting drug use" AND HIV	1. 39 2. 19 3. 12	1. 1 2. 0 3. 0
	Most linked documents are from the peer-reviewed literature.		Total: 1
Canadian HIV/AIDS Legal Network http://www.aidslaw.ca/site/ 13 May 2016	Used google advanced search. Used terms: 1. "injecting drug user" AND hepatitis AND prevalence 2. "injecting drug use" AND HIV AND prevalence	1. 113 2. 127	1. 3 2. 1
			Total: 4

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Consejo Nacional de Atención Integral al VIH-SIDA http://www.conasida.go.cr/ 13 May 2016	Used google translate and google advanced search to explore website. Used terms: 1. Drogen 2. Explored national documents section	1. 4 2. NA	1. 0 2. 0
Total: 0			
Ecuador: Programa Nacional del VIH SIDA http://www.salud.gob.ec/programa-nacional-de-prevencion-y-control-de-vihsida-its/ 13 May 2016	Used google translate and google advanced search to explore website. Used terms: 1. Drogen 2. Explored publications and articles section	1. 0 2. NA	1. 0 2. 0
Total: 0			
The Harm Reduction Coalition (HRC) www.harmreduction.org 17 May 2016	Used google advanced search. Used terms: 1. HIV AND prevalence 2. Hepatitis AND prevalence	1. 5 2. 2	1. 0 2. 0
Total: 0			
Nicaragua: Ministerio de Salud http://www.minsa.gob.ni/ 17 May 2016	Used google translate and google advanced search to explore website. Used terms: 1. Drogen (drug)	1. 7	1. 0
Total: 0			
Côte d'Ivoire Ministère de lutte contre le SIDA http://www.mlsida.gouv.ci/ 17 May 2016	Used google translate and google advanced search to explore website. Used terms: 1. Drogen (drug)	1. 18	1. 0
Total: 0			
Ghana AIDS Commission http://ghanaids.gov.gh/gac1/aids_info.php	Used google advanced search. Used terms: 1. Inject drug	1. 3	1. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
17 May 2016 Malawi: National AIDS Commission http://www.aidsmalawi.org.mw/	Explored publications, attempted to refine search by "most at risk populations" but link broken. Nothing relevant found.		Total: 0
17 May 2016 National AIDS Control Council Kenya http://www.nacc.or.ke	Used google advanced search. Used terms: 1. Inject drug	1. 2	1. 0
17 May 2016 National AIDS Council Zimbabwe http://www.nac.org.zw/	Attempted to explore research database section, but required a login.		Total: 0
17 May 2016 Nigeria: National Agency for the Control of HIV/AIDS http://www.naca.gov.ng/	Used google advanced search. Used terms: 1. Inject drug 2. Explored publications	1. 10 2. NA	1. 0 2. 2
			Total: 2
18 May 2016 South African National AIDS Council http://www.sanac.org.za/	Used google advanced search. Used terms: 1. Inject drug – one report looked relevant but link was broken and unable to locate on site with further searching 2. Explored HIV statistics, reports and global fund sections	1. 3 2. NA	1. 0 2. 3
			Total: 3
Uganda: AIDS Commission	Used website search option. Used terms:		

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
http://www.aidsuganda.org/	1. inject drug 2. Explored indicators and downloads section	1. 8 2. NA	1. 0 2. 0
18 May 2016			Total: 0
United Republic of Tanzania: Tanzania Commission for AIDS http://www.tacaids.go.tz/	Used website search option. Used terms: 1. inject drug Explored reports section but found nothing relevant.	1. 0	1. 0
18 May 2016			Total: 0
Viral Hepatitis Databases/Organisations			
World Hepatitis Alliance http://www.worldhepatitisalliance.org/en/viral-hepatitis	Used website search option. Used search term: 1. inject drug Explored annual reports and country specific reports but found no mention of injecting drug users.	1. 3	1. 0
19 May 2016			Total: 0
The Kirby Institute http://kirby.unsw.edu.au/	1. Explored annual surveillance reports and supplementaries	1. NA	1. 12
19 May 2016			Total: 12
British Liver Trust http://www.britishlivertrust.org.uk/	Used website search option. Used search term: 1. injecting drug use	1. 8	1. 0
19 May 2016	Explored research and publications but found no relevant mentions of injecting drug users.		Total: 0
European Centre for Disease Prevention and Control http://ecdc.europa.eu/en/healthtopics/hepatitis_C/Pages/index.aspx	Used google advanced search. Used terms: 1. Inject drug 2. Explored data and publications sections	1. 2 2. NA	1. 0 2. 1
19 May 2016	Most data on IDU and HCV/HBsAg concerned transmission rather than %age of population.		Total: 1

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Hepatitis C initiative http://www.hepatitis-c-initiative.eu/	Used google advanced search. Used terms: 1. Inject drug	1. 19	1. 0
20 May 2016	Explored resources section, but all provided documents were from the peer reviewed literature.		Total: 0
Asian Liver Center http://liver.stanford.edu/	Used google advanced search. Used terms: 1. Inject drug	1. 10	1. 0
20 May 2016	Explored publications and research section but all links were to peer reviewed literature.		Total: 0
Other Sources			
GreyNet – Grey Literature Network Service http://www.greynet.org/	Attempted to use google advanced search to locate documents, but no results for "drug" or "inject." Could not locate a search option on the site for resources. Appears to be only for information on grey literature as a resource type.		
24 May 2016	Technical guide – no other resources.		
Guide to Drug Abuse Epidemiology, 2000 http://whqlibdoc.who.int/hq/2000/a5835 2_PartA.pdf http://whqlibdoc.who.int/hq/2000/a5835 2_PartB.pdf http://whqlibdoc.who.int/hq/2000/a5835 2_PartC.pdf			
24 May 2016			
Health On the Net Foundation (HON) http://www.hon.ch/	Attempted google advanced search. Appears to link through to a simple google search. Tried terms: 1. "injecting drug user" AND prevalence 2. "injecting drug user" AND HIV 3. "injecting drug user" AND hepatitis		
24 May 2016	All searches turned up 10,000+ results. Brief examination of the first few pages of each showed all peer-reviewed literature sources.		

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
MEASURE DHS http://dhsprogram.com/ http://dhsprogram.com/topics/HIV-Corner/index.cfm	Used google advanced search. Used the terms: 1. "injecting drug user" 2. "drug user" 3. Inject drug use	4. 1 5. 5 6. 27	1. 1 2. 0 3. 0
24 May 2016			Total: 1
AIDS Portal http://www.aidsportal.org/web/guest/home	Link provided in technical report not working. Google search found the following website: http://aidszeroportal.org/ . Unsure if this is the new website as it appears to be a Thai organisation. Explored the zero portal.		
24 May 2016			
	HIV Databases		
AIDS Action Europe Clearinghouse www.hivaidsclearinghouse.eu	1. Searched within publications for "injecting drug users" 2. Searched within publications for "people who use drugs"	1. 33 2. 15	1. 0 2. 2
25 May 2016			Total: 2
AIDS Knowledge Hub http://www.aidsknowledgehub.org/	1. Google advanced search: "injecting drug user" 2. Searched through newsletters for mention of "injecting drug use"	1. 45 2. 10	1. 0 2. 0
25 May 2016	Publications section empty and links to partner sites for publications lead to 404.		Total: 0
Evidence to Action – HIV and AIDS Data Hub for Asia-Pacific http://www.aidsdatahub.org/	1. Explored publications by: population: PWID, year: 2008-2016	1. 91	1. 32
25 May 2016			Total: 32
Virtual AIDS Office (VAO) of Hong Kong http://www.info.gov.hk/aids/english/index.htm	1. Explored surveillance reports 2. Explored site using "injecting drug user" AND prevalence	1. NA 2. 201	1. 6 2. 0
25 May 2016	Explored "countries" section. Went through reports page for each country. 1. Afghanistan		Total: 6

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	2. American Samoa	1. NA	1. 1
	3. Bangladesh	2. NA	2. 0
	4. Bhutan	3. NA	3. 1
	5. Brunei	4. NA	4. 0
	6. Cambodia	5. NA	5. 0
	7. China	6. NA	6. 0
	8. Northern Mariana Islands	7. NA	7. 0
	9. Cook Islands	8. NA	8. 0
	10. Korea	9. NA	9. 0
	11. East Timor	10. NA	10. 0
	12. Sri Lanka	11. NA	11. 0
	13. Micronesia	12. NA	12. 0
	14. Fiji	13. NA	13. 0
	15. French Polynesia	14. NA	14. 0
	16. Guam	15. NA	15. 0
	17. Hong Kong	16. NA	16. 0
	18. Papua New Guinea	17. NA	17. 0
	19. Samoa	18. NA	18. 0
	20. India	19. NA	19. 0
	21. Indonesia	20. NA	20. 1
	22. Pakistan	21. NA	21. 0
	23. Japan	22. NA	22. 0
	24. Nepal	23. NA	23. 0
	25. Thailand	24. NA	24. 0
	26. Tonga	25. NA	25. 0
	27. Kiribati	26. NA	26. 0
	28. Laos	27. NA	27. 0
	29. Macao	28. NA	28. 0
	30. Malaysia	29. NA	29. 0
	31. Maldives	30. NA	30. 0
	32. Marshall Islands	31. NA	31. 0
	33. Mongolia	32. NA	32. 0
	34. Myanmar	33. NA	33. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
	35. Nauru 36. New Caledonia 37. New Zealand 38. Niue 39. Palau 40. Philippines 41. Pitcairn Islands 42. Taiwan 43. Singapore 44. Vanuatu 45. Vietnam 46. Solomon Islands 47. Wallis and Futuna 48. Tokelau Islands 49. Tuvalu	34. NA 35. NA 36. NA 37. NA 38. NA 39. NA 40. NA 41. NA 42. NA 43. NA 44. NA 45. NA 46. NA 47. NA 48. NA 49. NA	34. 0 35. 0 36. 0 37. 0 38. 0 39. 0 40. 0 41. 0 42. 0 43. 0 44. 0 45. 0 46. 0 47. 0 48. 0 49. 0
27 May 2016	Website does not look to have been updated recently. Lots of relevant documents but mostly pre-dating 2008. Many links to potentially relevant sources also broken.		Total: 3
Drug Policy Alliance http://www.drugpolicy.org/library/	Organisations/Ongoing Studies Attempts to search website/publications linked to Lindesmith library below.		
30 May 2016			
Lindesmith Library http://geniehost23.inmagic.com/lnmagicGENIE/opac.aspx?QueryScreen=simple_opac_search&xm=1&xm=1&xe=2&xe=2	Searched using terms: 1. Injecting drug use	1. 12	1. 0
	Publications linked were principally from the peer-reviewed literature. All documents found pre-date 2008.		
30 May 2016			Total: 0
WHO Regional Office for the Eastern Mediterranean - Library and Health Literature Services	Searched database EMCAT for the following terms: 1. Injecting drug use 2. Inject drug	1. 0 2. 0	1. 0 2. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
http://www.emro.who.int/Library/Databases/wxis.exe/Library/Databases/iah/?IsisScript=iah/iah.xic&base=emcat&lang=i	3. Drug Searched database IMEMR for the following terms: 4. Injecting drug use	3. 156	3. 0
30 May 2016	Searched database MESH for the following terms: 5. Injecting drug use 6. Drug	4. 27	4. 0
	Searched database EMAIEC for the following terms: 7. Injecting use	5. 0	5. 0
		6. 191	6. 0
		7. 51	7. 0
			Total: 0
New York Academy of Medicine http://www.nyam.org/library/	Links to peer reviewed literature.		
30 May 2016			
Policy Information Exchange Missouri Institute of Mental Health http://mimh200.mimh.edu/mimhweb/pie/	Browsed through documents and resources section but found nothing relevant.		
31 May 2016			
Project CORK http://www.projectcork.org/	Used CORK database search with the following parameters: 1. Topic: injecting drug use; Year: 2008-2016; Record type: report OR conference paper	1. 26	1. 0
31 May 2016			
PsycEXTRA http://www.apa.org/psycextra/	Accessed via UNSW library. Used following search strategies: 1. "injecting drug users" AND 2008-2016 2. "injecting drug use" AND 2008-2016 3. "intravenous drug use" AND 2008-2016	1. 7 2. 16 3. 41	1. 0 2. 0 3. 2
31 May 2016			

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Total: 2			
Schaffer Library of Drug Policy http://www.druglibrary.org/schaffer/index.htm	Used google advanced search to explore website. Used terms: 1. Injecting drug use 2. Inject drug prevalence	1. 2 2. 77	1. 0 2. 0
31 May 2016	Explored “major studies on drugs and drug policy” but found nothing recent or relevant.		Total: 0
Science.gov : USA.gov for science http://science.gov/	Attempted some searches using standard terms (e.g. “inject drug”). Searches turned up documents from peer-reviewed literature (returned all PubMed and PubMed Central resources).		
31 May 2016			
Virtual Health Library http://www.bireme.br/php/index.php?lang=en	LILACS database: Attempted some searches using standard terms (e.g. “inject drug”). All resources found were from the peer reviewed literature.		
31 May 2016			
Web of Science ISI Proceedings	Unable to access MEDICARIB, LEYES Access through UNSW library. Used web of science search engine selecting only “Conference Proceedings Citation Index- Science (CPCI-S) --1990-present.” Filtered all searches for year 2008-2016. Used terms: 1. “injecting drug use” 2. Injecting drug users	1. 9 2. 53	1. 0 2. 2
31 May 2016	Most citations were of conference proceedings that were later published in the peer-reviewed literature.		
Total: 2			
The Beckley Foundation – Drug Policy Programme http://beckleyfoundation.org/	URL given in technical report broken. Link to left find via google searching. Used google advanced search to navigate websites. Used terms: 1. Injecting drug use	1. 49	1. 0
31 May 2016	Explored publications and archived website but found nothing relevant.		
Total: 0			
Health Behaviour in School aged children	Explored reports sections, but found no mention of injecting drug use.		

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
http://www.hbsc.org/			
31 May 2016			
International Narcotics Control Board http://www.incb.org/incb/index.html	1. Explored publications and technical reports sections	1. NA	1. 8
31 May 2016			Total: 8
Monar Na Bajzlu Magazine http://magazynmnbp.pl/	Link provided in technical report not functional. Link found via google search. Used google advanced search to explore website. Used terms: 1. Wstrzykiwać (inject)	1. 0	1. 0
31 May 2016	Searched through issues of magazine but found no mention of injecting drug use.		Total: 0
Treatment Monitoring and Advocacy Project http://www.aidstreatmentaccess.org/	Link to site broken.		
31 May 2016			
World Bank http://www.worldbank.org/ http://www.worldbank.org/en/publications/reference	Searched publications using the following restrictions: 1. "injecting drug use" and year: 2008-2016 and type: publications and research 2. "injecting drug users" and year: 2008-2016 and type: publications and research 3. "inject drug" and year: 2008-2016 and type: publications and research Searched data section using the following restrictions: 4. "injecting drug user" and year: 2008-2016 and type: research 5. "inject drug" and year: 2008-2016 and type: research	1. 14 2. 32 3. 42 4. 94 5. 113	1. 2 2. 0 3. 1 4. 1 5. 1
31 May 2016			Total: 5
United Nations Office on Drugs and Crime (UNODC) http://www.unodc.org	1. Explored world drug reports section 2. Explored surveys on drugs and crime sections	1. NA 2. NA	1. 9 2. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
http://www.unodc.org/unodc/en/GAP/index.html	3. Explored data and indicators section	3. NA	3. 4
http://www.unodc.org/treatment/	4. Explored publications section	4. NA	4. 2
1 June 2016	5. Explored treatnet	5. NA	5. 0
			Total: 15
World Health Organization www.who.int	1. Explored HIV/AIDS > Publications on HIV > Publications on injecting drug use	1. NA	1. 3
WHO Library & Information Networks For Knowledge Database (WHOLIS) http://dosei.who.int/uhtbin/cgisirsi/Mont+Apr+28+04:08:45+MEST+2008/0/49	Searched publications on WHO iris (international repository for information sharing) for all WHO publications, including all regional offices. Used the following restriction: 2. Injecting drug user; year: 2008-2016; full text available online	2. 1817	2. 16
Regional Office for Africa http://www.afro.who.int/	Regional office for Africa: 3. Used google advanced search for "injecting drug use" 4. Used google advanced search for "inject drug" 5. Explored substance abuse section 6. Searched in the "WHO African Regional Digital Library" for "inject drug," "injecting drug" or "injecting" 7. Searched in the "African Index Medicus" for "inject drug," "injecting drug" or "injecting" 8. Explored data and statistics section	3. 8 4. 16 5. NA 6. 0 7. 0 8. 0	3. 1 4. 0 5. 0 6. 0 7. 0 8. 0
Regional Office for the Americas Pan American Health Organization http://www.paho.org/hq/			
Regional Office for South-East Asia http://www.searo.who.int/			
Regional Office for Europe http://www.euro.who.int/	Regional Office for the Americas Pan American Health Organization 9. Searched within publications for "inject drug/usario de drogas" filtered by years [2008:2016]	9. 24	9. 1
Regional Office for Eastern Mediterranean http://www.emro.who.int/	10. Explored data section (HIV indicators) 11. Explored countries section 12. Searched site for "injecting drug use"	10. NA 11. NA 12. 0	10. 0 11. 0 12. 0

Name, Link, & Date Searched	Strategy/ Comments	Total Number of Documents Found	Number of Relevant Documents Saved
Regional Office for the Western Pacific http://www.wpro.who.int/	Regional Office for South-East Asia 13. Searched within the regional publications database for “injecting drug use” 14. Searched seaaro.who.int for “injecting drug use”	13. 22 14. 4	13. 0 14. 0
	Regional Office for Europe 15. Searched within publications for “drug” 16. Searched European Regional Information System on Resources for the Prevention and Treatment of Substance Use Disorders – data did not specify beyond “substance use disorder” 17. Searched website for “injecting drug use” AND prevalence	15. 5 16. NA 17. 40	15. 0 16. 0 17. 7
	Regional Office for Eastern Mediterranean 18. Searched within indicator section for “drug” 19. Explored data repository 20. Searched for “injecting drug user” – request to view some documents blocked by site	18. 22 19. NA 20. 163	18. 0 19. 0 20. 1
	Regional Office for the Western Pacific 21. <u>Searched site for “injecting drug user”</u> 22. <u>Attempted to search digital library, but link was broken</u> 23. <u>Searched publications for “drug”</u>	21. 3 22. NA 23. 0	21. 0 22. 0 23. 0
2-5 June 2016			Total: 29

Appendix 4: First round email and social media requests for information

4.1 Example email

We are looking for data from around the world about HIV, hepatitis B and C (HBV and HCV) prevalence among people who inject drugs.

We are also seeking data on the prevalence of injecting drug use, and any surveys of people who inject drugs that may contain details about their demographics and drug use.

Do you have data from your country?

We are undertaking a systematic review of existing data about people who inject drugs. This work will inform a range of global data collection efforts, including the Global Burden of Disease 2016 project.

We are collecting data for every country on:

- prevalence of injecting drug use
- prevalence of HIV, HCV and HBV among people who inject drugs
- demographics and drug use characteristics of people who inject drugs (e.g., age, gender, duration of injection, main drug used, injecting and sexual risk behaviours)
- services provided to people who inject drugs:
 - o needle and syringe programmes
 - o opioid substitution therapy (methadone, buprenorphine etc.)
 - o HIV antiretroviral therapy (ART)
 - o HIV testing and counselling
 - o condom provision

You may be familiar with estimates that have previously been published on some of these topics, but the data are becoming old.

We have conducted a large search of the peer-reviewed literature, and are gathering as much grey literature (such as NGO and government reports) as possible. However, there will be material that our search will have missed.

Do you have any information that may be of use to us? Any assistance will be acknowledged in the reports we are writing on this subject. Due to the tight timelines of this project we can only consider material received **by Friday October 28th 2016**.

Many thanks in anticipation of any information you can provide, and for circulating to other colleagues who may be able to assist.

Please direct all correspondence to global.reviews@unsw.edu.au

Request for data about people who inject drugs

We are undertaking global reviews about people who inject drugs.

We seek information from every country on:

- The prevalence of injecting drug use
- Characteristics of people who inject drugs
- HIV, hepatitis C and hepatitis B prevalence
- Services provided to people who inject
 - E.g. opioid substitution therapy, needles and syringes, HIV treatment

Do you know of information that may be of use?

If so, please email global.reviews@unsw.edu.au by **Friday October 28th 2016**

Your help is appreciated, and will be acknowledged in our reports.



4.2 Example social media request

Help contribute data to a global review of injecting #drug use, #HIV and #hepatitis, and coverage of HIV #prevention services

Request for data about people who inject drugs

We are undertaking global reviews about people who inject drugs.

We seek information from every country on:

- The prevalence of injecting drug use
- Characteristics of people who inject drugs
- HIV, hepatitis C and hepatitis B prevalence
- Services provided to people who inject
 - E.g. opioid substitution therapy, needles and syringes, HIV treatment

Do you know of information that may be of use?

If so, please email global.reviews@unsw.edu.au by **Friday October 28th 2016**

Your help is appreciated, and will be acknowledged in our reports.



4.3 Twitter engagement statistics

The tweet was delivered to 5,525 individual feeds. It received 76 total engagements, including 20 retweets.

Appendix 5: Classification system used in the assessment of study methodologies

Table 5.1: Classification approach for grading studies

Grade	Data for the prevalence of injecting drug use	Data for the characteristics of injecting population	Data for the prevalence of HIV and hepatitis
A	A1: Multi-parameter evidence synthesis A2: Indirect prevalence estimation methods A3: Network scale-up method	Multi-site study with at least two sample types (e.g., treatment or outreach sample)	Multi-site seroprevalence study with at least two sample types (e.g., treatment or outreach sample)
B	General population household survey	B1: Multi-site study with one sample type B2: Single-site study with multiple sample types	B1: Multi-site seroprevalence study with one sample type B2: Single-site seroprevalence study with multiple sample types
C	Expert judgement with method by which estimate was obtained known (e.g., rapid assessment); Delphi method or other consensus estimate; government registrations of drug users	Single-site study with one sample type	Single-site seroprevalence study with one sample type
D1	*Official government estimate with methodology unknown	-	*Registration or notification data
D2	*Other estimates with unknown methodology	-	* Self-report
U	-	Estimate with methodology unknown	*Estimate with methodology unknown

Note. *Data graded D/U were not included in estimates presented in this manuscript.

Appendix 6: Selection of IDU prevalence estimates

Estimates of current injectors defined as those who had injected in the past 12 months were selected in preference to estimates for injecting drug users defined by other criteria. Wherever possible, we used the highest grade estimate (see Appendix Table 5.1). We preferred older, higher grade estimates to more recent lower grade estimates.

Where multiple estimates were available, Grade A estimates were selected in preference to other grades. If multiple estimates of the same grade were located, we conducted random effects meta-analysis to pool estimates.

The exception to this was when an estimate had been made for a single city. We attempted to ensure the maximum geographic coverage for a country.

When deriving the prevalence of injecting drug use it was also assumed people who inject drugs were aged between 15 and 64 years of age and prevalence was thus calculated among this population only.

One estimate of IDU prevalence available: in the situation where only one estimate of population prevalence or population size was available, then the weighted regional uncertainty limits around population prevalence were used. These were derived by estimating the weighted prevalence of low, mid and high IDU prevalence in countries where all three estimates were available. The amount of uncertainty was estimated. For all regions, this variation was then applied to each country where only one estimate had been derived in order to estimate an uncertainty range around the estimate.

No estimate of IDU prevalence (or IDU population size) available but IDU had been reported: In this instance, the weighted regional prevalence was used.

No reports of IDU were found for the country: In countries where no documented evidence of injecting drug use occurring could be located, we assumed zero prevalence of injecting.

For each region, the sum of all country estimates (as derived above) and their ranges was made. The “global” estimate comprised the addition of all regional estimates.

Appendix 7: Selection and synthesis of HIV and hepatitis estimates

Overall

- Estimates with sample sizes <=40 PWID were excluded.
- Samples which represented a subpopulation (e.g., prisoners, HIV non-infected) were excluded, including those where ≤85% of the original sample were included (e.g., due to incomplete responding or attrition in follow-up).
- Where multiple sources were identified using data from the same sample, the source(s) with the most complete data regarding the various indicators of interest were included.
- Where possible, if calculation or typesetting errors were detected in reported estimates, these were recalculated or clarified with authors.

Table 7.1: Classification system used in the evaluation of study methodologies

Grade	Hepatitis/HIV prevalence data
A	Multi-site seroprevalence study with >1 sample types (e.g. needle-syringe programmes, drug treatment centres, incarcerated IDUs)
B	B1 Seroprevalence study, single sample type and multiple sites B2 Seroprevalence study, multiple sample types and a single site
C	Seroprevalence study, single sample type
D	Registration or notification of cases of hepatitis/HIV infection
E	Prevalence study using self-reported hepatitis/HIV status
Ungraded	Estimate with methodology unknown

'D', 'E' and ungraded data have not been included in the estimates presented here.

HIV and Hepatitis among IDU

- Data collected more recently than those in the previous global reviews^{2,3} were considered for inclusion.
- If no details were provided on whether a single or multiple sample types were used, it was assumed a single sample type only, and graded C.
- Estimates based on case notifications (grade 'D'), self-report (grade 'E') or unspecified methodologies (grade U) were excluded.

- City, sub-national and national estimates (grade A-C) published within the last four years of the most recently available estimate were pooled via random effects meta-analysis where multiple estimates were available for a country.
- Studies that excluded IDUs according to gender (e.g. those actively excluding male IDUs) were not included if mixed gender studies were available.
- Hepatitis estimates were restricted to serological test results for anti-HCV and HBsAg. Studies reporting only on genetic results or serological residue from syringes were excluded.
- Hepatitis B reports not specifying a specific serological marker were reviewed by JS, EC, PV and MH, and if unclear to which marker these estimates pertained, they were excluded.
- Hepatitis prevalence estimates from single city studies were assumed to be *single site* studies unless otherwise stated in the study methodology.
- Where possible, if calculation or typesetting errors were detected in reported estimates, these were recalculated or clarified with authors.

One estimate of HIV, HCV or HBsAG prevalence available, with no uncertainty: in the countries where only one estimate of HIV, HCV or HBsAG prevalence was available, then the uncertainty limits were estimated based on the median sample size of data (with uncertainty) from other countries in the same region. If no other country had estimates with uncertainty available within a region, the sample sizes were drawn from estimates at the broader global-level.

No estimate of HIV, HCV or HBsAG prevalence available: In this instance, the weighted regional prevalence was used for all countries without an estimate of prevalence but where injecting drug use reported to occur. The methods for estimating uncertainty ranges described above (based on the median sample size of other estimates within the same region) were used to estimate uncertainty bounds.

No reports of injecting drug use were found for the country: In countries where no documented evidence of injecting drug use occurring could be located, we assumed zero prevalence of injecting and of HIV among people who inject drugs.

Appendix 8: Decision rules and data extracted from studies of characteristics of people who inject drugs

Overall

- Estimates with sample sizes ≤ 40 PWID were excluded.
- All eligible city, sub-national and national data for each country were pooled via random effects meta-analysis to create country, regional and global estimates where multiple estimates were available.
- Samples which represented a subpopulation (e.g., prisoners, HIV non-infected) were excluded, including those where $\leq 85\%$ of the original sample were included (e.g., due to incomplete responding or attrition in follow-up).
- Where multiple sources were identified using data from the same sample, the source(s) with the most complete data regarding the various indicators of interest were included.
- Where estimates were available for multiple years of annual surveys, the most recent estimate was included.
- Where possible, if calculation or typesetting errors were detected in reported estimates, these were recalculated or clarified with authors.
- Estimates were excluded if the sample inclusion/exclusion criteria reflected the characteristic of interest (e.g., samples where participation was restricted to male PWID were excluded from meta-analyses of the percentage female).
- In the case of time-varying characteristics, estimates for recent timeframes (i.e., ≤ 12 months) were pooled.

Selection of Characteristics Data for Pooling

- Only categorical data were used to determine the ‘young’ age group. We computed the percentage who were young, defined where possible as ≤ 24 years.
- A hierarchy of sex risk behaviours was developed for selection of a single estimate where multiple risk behaviours were reported. For example, unprotected sex with casual/non-regular partner was selected for extraction over unprotected sex with a regular partner.

- A hierarchy of injecting risk behaviours was developed for selection of a single estimate where multiple risk behaviours were reported. For example, receptive syringe sharing was selected for extraction over re-use of own injecting equipment.
- Recent sex work was defined as an occasion where the individual had exchanged sex for money and/or drugs within the past year wherever possible.
- A hierarchy of main drug injected estimates were developed, where ‘main drug injected’ was selected for pooling over ‘last drug injected’, which in turn was selected over endorsement of any injecting use of the specific drug within a set timeframe.

For main drug injected, where estimates for ‘any opioid’ were not available, estimates of heroin or pharmaceutical opioid use were input (summed for main drug/last drug if both heroin and pharmaceutical opioid estimates available; highest estimate input for injecting use within a set timeframe if both estimates were available). This same process applied for stimulants (meth/amphetamine and cocaine), or where any other summation of estimates was required (e.g., computing single estimate of pharmaceutical opioid injecting use from estimates for various pharmaceutical opioids e.g., morphine, oxycodone). Where a combination of opioids and stimulants was identified (e.g., ‘speedball’: cocaine and heroin), the percentage reporting injecting use was input to both categories (i.e., estimate entered into heroin and cocaine).

Appendix 9: Method of estimating regional and global numbers

A range of situations existed with respect to the amount of data available on the prevalence of injecting drug use and of HIV, HCV and HBsAg among people who inject drugs. Using the following protocol, available country level data were extrapolated to derive regional and global estimates of the number of injecting drug users who are HIV, HCV or HBsAg positive, and to derive uncertainty bounds around these estimates. Our approach was developed and used in the previous UN Reference Group global reviews and is consistent with the approaches used in WHO and UN publications.

Regional estimates:

Injecting drug use was reported to be present in a number of countries (as identified by previous reviews⁴), for which prevalence estimates for HIV, HCV or HBsAg among PWID were not able to be located in this review. For the purpose of deriving regional estimates of the number of current PWID who were HIV, HCV or HBsAg positive, the mean global or regional prevalence estimates were applied to these countries where country-level prevalence estimates were absent, but where evidence of PWID existed.

Estimated regional and global prevalence estimates for PWID were the mean of available country-level estimates, within a region or globally respectively, weighted by estimated country aged 15-64 years United Nations population size. Estimated regional and global prevalence estimates for HIV, HCV or HBsAg among PWID were the mean of available country-level estimates, within a region or globally respectively, weighted by estimated country PWID population size.

Estimated *regional prevalence* was used where there were two or more countries within a region for which estimates were available, or where data was available for only one country if this country accounted for greater than 50% of the total estimated regional PWID population.

Estimated *global prevalence* was used in regions where estimates were not available of any country, or if available for only one country but this country accounted for less than 50% of the total estimated regional PWID population.

Uncertainty bounds:

1. If an estimate was reported with lower and upper uncertainty bounds (for example, if the study estimated 95% confidence intervals) these were used. This was particularly notable in the case of data from the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) and published literature in peer-reviewed journals.
2. If only one estimate on the prevalence of PWID that met inclusion criteria was available and no upper and lower bounds were reported in a given country, the regional or global estimates were applied based on the 50% rule described above..

For each *regional* population size estimate, the sum of all country estimates (both those reported and those derived as above) and their ranges, was made. The *global* population size estimate comprised the sum of all regional estimates.

For each region, the sum of all country estimates (as derived above) and their ranges was made. The “global” estimate comprised the addition of all regional estimates.

References

1. Degenhardt L, Gibson G, Leung J, Kumvaj M, Larney S. *Searching the grey literature to access research on illicit drug use, HIV and viral hepatitis: A resource to identify drug-related databases and websites.* NDARC Technical Report No. 334. Sydney: National Drug and Alcohol Research Centre, University of NSW. <https://ndarc.med.unsw.edu.au/resource/searching-grey-literature-access-research-illicit-drug-use-hiv-and-viral-hepatitis-resource> Accessed on May 29th 2017;2016.
2. Mathers BM, Degenhardt L, Phillips B, et al. Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review. *Lancet.* 2008;372(9651):1733-1745.
3. Nelson PK, Mathers BM, Cowie B, et al. Global epidemiology of hepatitis B and hepatitis C in people who inject drugs: results of systematic reviews. *Lancet.* 2011;378(9791):571-583.
4. Mathers B, Degenhardt L, Phillips B, et al. Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review. *Lancet.* 2008;372:1733-1745.

Appendix 10: Grade and sources for country-level estimates of the prevalence of injecting drug use

	New estimate ?	Year of estimate	% (range)	National no. PWID (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Australasia									
Australia	Yes	2016	0.60 (0.43,0.76)	93,000 (68000,93000)	1	A	National	A1	1
New Zealand	No	2006	0.73 (0.49,0.97)	22,500 (15000,30000)	1	B	National	B	2
Caribbean									
Antigua & Barbuda	No		--	--					
Bahamas	No		NK	NK					
Barbados	No		--	--					
Bermuda	No		NK	NK					
Comm. of Puerto Rico	No	2002	1.15 (0.77,1.71)	28000 (19000,42000)	1	A	No region	A1	2
Cuba	No		--	--					
Dominica	No		--	--					
Dominican Republic	No		NK	NK					
Grenada	No		--	--					
Haiti	No		NK	NK					
Jamaica	No		NK	NK					
Saint Kitts & Nevis	No		--	--					
Saint Lucia	No		--	--					
St Vincent & the Grenadines	No		--	--					
Trinidad & Tobago	No		--	--					
Central Asia									
Kazakhstan	No	2006	0.96 (0.64,1.42)	112,500 (75500,166000)	1	A	National	A1	2
Kyrgyzstan	No	2006	0.74 (0.50,1.11)	28,500 (19000,42000)	1	A	National	A1	2
Tajikistan	No	2006	0.45 (0.30,0.66)	23,500 (16000,34500)	1	A	National	A1	2
Turkmenistan	No		NK	NK					
Uzbekistan	No	2006	0.47 (0.32,0.70)	94000 (63000,140000)	1	A	National	A1	2
East and South East Asia									
Brunei Darussalam	No		NK	NK					
Cambodia	Yes	2012	0.11 (0.10,0.23)	10500 (9500,22500)	1	A2	National	B3	3
	No	2005	0.25 (0.19,0.31)	2564000 (1964000,3164000)	1	A	No region	A1	2
China	No		NK	NK					
Hong Kong (China)	No		NK	NK					
Indonesia	Yes	2012	0.11 (0.09,0.13)	190500 (156000,225000)	1	A2	National	B3	4
Japan	No	2004	0.47 (0.36,0.58)	368500 (281500,459000)	1	D1	No region	A1	2
Lao PDR	No		NK	NK					
Malaysia	No	2002	1.33 (1.11,1.56)	281500 (233500,330000)	1	C	No region	A1	2
Mongolia	No		NK	NK					
Myanmar	Yes	2014	0.48 (0.32,0.65)	173500 (115500,235000)	1	A2	National	B2	5
North Korea	No		--	--					
Philippines	Yes	2011	0.04 (0.03,0.05)	25500 (19000,32000)	1	C	National	B2	6
Republic of Korea	No		NK	NK					
Singapore	No		NK	NK					
Taiwan	No		NK	NK					
Thailand	Yes	2013	0.11 (0.03,0.18)	51500 (16000,87000)	2	A3	National	A2	7
Timor Leste	Yes	2015	0.01 (0.00,0.02)	<500 (<500,<500)	1	A2	National	C	8
Viet Nam	No	2005	0.25 (0.19,0.31)	161000 (123000,200500)	1	D1	No region	A1	2
Eastern Europe									
Armenia	Yes	2010	0.62 (0.41,1.35)	13000 (9000,29000)	1	A2	National	B2	9
Azerbaijan	Yes	2011	0.61 (0.49,0.74)	43500 (34500,52000)	34	A2	Sub-national	B2	10
Belarus	Yes	2015	0.59 (0.22,0.96)	40500 (15000,66000)	1	A2	National	B3	11
Bosnia & Herzegovina	No		NK	NK					
Bulgaria	No	2005	0.38 (0.30,0.45)	18500 (15000,22500)	1	A	National	A1	2
Czech Republic	Yes	2014	0.64 (0.61,0.67)	47000 (44500,49000)	1	A2	National	B2	12
Estonia	Yes	2009	0.94 (0.69,1.73)	8500 (6500,16000)	1	A2	National	A1	13
Georgia	No	2004	4.19 (0.48,7.90)	115000 (13000,217000)	1	C	National	A1	2
Hungary	No	2005	0.06 (0.03,0.08)	4000 (2000,6000)	1	A	National	A1	2
Latvia	Yes	2012	0.92 (0.73,1.17)	14000 (11000,18000)	1	A2	National	B2	12

	New estimate ?	Year of estimate	% (range)	National no. PWID (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Lithuania	No	2006	0.22 (0.12,0.34)	5000 (2500,8000)	1	C	National	A1	²
Moldova	Yes	2008	0.40 (0.25,0.54)	12000 (7500,16500)	8	A3	Sub-national	B3	¹⁴
Poland	No		NK	NK					
Romania	Yes	2014	0.62 (0.46,0.84)	81500 (60500,110000)	1	A2	City	B2	¹⁵
Russian Federation	No	2007	1.78 (0.94,2.71)	1881000 (1028500,3114000)	1	D1	National	A1	²
Slovakia	No	2006	0.49 (0.35,0.89)	20000 (14500,36000)	1	A	National	A1	²
	Yes	2012	0.97 (0.52,1.79)	319500 (172000,590500)	1	A2	National	B3	¹⁶
Latin America									
Argentina	No	1999	0.29 (0.29,0.30)	80500 (79000,82500)	1	D1	No region	A1	²
Belize	No		--	--					
Bolivia	No		NK	NK					
Brazil	No	2003	0.67 (0.51,0.87)	962000 (734500,1256000)	1	D1	National	A1	²
Chile	No	2006	0.38 (0.29,0.50)	47000 (36000,61500)	1	D1	National	A1	²
Colombia	No		NK	NK					
Costa Rica	No		NK	NK					
Ecuador	No		NK	NK					
El Salvador	No		NK	NK					
Guatemala	No		NK	NK					
Guyana	No		NK	NK					
Honduras	No		NK	NK					
Mexico	Yes	2011	0.18 (0.12,0.25)	150500 (100500,209500)	1	B	National	B	¹⁷
Nicaragua	No		NK	NK					
Panama	No		NK	NK					
Paraguay	No		NK	NK					
Peru	No		NK	NK					
Suriname	No		NK	NK					
Uruguay	Yes	2007	0.30 (0.10,0.87)	6500 (2000,19000)	1	B	National	B2	¹⁸
Venezuela	No		NK	NK					
Middle East & North Africa									
Algeria	No		NK	NK					
Bahrain	No		NK	NK					
Cyprus	Yes	2014	0.08 (0.04,0.12)	500 (500, 1,000)	4	A2	National	B2	¹²
Egypt	No		NK	NK					
Iraq	No		NK	NK					
Israel	No		NK	NK					
Jordan	No		NK	NK					
Kuwait	No		NK	NK					
Lebanon	No		NK	NK					
Libyan Arab Jamahiriya	No	2001	0.05 (0.01,0.10)	2000 (1000,3000)	1	C	National	A1	²
Morocco	Yes	2011; 2012; 2013	0.13 (0.07,0.20)	30500 (15500,45500)	3	A2; B	Sub-national	B3	^{19 20}
Occ. Palestinian Terr.	No		NK	NK					
Oman	No		NK	NK					
Qatar	No		NK	NK					
Saudi Arabia	No		NK	NK					
South Sudan	No		--	--					
Sudan	No		NK	NK					
Syrian Arab Rep.	No		NK	NK					
Tunisia	No		NK	NK					
Turkey	No		NK	NK					
United Arab Emirates	No		NK	NK					
Yemen	No		NK	NK					
North America									
Canada	Yes	2004	1.22 (1.04,1.40)	308000 (262000,354500)	1	B	National	B2	²¹
United States	Yes	2007	1.04 (0.57,1.88)	2248500 (1236500,4074000)	1	A2	National	A2	²²
Pacific Island States & Terr.									
American Samoa	No		NK	NK					
Fed. States of Micronesia	No		NK	NK					
Fiji	No		NK	NK					
French Polynesia	No		NK	NK					

	New estimate ?	Year of estimate	% (range)	National no. PWID (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Guam	No		NK	NK					
Kiribati	No		NK	NK					
Marshall Islands	No		NK	NK					
Nauru	No		--	--					
New Caledonia	No		NK	NK					
Northern Mariana Islands	No		NK	NK					
Palau	No		NK	NK					
Papua New Guinea	No		NK	NK					
Samoa	No		NK	NK					
Solomon Islands	No		NK	NK					
Tonga	No		NK	NK					
Tuvalu	No		--	--					
Vanuatu	No		NK	NK					
South Asia									
Afghanistan	Yes	2012	0.33 (0.22, 0.49)	22500 (15000, 33500)	4	A2	Sub-national	B2	²³
Bangladesh	Yes	2016	0.80 (0.50, 1.09)	139000 (88000, 190500)	1	A2	National	B3	²⁴
Bhutan	No		0.07 (0.06, 0.07)	68500 (63500, 74000)					
India	No	2006	NK	NK	1	A	National	A1	²
Iran	Yes	2013	0.02 (0.01, 0.03)	197000 (127500, 267000)	1	A3	National	A1	²⁵
Maldives	Yes	2008	0.28 (0.19, 0.37)	158000 (107000, 209000)	2	C	Sub-national	B2	²⁶
Nepal	Yes	2011	0.60 (0.26, 0.94)	1500 (500, 2500)	1	A2	National	B3	²⁷
Pakistan	Yes	2011	0.20 (0.19, 0.21)	35000 (33500, 37000)	1	A2	National	B3	²⁸
Sri Lanka	Yes	2013	0.37 (0.32, 0.42)	423000 (363000, 482500)	1	C	National	B2	²⁹
Sub Saharan Africa									
Angola	No		NK	NK					
Benin	No		NK	NK					
Botswana	No		--	--					
Burkina Faso	No		NK	NK					
Burundi	No		NK	NK					
Cameroon	No		NK	NK					
Cape Verde	No		NK	NK					
Central African Republic	No		--	--					
Chad	No		NK	NK					
Comoros	No		--	--					
Congo (Kinshasa)	Yes	2013	0.01 (0.00, 0.40)	3500 (0, 158000)	1	A2	National	B3	³⁰
Cote d'Ivoire	Yes	2014	0.01 (0.00, 0.01)	500 (500, 1000)	2	A2	City	B3	³¹
Djibouti	No		NK	NK					
Equatorial Guinea	No		--	--					
Eritrea	No		--	--					
Ethiopia	No		NK	NK					
Gabon	No		NK	NK					
Gambia	No		NK	NK					
Ghana	No		NK	NK					
Guinea	No		NK	NK					
Guinea-Bissau	No		--	--					
Kenya	Yes	2011; 2012	0.12 (0.03, 0.20)	30500 (9000, 52000)	6	A2	Sub-national	B3; A1	^{32,33}
Lesotho	No		--	--					
Liberia	No		NK	NK					
Madagascar	Yes	2014	0.12 (0.02, 0.59)	15500 (3000, 79500)	1	A2	National	B3	³⁴
Malawi	No		NK	NK					
Mali	No		NK	NK					
Mauritania	No		--	--					
Mauritius	Yes	2014	0.78 (0.39, 1.54)	7000 (3500, 14000)	1	B1	Sub-national	B3	³⁵
Mozambique	Yes	2014	0.20 (0.00, 0.41)	29000 (0, 59000)	4	A1; A2	City	A1	³⁶
Namibia	No		--	--					
Niger	No		NK	NK					
Nigeria	No		NK	NK					
Rep. of the Congo	No		--	--					
Rwanda	Yes	2011	0.03 (0.00, 0.07)	2000 (<500, 4500)	1	A3	National	B3	³⁷
Sao Tome & Principe	No		--	--					
Senegal	No		NK	NK					
Seychelles	Yes	2011	2.30 (1.54, 3.43)	1500 (1000, 2500)	1	D1	National	B3	³⁸
Sierra Leone	Yes	2013	0.04 (0.04, 0.04)	1500 (1000, 1500)	1	A2	National	B2	³⁹

	New estimate ?	Year of estimate	% (range)	National no. PWID (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Somalia	No		NK	NK					
South Africa	Yes	2014	0.21 (0.06,0.74)	76000 (21500,268000)	1	A2	National	B3	40
Swaziland	No		NK	NK					
Togo	Yes	2014	0.06 (0.01,0.49)	2500 (<500,19500)	1	C	National	B3	41
Uganda	No		NK	NK					
United Rep. of Tanzania	Yes	2012	1.24 (0.72, 1.76)	343000 (200000, 486000)	2	A2	Sub-national	A1	42
Zambia	No		NK	NK					
Zimbabwe	No		NK	NK					
Western Europe									
Albania	No		NK	NK					
Andorra	No		NK	NK					
Austria	No	2000	0.32 (0.22,0.42)	18500 (12500,24500)	1	A	National	A1	2
Belgium	Yes	2014	0.35 (0.24,0.49)	26000 (18500,37000)	1	A2	National	B2	12
Croatia	Yes	2015	0.23 (0.18,0.29)	6500 (5000,8500)	1	A2	National	B2	12
Denmark	Yes	2009	0.45 (0.35,0.52)	16500 (13000,19000)	1	A2	National	A1	43
England	Yes	2010	0.59 (0.55,0.63)	210500 (196500,225000)	1	A2	National	B2	44
Finland	Yes	2012	0.46 (0.41,0.67)	17000 (15000,25000)	1	D2	National	B2	12
Form. Yug. Rep. Macedonia	No		NK	NK					
France	Yes	2011	0.20 (0.16,0.23)	82000 (66500,97000)	1	D2	National	A1	43
Germany	Yes	2000	0.24 (0.03, 0.45)	131,500 (14,000, 249,500)	2	A	National	B2	12
Greece	Yes	2014	0.07 (0.06,0.09)	5000 (4000,6000)	1	A2	National	B2	12
Greenland	No		--	--					
Iceland	No		NK	NK					
Ireland	No	1996	0.27 (0.20,0.33)	8500 (6500,10500)	1	A	No region	A1	2
Italy	No	1996	0.83 (0.57, 1.14)	341,500 (233,500, 467,500)	1	A	No region	A1	2
Liechtenstein	No		--	--					
Luxembourg	Yes	2009	0.57 (0.45,0.69)	2000 (1500,2500)	1	A1	National	A1	45
Malta	No		NK	NK					
Monaco	No		NK	NK					
Montenegro	No		NK	NK					
Netherlands	No	2001	0.03 (0.02,0.04)	3500 (2500,4500)	1	A	National	A1	2
Northern Ireland	No		NK	NK					
Norway	Yes	2013	0.24 (0.21,0.29)	8500 (7000,10000)	1	A2	National	B2	12
Portugal	Yes	2012	0.22 (0.19,0.25)	16000 (13500,17500)	1	D2	National	B2	12
San Marino	No		NK	NK					
Scotland	Yes	2009	0.44 (0.38,0.49)	16000 (13500,17500)	2	A1	National	A1	46,47
Serbia	Yes	2016	0.49 (0.41,0.58)	29000 (24000,34500)	1	A2	Sub-national	B3	48
Slovenia	Yes	2012	0.42 (0.30,0.55)	6000 (4000,7500)	1	C	National	A1	43
Spain	Yes	2013	0.03 (0.01, 0.05)	10,500 (3,500, 17,500)	3	A2	National	B2; A1	12,49
Sweden	Yes	2011	0.13 (0.03,0.62)	8000 (2000,38500)	1	A2	National	B2	12
Switzerland	Yes	2006	0.24 (0.19,0.29)	13500 (11000,16000)	1	A2	National	A1	50
Wales	No		NK	NK					

References

1. Larney S, Hickman M, Guy R, et al. Estimating the number of people who inject drugs in Australia. 2017.
2. Mathers BM, Degenhardt L, Phillips B, et al. Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review. *Lancet* 2008; **372**(9651): 1733-45.
3. Chhorvann C, Sopheap H, Sovannary T. National Population Size Estimation, HIV Related Risk Behaviors and HIV Prevalence among People Who Use Drugs in Cambodia. 2012.
4. Ministry of Health Indonesia. 2012 Size Estimation of Key Affected Population (KAPs). 2014.
5. Lou V, Johnston L, Soe PM. Myanmar Integrated Biological and Behavioral Surveillance Survey of People Who Inject Drugs, 2014.
6. Samonte GMJ, Belimac JGB, Feliciano JS. Philippine Estimates of the Most At-Risk Population and People Living with HIV. 2011.
7. Kanato M. Size estimation of injecting drug users through the network scale-up method in Thailand. *Journal of the Medical Association of Thailand* 2015; **98**: S17-S24.
8. Jose H, Rawstorne P, Rahman B, Dolan K. Timor-leste national size estimates and behavioural data for key populations at risk of HIV and other STIs. *Sexually Transmitted Infections* 2015; **91**: A182.
9. UNAIDS. Estimating the size of populations of sex workers, men who have sex with men, and injecting drug users in Armenia in 2010. 2011.
10. WHO. Estimating the Sizes of Populations at Risk for HIV and AIDS. 2011.
11. Кечина Евгения Аркадьевна. Оценка численности потребителей инъекционных наркотиков в Республике Беларусь. 2015.
12. EMCDDA. Data tables: Problem drug use > Injecting > All years > Geo-coverage > National - Table: IDU-Nat. 2016. www.emcdda.europa.eu/data/stats2016#displayTable>IDU-Nat (accessed 30 July 2016).
13. Uuskula A, Rajaleid K, Talu A, Abel-Ollo K, Des Jarlais DC. A decline in the prevalence of injecting drug users in Estonia, 2005-2009. *International Journal of Drug Policy* 2013; **24**(4): 312-8.
14. Republic of Moldova: National Coordination Council on HIV/AIDS and TB. Size Estimation for High Risk Groups Moldova 2010.
15. EMCDDA. Data tables: Problem drug use > Injecting > All years > Geo-coverage > Subnational - Table: IDU-Subnat. 2016. www.emcdda.europa.eu/data/stats2016#displayTable>IDU-Subnat (accessed 30 July 2016).
16. Berleva G, Dumchev K, Kasianchuk M, et al. Estimation of the Size of Populations Most-at-Risk for HIV Infection in Ukraine. 2012.
17. (CENADIC) CNPIPyecdIA. Encuesta Nacional de Adicciones 2011: Drogas Ilicitas, 2012.
18. Informe de Progreso Global sobre SIDA 2012. Seguimiento de la Declaración Política sobre el VIH/sida de 2011 Uruguay - Informe 2012. Report to UNAIDS. 2012.
19. Toufik A. Enquêtes intégrées de surveillance bio-comportementale auprès des Usagers de Drogues Injectables à Tétouan. 2014.
20. Ministere de la Sante. Enquete integree de surveillance bio-comportementale aupres des Usagers de Drogues Injectables a Tanger et a Nador: Maroc 2011-2012. 2012.
21. Sawka E, Patton D, Adlaf E, et al. A national survey of Canadians' use of alcohol and other drugs: Prevalence of Use and Related Harms. the Canadian Centre on Substance Abuse (CCSA), 2004.
22. Tempalski B, Pouget ER, Cleland CM, et al. Trends in the population prevalence of people who inject drugs in US metropolitan areas 1992-2007. 2013; **8**(6): e64789.
23. National AIDS Control Program Afghanistan. Integrated Biological & Behavioral Surveillance (IBBS) in Selected Cities of Afghanistan. 2012.
24. National AIDS/STD Programme Bangladesh. Mapping Study and Size Estimation of Key Populations in Bangladesh. 2016.

25. JafariKhounigh A, Haghdoost AA, SalariLak S, et al. Size Estimation of Most-at-Risk Groups of HIV/AIDS Using Network Scale-up in Tabriz, Iran. *Journal of controlled release : official journal of the Controlled Release Society* 2014; **3**: 21-6.
26. Republic of Maldives. Biological and Behavioral Survey (BBS) on HIV and AIDS 2008. 2008.
27. Nepal: National Centre for AIDS and STD Control. Mapping & Size Estimation of Most-At-Risk-Population in Nepal, 2011, Injecting Drug Users. 2011.
28. Emmanuel F. HIV Second Generation Surveillance in Pakistan - National Report Round IV. 2012.
29. Global Fund. National Size Estimation of Most at Risk Populations (MARPs) for HIV in Sri Lanka 2013.
30. Democratic Republic of Congo Presidency of the Republic National Multisectoral Programme against AIDS. Rapport de l'enquête sur l'estimation de la taille des populations clés dans six provinces 2013.
31. Bouscaillou J, Evanno J, Prouté M, et al. Santé des personnes usagères de drogue à Abidjan en Côte d'Ivoire: Prévalence et pratiques à risque d'infection par le VIH, les hépatites virales, et autres infections 2014.
32. Okal J, Geibel S, Muraguri N, et al. Estimates of the Size of key populations at risk for HIV infection: Men who have sex with men, female sex workers and injecting drug users in Nairobi, Kenya. *Sexually Transmitted Infections* 2013; **89**(5): 366-71.
33. Ministry of Health Kenya. MARPs Surveillance Report, 2012.
34. Système d'Information Multi-Sectorielle: Madagascar. Cartographie et estimation de la taille des personnes cibles les plus exposées aux risques du VIH/Sida. 2014.
35. Munro A, Taylor A, Knox T, et al. Needle Exchange Surveillance Initiative (NESI): Prevalence of HCV and injecting risk behaviours among people who inject drugs (PWID) attending injecting equipment provision services (IEPs) in Scotland, 2008/2009-2013/2014. Scotland: University of the West of Scotland, 2015.
36. Sathane I, Horth R, Boothe M, et al. Estimating the number of people who inject drugs in two urban areas in Mozambique using four different methods, 2014. *Journal of the International AIDS Society* 2015; **18**: 54-5.
37. Rwanda Biomedical Center. Rwanda: Estimating the Size of Populations through a Household Survey (ESPHS). 2011.
38. National AIDS Council. Global AIDS Response Progress Report: Full Country Report Seychelles. Report to UNAIDS. 2015.
39. UNAIDS. Population Size Estimation of Key Populations. 2013.
40. Human Sciences Research Council (HSRC) South Africa. Programmatic Mapping and Size Estimation (PMSE) of Key Populations in South Africa. 2015.
41. UNAIDS. Cartographie des sites, estimation de la taille des usagers de drogues injectables (UDI) et evaluation de leurs besoins en matière de services de prévention, de soins et traitement en matière de VIH et de santé de la reproduction au Togo. 2014.
42. Khalid FJ, Hamad FM, Othman AA, et al. Estimating the number of people who inject drugs, female sex workers, and men who have sex with men, Unguja Island, Zanzibar: Results and synthesis of multiple methods. *AIDS and Behavior* 2014; **18**(Suppl 1): 25-31.
43. Fraser H, Martin NK, Brummer-Korvenkontio H, et al. HCV Treatment as Prevention in Europe: Model Projections and Impact of Current and Scaled-up Treatment Rates. 2016.
44. Hay G, Gannon M, Casey J, Millar T, The Centre for Drug Misuse Research, The National Drug Evidence Centre. Estimates of the Prevalence of Opiate Use and/or Crack Cocaine Use, 2009/10: Sweep 6 report. 2011.
45. Origer A. Prevalence of problem drug use and injecting drug use in Luxembourg: A longitudinal and methodological perspective. *European Addiction Research* 2012; **18**(6): 288-96.

46. King R, Bird SM, Overstall AM, Hay G, Hutchinson SJ. Estimating prevalence of injecting drug users and associated heroin-related death rates in England by using regional data and incorporating prior information. *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 2014; **177**(1): 209-36.
47. Prevost TC, Presanis AM, Taylor A, Goldberg DJ, Hutchinson SJ, De Angelis D. Estimating the number of people with hepatitis C virus who have ever injected drugs and have yet to be diagnosed: An evidence synthesis approach for Scotland. *Addiction* 2015; **110**(8): 1287-300.
48. Gexha-Bunjaku D, Deva E, Gashi L, Kacaniku-Gunga P, Emmanuel F. Programmatic Mapping and Size Estimations of Key Populations. 2016.
49. Barrio G, Bravo MJ, Brugal MT, et al. Harm reduction interventions for drug injectors or heroin users in Spain: expanding coverage as the storm abates. *Addiction* 2012; **107**(6): 1111-22.
50. Arnaud S, Jeannin A, Dubois-Arber F. Estimating national-level syringe availability to injecting drug users and injection coverage: Switzerland, 1996-2006. *International Journal of Drug Policy* 2011; **22**(3): 226-32.

Appendix 11: Grade and sources for country-level estimates of HIV prevalence among people who inject drugs

	New estimate?	Year of estimate	HIV among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Australasia								
Australia	Yes	2011; 2012; 2013; 2014	1.3 (1,1.6)	32	B1	National	B3	¹
New Zealand	Yes	2013	0.1 (0,0.8)	1	B1	National	B2	²
Caribbean								
Antigua & Barbuda	No		--					
Bahamas	No		NK					
Barbados	No		--					
Bermuda	No		NK					
Comm. of Puerto Rico	Yes	2015	6.0 (3.7,9.3)	1	B1	Sub-national	A1	³
Cuba	No		--					
Dominica	No		--					
Dominican Republic	No		NK					
Grenada	No		--					
Haiti	No		NK					
Jamaica	No		NK					
Saint Kitts & Nevis	No		--					
Saint Lucia	No		--					
St Vincent & the Grenadines	No		--					
Trinidad & Tobago	No		--					
Central Asia								
Kazakhstan	No	2005	9.2 (8.0-10.4)	1	B	Sub-national	A1	⁴
Kyrgyzstan	Yes	2013	12.4 (10.3,14.7)	1	B1	National	B2	⁵
Tajikistan	Yes	2015	27.0 (21.0,33.7)	1	B1	National	A2	⁶
Turkmenistan			NK					
Uzbekistan	Yes	2013	7.3 (5.8,9.1)	1	U	National	B2	⁷
East and South East Asia								
Brunei Darussalam	No		NK					
Cambodia	Yes	2012	24.4 (17.0,33.1)	1	B1	Sub-national	B3	⁸
China	Yes	2010; 2011; 2012; 2013	12.4 (6.8,17.9)	8	A; B1; C	Sub-national	A1	⁹⁻¹⁶
Hong Kong (China)	No		NK					
Indonesia	Yes	2013; 2015	44.5 (34.0,55.0)	6	B1; C	Sub-national	B3	^{17,18}
Japan	No		NK					
Lao PDR	Yes	2011	17.4 (7.8,31.4)	1	B1	Sub-national	D	¹⁹
Malaysia	Yes	2012; 2014	17.8 (16.6,19.1)	2	B1	National	B2	²⁰
Mongolia	No		NK					
Myanmar	Yes	2011; 2012; 2014	23.4 (19.0,27.7)	29	A; B1	Sub-national	B2; B3	²¹⁻²⁴
North Korea	No		--					
Philippines	Yes	2011; 2013	20.3 (13.0,27.6)	5	B1	National	B2; B3	^{25,26}
Republic of Korea	Yes	2010	0.0 (0.0,0.0)	1	C	National	A1	²⁷
Singapore	No		NK					
Taiwan	Yes	2010; 2011; 2013	12.4 (8.1,16.8)	4	C	National	A1; C	²⁸⁻³¹
Thailand	Yes	2009; 2010; 2012	24.5 (17.4,31.7)	6	B1; B2	Sub-national	A1; B3	³²⁻³⁴
Timor Leste	No		NK					
Viet Nam	Yes	2011; 2012; 2013; 2014	16.6 (13.1,20.1)	25	A; B1	Sub-national	A1; B2; B3	³⁵⁻³⁹
Eastern Europe								
Armenia	Yes	2011; 2012	5.4 (2.2,8.5)	6	B1	City	B2; B3	^{40,41}
Azerbaijan	Yes	2012	9.7 (5.6,13.8)	7	B2	City	B2	⁴²
Belarus	Yes	2015	25.6 (17.9,33.2)	6	B1	City	B2	⁴³
Bosnia & Herzegovina	Yes	2012	0.3 (0.0,0.6)	5	B1	City	B3	⁴⁴

	New estimate?	Year of estimate	HIV among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Bulgaria	Yes	2011; 2012; 2013; 2014	7.0 (3.2,1.1)	6	A	Sub-national	B2	45
Czech Republic	Yes	2011; 2012; 2013; 2014	0.3 (0.2,0.4)	12	A; B1	National	B2	45
Estonia	Yes	2011; 2012; 2014	53.4 (44.4,62.5)	3	C	City	A1; A2; B2	46-48
Georgia	Yes	2012; 2015	2.2 (1.5,2.9)	13	B1	City	B2	49,50
Hungary	Yes	2012; 2014; 2015	0.2 (0.0,0.4)	3	A	National	A1; B2	45,51,52
Latvia	Yes	2011; 2012; 2013; 2014	26.9 (24.1,29.6)	4	B1	Sub-national	B2	45
Lithuania	Yes	2012; 2014	8.0 (1.7,14.4)	3	B1; C	City	B2	45,46
Moldova	Yes	2013	29.5 (12.9,46.0)	4	B2	City	B2	53
Poland	Yes	2005	18.0 (15.3,20.9)	1	A	Sub-national	A1	54
Romania	Yes	2011; 2012; 2013; 2014	20.5 (7.0,34.1)	7	A; B2	National	B2; B3	45,55
Russian Federation	Yes	2009; 2010; 2012; 2015	30.4 (17.9,43.0)	12	B1; B2	City	A1; C	56-59
Slovakia	Yes	2011; 2012; 2013; 2014	0.01 (0.0,0.03)	7	A; B1	National	B2	45
Ukraine	Yes	2013; 2015	19.1 (16.1,22.2)	60	B1	National	A1; B2	60,61
Latin America								
Argentina	No	1987; 1999; 2001	49.7 (35.4-64.0)	2	A	Sub-national	A1	4
Belize	No		--					
Bolivia	No		NK					
Brazil	No	2000	48.0 (18.0-78.0)	1	A	Sub-national	A1	4
Chile	No		NK					
Colombia	Yes	2011; 2014	4.6 (2.7,6.4)	7	B1	Sub-national	A1; B1	62,63
Costa Rica	No		NK					
Ecuador	No		NK					
El Salvador	No		NK					
Guatemala	No		NK					
Guyana	No		NK					
Honduras	No		NK					
Mexico	Yes	2005; 2007	4.0 (3.0,4.9)	3	A; B1	City	A1	64-66
Nicaragua	Yes	2014	2.4 (0.1,12.9)	1	B1	National	B3	67
Panama	No		NK					
Paraguay	No	2006	9.4 (3.7-15.0)	2	B	Sub-national	A1	4
Peru	No	1994; 1995	13.0 (10.8-15.3)	1	D	National	A1	4
Suriname	No		NK					
Uruguay	Yes	2004	18.5 (16.1-20.9)	1	U	National	B2	68
Venezuela	No		NK					
Middle East & North Africa								
Algeria	Yes	2014	1.1 (0.0,5.7)	1	C	National	B3	69
Bahrain	Yes	2009	4.6 (1.9,9.3)	1	C	National	B2	70
Cyprus	Yes	2011; 2012; 2013; 2014	1.2 (0.6,1.7)	8	A; B1	National	B2	45
Egypt	No	2006	2.6 (0.6,4.5)	1	B	City	A1	4
Iraq	No		NK					
Israel	Yes	2010	0.0 (0.0,0.0)	1	C	Sub-national	B2	71
Jordan	No		NK					
Kuwait	No		NK					
Lebanon	Yes	2008	0.0 (0.0,0.0)	1	C	City	A1	72
Libyan Arab Jamahiriya	Yes	2010	89.6 (85.8,92.7)	1	B1	City	A1	73
Morocco	Yes	2011; 2013	9.6 (0.0,20.6)	3	B1	Sub-national	B3	74,75
Occ. Palestinian Terr.	Yes	2013	0.0 (0.0,0.0)	4	B1	Sub-national	A1	76
Oman	No	2000; 2005	11.8 (5.0,18.6)					
Qatar	No		NK					
Saudi Arabia	Yes	2012	9.8 (7.0,13.2)	1	C	City	A1	77

	New estimate?	Year of estimate	HIV among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
South Sudan	No		--					
Sudan	No	2003	0.0 (0.0,0.0)	1	B	No region	A1	4
Syrian Arab Rep.	Yes	2014	0.0 (0.0,0.0)	1	B1	Sub-national	B2	78
Tunisia	Yes	2009; 2011	3.5 (2.6,4.4)	2	B1	Sub-national	B2	79,80
Turkey	Yes	2012; 2013; 2014; 2015	0.2 (0.1,0.4)	5	B1	National	A1; B2	45,81
United Arab Emirates	No		NK					
Yemen	No		NK					
North America								
Canada	Yes	2011; 2012; 2013; 2014	11.3 (8.5,14.2)	24	A; B1	Sub-national	A2; B3; D	82-88
United States	Yes	2011; 2012; 2013; 2014	8.7 (6.8,10.7)	24	A; B1; B2; C	City	A1; B3	89-93
Pacific Island States & Terr.								
American Samoa	No		NK					
Fed. States of Micronesia	No		NK					
Fiji	No		NK					
French Polynesia	No		NK					
Guam	No		NK					
Kiribati	No		NK					
Marshall Islands	No		NK					
Nauru	No		--					
New Caledonia	No		NK					
Northern Mariana Islands	No		NK					
Palau	No		NK					
Papua New Guinea	No		NK					
Samoa	No	2004; 2005	0.0 (0.0-0.0)	1	D1	No region	A1	4
Solomon Islands	No	2004; 2005	0.0 (0.0-0.0)	1	D1	No region	A1	4
Tonga	No	2004; 2005	0.0 (0.0-0.0)	1	D1	No region	A1	4
Tuvalu	No		--					
Vanuatu	No		NK					
South Asia								
Afghanistan	Yes	2009; 2012	4.0 (2.2,5.8)	10	A; B1; C	City	A1; B3	94-97
Bangladesh	Yes	2011	0.5 (0.2,0.7)	23	A	City	B3	98
Bhutan	No		NK					
India	Yes	2012; 2013; 2014; 2015	15.6 (12.9,18.2)	36	A; B1; C	Sub-national	A1; B2	99-109
Iran	Yes	2010; 2012; 2013; 2014	14.0 (9.2,18.7)	5	A; B1; C	Sub-national	A1	110-114
Maldives	Yes	2008	0.0 (0.0-0.0)	2	B1	City	B2	115
Nepal	Yes	2012; 2013; 2014; 2015	9.6 (6.3,12.9)	11	A; B1	National	A1; B3; C	116-123
Pakistan	Yes	2011; 2014	32.3 (25.5,39.1)	16	B1	Sub-national	A1; B3	124,125
Sri Lanka	Yes	2014	0.0 (0.0-0.0)	1	C	City	B3	126
Sub Saharan Africa								
Angola	No		NK					
Benin	Yes	2013; 2015	5.1 (3.2,7.0)	2	B1	National	B2	127,128
Botswana	No		--					
Burkina Faso	No		NK					
Burundi	No		NK					
Cameroon	No		NK					
Cape Verde	No		NK					
Central African Republic	No		--					
Chad	No		NK					
Comoros	No		--					
Congo (Kinshasa)	Yes	2014	13.3 (7.3,21.6)	1	C	National	B3	129
Cote d'Ivoire	Yes	2014	5.3 (1.1,14.6)	1	B1	City	A1	130
Djibouti	No		NK					
Equatorial Guinea	No		--					

	New estimate?	Year of estimate	HIV among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Eritrea	No		--					
Ethiopia	No		NK					
Gabon	No		NK					
Gambia	No		NK					
Ghana	No		NK					
Guinea	No		NK					
Guinea-Bissau	No		--					
Kenya	Yes	2010; 2011; 2012; 2013	42.0 (21.1,62.8)	7	B1; B2; C	Sub-national	A1; A2; B3	131-136
Lesotho	No		--					
Liberia	No		NK					
Madagascar	Yes	2012	4.8 (0.2,9.4)	3	B1	City	B2	137
Malawi	No		NK					
Mali	No		NK					
Mauritania	No		--					
Mauritius	Yes	2009; 2011	45.5 (42.4,48.6)	2	B1	National	A1; B3	138,139
Mozambique	Yes	2014	46.3 (41.9,50.7)	2	B1	City	B2; B3	140
Namibia	No		--					
Niger	No		NK					
Nigeria	Yes	2014	3.1 (1.8,4.4)	8	B1	National	B3	141
Rep. of the Congo	No		NK					
Rwanda	No		NK					
Sao Tome & Principe	No		--					
Senegal	Yes	2011	9.3 (5.0,15.4)	1	B1	City	A1	142
Seychelles	Yes	2011	3.8 (2.0,6.4)	1	B1	National	B2	143
Sierra Leone	Yes	2015	8.5 (5.4,12.6)	1	B1	National	B2	144
Somalia	No		NK					
South Africa	Yes	2013	14.2 (11.1,17.8)	1	A	Sub-national	A1	145
Swaziland	No		NK					
Togo	No		NK					
Uganda	No		NK					
United Rep. of Tanzania	Yes	2011; 2012; 2013; 2014	28.3 (16.3,40.4)	5	A; B1; C	Sub-national	A1; B3	146-150
Zambia	No		NK					
Zimbabwe	No		NK					
Western Europe								
Albania	Yes	2011	0.5 (0.0,2.8)	1	B1	City	C	151
Andorra	No		NK					
Austria	Yes	2011; 2012; 2013; 2014	0.6 (0.3,1.0)	14	A; B1; C	National	B2	45
Belgium	Yes	2011; 2012; 2013; 2014	4.3 (3.3,5.4)	7	B1; C	City	B2	45
Croatia	Yes	2015	0.4 (0.0,0.8)	3	B1	City	A1	152
Denmark	Yes	2010	1.3 (0.3,3.6)	1	B1	Sub-national	A1	153
England	Yes	2006	0.8 (0.1,1.5)	2	B1	Sub-national	A1	154,155
Finland	Yes	2014	1.2 (0.5,2.4)	1	B1	National	B2	45
Form. Yug. Rep. Macedonia	No		NK					
France	Yes	2010; 2011; 2012	8.7 (5.3,12.1)	3	A; B1	National	A1; B2	45,156
Germany	Yes	2011; 2012; 2013; 2014	4.4 (2.3,6.4)	8	B1	City	A1	157
Greece	Yes	2011; 2012; 2013; 2014	6.9 (4.2,9.6)	14	A; B1	National	A1; B2	45,158,159
Greenland	No		--					
Iceland	No		NK					
Ireland	No	1999	5.8 (4.6,7)	1	A	National	A1	4
Italy	Yes	2011; 2012; 2013; 2014	6.1 (4.7,7.5)	21	C; B1	City	A2; B2	45,160
Liechtenstein	No		--					

	New estimate?	Year of estimate	HIV among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Luxembourg	Yes	2011; 2012; 2013; 2014	1.5 (0.5,2.5)	4	A	National	B2	45
Malta	Yes	2011; 2012; 2013; 2014	0.5 (0.0,1.2)	4	A	National	B2	45
Monaco	No		NK					
Montenegro	Yes	2008; 2005	0.2 (0.0,0.6)	2	B1	National	A1	161,162
Netherlands	Yes	2011; 2012; 2013; 2014	2.3 (1.9,2.6)	9	A; B1	National	B2	45
Northern Ireland	No		NK					
Norway	Yes	2010; 2011; 2012	0.7 (0.0,1.5)	3	A	City	B2	45
Portugal	Yes	2011; 2012; 2013; 2014	18.0 (15.4,20.6)	4	B1	National	B2	45
San Marino	No		NK					
Scotland	Yes	2014	0.8 (0.5,1.3)	1	B1	National	B3	163
Serbia	Yes	2014	0.0 (0.0-0.0)	2	B1	Sub-national	B3	164
Slovenia	Yes	2011; 2012; 2013; 2014	0.5 (0.1,1.0)	8	A; B1	National	B2	45,165
Spain	Yes	2010; 2011; 2012; 2013	32.6 (31.6,33.6)	6	A; B1	National	A1; B2	45,166,167
Sweden	Yes	2005; 2008	0.2 (0.0,0.5)	2	A; C	Sub-national	A; C	168,169
Switzerland	No	2004	1.4 (0.8,2.0)	1	A	No region	A1	4
Wales	No		NK					

References

1. The Kirby Institute. Prevalence of HIV, HCV and injecting and sexual behaviour among Needle and Syringe Program attendees 1995-2014. 2015.
2. Noller G, Leafe K. Brief analysis of the New Zealand population of people who inject drugs (PWID): Estimates of population size, prevalence of BBVs, demographics and risk behaviours, and service provision. 2016.
3. Abadie R, Welch-Lazoritz M, Gelpi-Acosta C, Reyes JC, Dombrowski K. Understanding differences in HIV/HCV prevalence according to differentiated risk behaviors in a sample of PWID in rural Puerto Rico. *Harm Reduction Journal* 2016; **13 (1) (no pagination)**(10).
4. Mathers BM, Degenhardt L, Phillips B, et al. Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review. *Lancet* 2008; **372**(9651): 1733-45.
5. Chokmorova U, Ismailova A, Bubusara S, et al. IBBS 2013 Report. 2013.
6. Bangel SA, Zule W, Otiashvili D, Latypov A, Wechsberg M. Gender disparities in HIV prevalence and risk behaviors among people who inject drugs in Tajikistan. 2016.
7. Республика Узбекистан. НАЦИОНАЛЬНЫЙ ДОКЛАД О ХОДЕ ВЫПОЛНЕНИЯ ДЕКЛАРАЦИИ О ПРИВЕРЖЕННОСТИ ДЕЛУ БОРЬБЫ С ВИЧ/СПИДСПЕЦИАЛЬНОЙ СЕССИИ ГЕНЕРАЛЬНОЙ АССАМБЛЕИ ООН. Report to UNAIDS. 2015.
8. Chhorvann C, Sopheab H, Sovannary T. National Population Size Estimation, HIV Related Risk Behaviors and HIV Prevalence among People Who Use Drugs in Cambodia. 2012.
9. Wang, Chen. 年四川省达州市吸毒人群艾滋病哨点监测结果分析. 2014.
10. Deng X. Analysis of HIV and HPC in drug users (in Mandarin). 2014.
11. Li L, Assanangkornchai S, Duo L, McNeil E, Li J. Risk behaviors, prevalence of HIV and hepatitis C virus infection and population size of current injection drug users in a China-Myanmar border city: results from a Respondent-Driven Sampling Survey in 2012. *PLoS ONE [Electronic Resource]* 2014; **9**(9): e106899.
12. Zhang L, Zhang D, Chen W, Zou X, Ling L. High prevalence of HIV, HCV and tuberculosis and associated risk behaviours among new entrants of methadone maintenance treatment clinics in Guangdong Province, China. *PLoS ONE [Electronic Resource]* 2013; **8**(10): e76931.
13. Luo W, Wu Z, Poundstone K, et al. Needle and syringe exchange programmes and prevalence of HIV infection among intravenous drug users in China. *Addiction* 2015; **110**(Suppl 1): 61-7.
14. Zhou YH, Yao ZH, Liu FL, et al. High prevalence of HIV, HCV, HBV and co-infection and associated risk factors among injecting drug users in Yunnan Province, China. *PloS one* 2012; **7 (8) (no pagination)**(e42937).
15. Xu, Chu. 昆明市E_年吸毒人员TV感染及相关因素分析. 2011.
16. Zhu XH, Xun JP, Gao L, Peng JJ. Monitoring and Analysis of Clinical Blood in 613 MMT Clients. 2010.
17. Persaudaraan Korban Napza Indonesia (PKNI). Peer-Driven Intervention on Hepatitis C Testing and Treatment Literacy among People Who Inject Drugs in Jakarta, Indonesia. 2014.
18. Ministry of Health and the National AIDS Commission Indonesia. 2013 Sero-Surveillance Survey And 2013 Rapid Behavioral Survey. 2013.
19. Phimphachanh C. Rapid Assessment and Response to Drug Use and Injecting Drug Use in Huaphanh and Phongsaly Provinces, Lao PDR. 2011.
20. Ngadiman S, Suleiman A, Taib SM, et al. Global AIDS Response Progress Report Malaysia 2015. Report to UNAIDS. 2015.
21. WHO. HIV Sentinel Sero-Surveillance Survey Report 2014. 2015.
22. Lou V, Johnston L, Soe PM. Myanmar Integrated Biological and Behavioral Surveillance Survey of People Who Inject Drugs, 2014.
23. AIDS Data Hub. HIV Sentinel Sero-Surveillance Survey Report 2012. 2013.
24. WHO. HIV Sentinel Sero-Surveillance Survey Report 2011. 2012.
25. HIV and AIDS Data Hub for Asia-Pacific. IHBSS Philippines. 2013.

26. HIV and AIDS Data Hub for Asia-Pacific. IHBSS Philippines. 2011.
27. Min JA, Yoon Y, Lee HJ, et al. Prevalence and associated clinical characteristics of hepatitis B, C, and HIV infections among injecting drug users in Korea. *Journal of Medical Virology* 2013; **85**(4): 575-82.
28. Shi MD, Zhang KX, Tsai LY. Injecting drug users (IDUs) prevalence of hepatitis virus, HIV and syphilis in Southern Taiwan. *Hepatology International* 2013; **7**: S116.
29. Yen YF, Yen MY, Lin T, et al. Prevalence and factors associated with HIV infection among injection drug users at methadone clinics in Taipei, Taiwan. *BMC Public Health* 2014; **14**: 682.
30. Yen YF, Hu BS, Lin YS, et al. Latent tuberculosis among injection drug users in a methadone maintenance treatment program, Taipei, Taiwan: TSPOT.TB versus tuberculin skin test. *Scandinavian Journal of Infectious Diseases* 2013; **45**(7): 504-11.
31. Yen YF, Rodwell TC, Yen MY, et al. HIV infection risk among injection drug users in a methadone maintenance treatment program, Taipei, Taiwan 20072010. *American Journal of Drug and Alcohol Abuse* 2012; **38**(6): 544-50.
32. Pansuwan N, Wisawakam P, Saengwanloy O, Jittakot Y, Pawa D. The 2012 Integrated Behavior and Biological Surveillance (IBBS) of HIV, Sexually Transmitted Infections and Associated Risk Behaviors among Injecting Drug Users. 2012.
33. Visavakum P, Punsuwan N, Manopaiboon C, et al. HIV prevalence and risk behaviors among people who inject drugs in Songkhla, Thailand: A respondent-driven sampling survey. *International Journal of Drug Policy* 2016; **31**: 163-7.
34. Prybylski D, Manopaiboon C, Visavakum P, et al. Diverse HIV epidemics among people who inject drugs in Thailand: evidence from respondent-driven sampling surveys in Bangkok and Chiang Mai. *Drug & Alcohol Dependence* 2015; **148**: 126-35.
35. HAARP. HAARP Vietnam. 2015.
36. Ministry of Health. HIV/STI Integrated Biological and Behavioral Surveillance (IBBS) in Vietnam. Results from Round III 2013 and Trends Across Three Rounds (2005-2009-2013) of Surveys. 2014.
37. Des Jarlais D, Huong DT, Oanh KTH, et al. Prospects for ending the HIV epidemic among persons who inject drugs in Haiphong, Vietnam. *International Journal of Drug Policy* 2016; **32**.
38. Lim TW, Frangakis C, Latkin C, et al. Community-level income inequality and HIV prevalence among persons who inject drugs in Thai Nguyen, Vietnam. *PLoS ONE [Electronic Resource]* 2014; **9**(3): e90723.
39. Hammett TM, Des Jarlais DC, Kling R, et al. Controlling HIV epidemics among injection drug users: eight years of Cross-Border HIV prevention interventions in Vietnam and China. *PloS one* 2012; **7**(8): e43141.
40. Global Fund. Armenia IBBS. 2012.
41. Grigoryan S, Hakobyan A, Papoyan A, et al. Results from the HIV Biological and Behavioural Surveillance in the Republic of Armenia. 2013.
42. WHO. The report on results of a surveillance survey on knowledge, risks and prevalence of HIV and sexually and parenterally transmitted infections in most-at-risk populations in Azerbaijan. 2012.
43. Аркад'евна УК. ПОВЕДЕНИЧЕСКИЕ ОСОБЕННОСТИ И УРОВЕНЬ ЗНАНИЙ ПО ПРОБЛЕМЕ ВИЧ/СПИД СРЕДИ ПОТРЕБИТЕЛЕЙ ИНЪЕКЦИОННЫХ НАРКОТИКОВ. 2015.
44. Bacak V, Dominkovic Z. Report on behavioral and biological surveillance among injection drug users in Bosnia and Herzegovina, 2009: a respondent driven sampling survey, 2009. 2012.
45. EMCDDA. Data tables: Infectious diseases > Prevalence > HIV > All - Table: INF-108. 2016. www.emcdda.europa.eu/data/stats2016#displayTable:INF-108 (accessed 30 July 2016).
46. EMCDDA. Data tables: Infectious diseases > Prevalence > HCV > All - Table: INF-111. 2016. www.emcdda.europa.eu/data/stats2016#displayTable:INF-111 (accessed 30 July 2016).
47. Uuskula A, Raag M, Abel-Oollo K, et al. HSV-2 seroprevalence among current injection drug users in Estonia. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).
48. Kallas E, Huik K, Pauskar M, et al. Influence of interleukin 10 polymorphisms -592 and -1082 to the HIV, HBV and HCV serostatus among intravenous drug users. *Infection, Genetics & Evolution* 2015; **30**: 175-80.

49. Curatio International Foundation, Public Union Bemoni. HIV risk and prevention behaviors among People Who Inject Drugs in seven cities of Georgia 2015. 2015.
50. Curatio International Foundation, Public Union Bemoni. HIV risk and prevention behaviours among People Who Inject Drugs in six cities of Georgia Bio-behavioral surveillance survey in Tbilisi, Batumi, Zugdidi, Telavi, Gori, Kutaisi in 2012. 2012.
51. National Centre for Epidemiology Hungary. A 2014 évben regisztrált HIV-fertőzöttek, és az újonnan bejelentett AIDS betegek korcsoportok szerint. 2015.
52. Tarjan A, Dudas M, Gyarmathy V, Rusvai E, Treso B, Csohan A. Emerging risks due to new injecting patterns in Hungary during austerity times. *Substance Use & Misuse* 2015; **50**(7): 848-58.
53. Global Fund. Integrated Bio-Behavioural Study in key populations at higher risk: key indicators. 2013.
54. Rosinska M, Sieroslawski J, Wiessing L. High regional variability of HIV, HCV and injecting risks among people who inject drugs in Poland: comparing a cross-sectional bio-behavioural study with case-based surveillance. *BMC Infectious Diseases* 2015; **15**: 83.
55. Romania: Comisia Nationala de Lupta Anti-SIDA. The evolution of HIV/AIDS Epidemic in Romania 31 December 2013. 2013.
56. Girchenko P, King EJ. Correlates of double risk of HIV acquisition and transmission among women who inject drugs in St. Petersburg, Russia. *AIDS and Behavior* 2017; **21**(4): 1054-8.
57. Demianenko E, Zohrabyan L, Sultanov L, Vagaitseva N, Malkin J, Toskin I. The gap between knowledge of hiv prevention and high risk injection practise in people who inject drugs (PWID) in Barnaul, Russia. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).
58. Cepeda JA, Niccolai LM, Eritsyan K, Heimer R, Levina O. Moderate/heavy alcohol use and HCV infection among injection drug users in two Russian cities. *Drug & Alcohol Dependence* 2013; **132**(3): 571-9.
59. Eritsyan K, Heimer R, Barbour R, et al. Individual-level, network-level and city-level factors associated with HIV prevalence among people who inject drugs in eight Russian cities: A cross-sectional study. *BMJ Open* 2013; **3**(6): 1-11.
60. Barska G, Sazonov JO. Survey Results 2015. Monitoring Behaviour and HIV Prevalence among People who use Injectable Drugs and their Sexual Partners, 2016.
61. Global Fund. МОНІТОРИНГ ПОВЕДІНКИ ТА ПОШИРЕННЯ ВІЛ-ІНФЕКЦІЇ СЕРЕД СПОЖИВАЧІВ ІН'ЄКЦІЙНИХ НАРКОТИКІВ ЯК КОМПОНЕНТ ЕПІДНАГЛЯДУ ЗА ВІЛ ДРУГОГО ПОКОЛІННЯ. 2014.
62. Berbesi Fernández D, Montoya Vélez L, Segura Cardona A, Mateu-Gelabert P. Estudio de Prevalencia de VIH y Comportamientos de Riesgo Asociados, en Usuarios de Drogas por Vía Inyectada (UDI) en Medellín y Pereira, 2011.
63. Berbesi D, Segura A, Cardona D, Agudelo A. Factors associated with syringe exchange among injection drug users in Colombia. *Journal of Substance Use* 2016: 1-7.
64. Rusch ML, Lozada R, Pollini RA, et al. Polydrug use among IDUs in Tijuana, Mexico: correlates of methamphetamine use and route of administration by gender. *Journal of Urban Health* 2009; **86**(5): 760-75.
65. Baumbach JP, Foster LN, Mueller M, et al. Seroprevalence of select bloodborne pathogens and associated risk behaviors among injection drug users in the Paso del Norte region of the United States-Mexico border. *Harm Reduction Journal* 2008; **5**: 33.
66. Brouwer K, Lozada R, Cornelius W, et al. Deportation along the U.S.-Mexico border: Its relation to drug use patterns and accessing care. *Journal of Immigrant and Minority Health* 2009; **11**(1): 1-6.
67. Ministerio de Salud Nicaragua. Estudio de Vigilancia de Comportamiento Sexual y prevalencia del VIH y sífilis en poblaciones vulnerables y en mayor riesgo al VIH. 2014.
68. Informe de Progreso Global sobre SIDA 2012. Seguimiento de la Declaración Política sobre el VIH/sida de 2011 Uruguay - Informe 2012. Report to UNAIDS. 2012.
69. ONUSIDA. Rapport d'Activite sur la Riposte Nationale au VIH/Sida. Report to UNAIDS. 2014.
70. Kingdom of Bahrain. UNGASS Country Progress Report. Report to UNAIDS. 2012.

71. WHO. HIV Bio-Behavioral Survey among Injecting Drug Users in the East Jerusalem Governorate. 2010.
72. Mahfoud Z, Afifi R, Ramia S, et al. HIV/AIDS among female sex workers, injecting drug users and men who have sex with men in Lebanon: Results of the first biobehavioral surveys. *Aids* 2010; **24**(SUPPL. 2): S45-S54.
73. Mirzoyan L, Berendes S, Jeffery C, et al. New evidence on the HIV epidemic in Libya: Why countries must implement prevention programs among people who inject drugs. *JAIDS Journal of Acquired Immune Deficiency Syndromes* 2013; **62**(5): 577-83.
74. Toufik A. Enquêtes intégrées de surveillance bio-comportementale auprès des Usagers de Drogues Injectables à Tétouan. 2014.
75. Ministere de la Sante. Mise en Oeuvre de la Declaration Politique sur le VIH/Sida. Report to UNAIDS. 2014.
76. Stulhofer A, Jwehan I, AbuRabie R. HIV and HCV prevalence and incarceration-related risks among injecting drug users in three West Bank governorates. *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV* 2016; **28**(9): 1159-65.
77. Alshomrani AT. Prevalence of human immunodeficiency virus, hepatitis C virus, and hepatitis B virus infection among heroin injectors in the central region of Saudi Arabia. *Saudi Medical Journal* 2015; **36**(7): 802-6.
78. UNDP. Syria IBBS. 2014.
79. Ministry of Health New Zealand. Country Progress Report. 2011.
80. Benzineb S, Hsairi M. Enquête de séroprévalence du VIH et des Hépatites virales auprès des usagers de drogues injectables en Tunisie. 2009.
81. Alaei A, Alaei K, Waye K, et al. Hepatitis C infection and other drug-related harms among inpatients who injected drugs in Turkey. *Journal of Viral Hepatitis* 2016.
82. Rashidi B, Tosonian H, Sharma S, et al. Engaging high risk populations of downtown vancouver through Hepatitis C and HIV portable pop-up clinics. *Canadian Journal of Infectious Diseases and Medical Microbiology* 2014; **25**: 19A.
83. Leclerc P, Roy E, Morissette C, Alary M, Parent R, Blouin K. Surveillance des maladies infectieuses chez les utilisateurs de drogue par injection: Epidemiologie du VIH/VHC de 1995 a 2014. 2016.
84. Caldarelli H, Locker A, Warshawsky B. I-Track Survey, Phase 3: A Profile of People Who Inject Drugs in London, Ontario, 2013.
85. Shoemaker M, Taylor L, Callaghan R. Prince George 2012 I-Track Survey Results: Findings and Discussion, 2013.
86. Machalek K, Hanley BE, Bacon P. Whitehorse I-Track Report: Monitoring Behaviour among People Who Inject or Inhale Drugs in Whitehorse, Yukon. Blood Ties Four Directions Centre, 2014.
87. Gratrix J, Plitt S, Singh AE, Edmonton Site I-Track Phase 3 Investigators. I-Track Phase 3: Enhanced Surveillance of Risk Behaviours among People who Inject Drugs in Canada (Edmonton Site). 2014.
88. Millson P, White S, Leonard L, Public Health Agency of Canada. Enhanced Surveillance of Risk Behaviours and Prevalence of HIV and Hepatitis C among People who Inject Drugs, 2016.
89. Armenta RF, Collins KM, Strathdee SA, et al. Mycobacterium tuberculosis infection among persons who inject drugs in San Diego, California. *International Journal of Tuberculosis and Lung Disease* 2017; **21**(4): 425-31.
90. Des Jarlais DC, Arasteh K, McKnight C, et al. Providing ART to HIV seropositive persons who use drugs: Progress in New York City, prospects for "ending the epidemic". *AIDS and Behavior* 2016; **20**(2): 353-62.
91. Jordan AE, Des Jarlais DC, Arasteh K, McKnight C, Nash D, Perlman DC. Incidence and prevalence of hepatitis c virus infection among persons who inject drugs in New York City: 2006-2013. *Drug & Alcohol Dependence* 2015; **152**: 194-200.

92. Centers for Disease Control and Prevention. HIV Infection, Risk, Prevention, and Testing Behaviors among Persons Who Inject Drugs: National HIV Behavioral Surveillance Injection Drug Use 20 U.S. Cities, 2012. 2015.
93. Heimer R, Barbour R, Palacios WR, Nichols LG, Grau LE. Associations between injection risk and community disadvantage among suburban injection drug users in southwestern Connecticut, USA. *AIDS & Behavior* 2014; **18**(3): 452-63.
94. Ruisenor-Escudero H, Vu A, Wirtz AL, et al. Cross-sectional assessments of participants' characteristics and loss to follow-up in the first Opioid Substitution Therapy Pilot Program in Kabul, Afghanistan. *Harm Reduction Journal* 2015; **12** (1) (no pagination)(28).
95. National AIDS Control Program Afghanistan. Integrated Biological & Behavioral Surveillance (IBBS) in Selected Cities of Afghanistan. 2012.
96. Todd CS, Nasir A, Stanekzai M, et al. Prevalence and correlates of HIV, syphilis, and hepatitis B and C infection and harm reduction program use among male injecting drug users in Kabul, Afghanistan: A cross-sectional assessment. *Harm Reduction Journal* 2011; **8**: 22.
97. Ruisenor-Escudero H. Injecting drug use in Afghanistan: Risk factors for HIV, HCV, STIS, injecting drug practices, and outcomes of an opiate substitution therapy program. *Dissertation Abstracts International: Section B: The Sciences and Engineering* 2014; **75**(2-B(E)): No Pagination Specified.
98. Azim T, Rahman M, Rahman M, et al. National HIV Serological Surveillance, 2011 Bangladesh. 2011.
99. Solomon SS, Srikrishnan AK, McFall AM, et al. Burden of liver disease among community- based people who inject drugs (PWID) in Chennai, India. *PLoS ONE [Electronic Resource]* 2016; **11** (1) (no pagination)(e0147879).
100. India: NACO. India: National Integrated Biological and Behavioural Surveillance (IBBS) 2014-15. 2015.
101. Sabri B, McFall AM, Solomon SS, et al. Gender Differences in Factors Related to HIV Risk Behaviors among People Who Inject Drugs in North-East India. *PLoS ONE [Electronic Resource]* 2017; **12**(1).
102. Gupta D, Saha K, Biswas A, Firdaus R, Ghosh M, Sadhukhan PC. Recombination in hepatitis C virus is not uncommon among people who inject drugs in Kolkata, India. *Infection, Genetics and Evolution* 2017; **48**: 156-63.
103. Lucas GM, Solomon SS, Srikrishnan AK, et al. High HIV burden among people who inject drugs in 15 Indian cities. *AIDS* 2015; **29**(5): 619-28.
104. Mehta SH, Lucas GM, Solomon S, et al. HIV care continuum among men who have sex with men and persons who inject drugs in India: Barriers to successful engagement. *Clinical Infectious Diseases* 2015; **61**(11): 1732-41.
105. Sharma AK, Bn S, Basu D. HCV and HIV co-infection and related risks in injecting drug users from a superspeciality centre. *Hepatology* 2014; **60**: 933A.
106. Saraswati LR, Sarna A, Sebastian MP, et al. HIV, Hepatitis B and C among people who inject drugs: high prevalence of HIV and Hepatitis C RNA positive infections observed in Delhi, India. *BMC Public Health* 2015; **15**: 726.
107. Basu D, Sharma AK, Gupta S, Nebhinani N, Kumar V. Hepatitis C virus (HCV) infection & risk factors for HCV positivity in injecting & non-injecting drug users attending a de-addiction centre in northern India. *Indian Journal of Medical Research* 2015; **142**(September): 311-6.
108. Chalana H, Singh H, Sachdeva JK, Sharma S. Seroprevalence of human immunodeficiency virus, hepatitis B surface antigen, and hepatitis C in substance dependents admitted in a tertiary hospital at Amritsar, India. *Asian Journal of Psychiatry* 2013; **6**(6): 552-5.
109. Ghosh I, Ghosh P, Bharti AC, Mandal R, Biswas J, Basu P. Prevalence of human papillomavirus and co-existent sexually transmitted infections among female sex workers, men having sex with men and injectable drug abusers from eastern India. *Asian Pacific Journal of Cancer Prevention: Apjcp* 2012; **13**(3): 799-802.

110. Kakavand-Ghalehnoei R, Shoja Z, Najafi A, et al. Prevalence of human herpesvirus-8 among HIV-infected patients, intravenous drug users and the general population in Iran. *Sexual Health* 2016; **13**(3): 295-8.
111. Honarvar B, Odoomi N, Moghadami M, et al. Blood-borne hepatitis in opiate users in Iran: A poor outlook and urgent need to change nationwide screening policy. *PloS one* 2013; **8** (12) (no pagination)(e82230).
112. Ramezani A, Amirmoezi R, Volk JE, et al. HCV, HBV, and HIV seroprevalence, coinfections, and related behaviors among male injection drug users in Arak, Iran. *AIDS Care* 2014; **26**(9): 1122-6.
113. Khajehkazemi R, Haghdoost A, Navadeh S, et al. Risk and vulnerability of key populations to HIV infection in Iran; Knowledge, attitude and practises of female sex workers, prison inmates and people who inject drugs. *Sexual Health* 2014; **11**(6): 568-74.
114. Khosravani A, Sarkari B, Negahban H, Sharifi A, Toori MA, Eilami O. Hepatitis B Infection among high risk population: a seroepidemiological survey in Southwest of Iran. *BMC Infectious Diseases* 2012; **12**: 378.
115. Republic of Maldives. Biological and Behavioral Survey (BBS) on HIV and AIDS 2008. 2008.
116. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWID- Male) in the Eastern Terai Highway Districts (Jhapa, Morang and Sunsari) of Nepal. 2015.
117. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWID) in Kathmandu Valley. 2015.
118. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWIDs) in Pokhara Valley. 2015.
119. Deuba K. Poor condom-negotiation skills, inadequate social support, depression and incarceration associated with HIV risks among young key populations in Nepal. *International Journal of Infectious Diseases* 2016; **45**: 256.
120. Bista B. Injecting drug users (IDUs) are prone to Hepatitis B because of the high risk behaviour. Hepatitis B can be prevented through vaccines but the IDUs and their sexual partners from Kathmandu, Nepal are not getting preventive hepatitis B vaccinations. *Journal of Viral Hepatitis* 2015; **22**: 40-1.
121. Kinkel HT, Karmacharya D, Shakya J, et al. Prevalence of HIV, hepatitis B and C infections and an assessment of HCV-genotypes and two IL28B SNPs among people who inject drugs in three regions of Nepal. *PLoS ONE [Electronic Resource]* 2015; **10** (8) (no pagination)(e0134455).
122. Ojha SP, Sigdel S, Verthien U, Khadga PK. HIV epidemiology in Nepal—"South Asian cocktail" a drug use pattern in Nepal and its correlation with spread of HIV. *Indian Journal of Psychiatry* 2014; **55**: S46-S7.
123. Ministry of Health and Population Nepal. Integrated Biological and Behavioral Surveillance (IBBS) Survey among People who Inject Drugs (PWIDs) in Eastern Terai Highway Districts of Nepal. 2012.
124. AP Consultancies. Integrated Behavioural and Biological Surveillance, among Most at Risk Population IBBS Study – Punjab 2014 2014.
125. Archibald CP, Shaw SY, Emmanuel F, et al. Geographical and temporal variation of injection drug users in Pakistan. *Sexually Transmitted Infections* 2013; **89 Suppl 2**: ii18-28.
126. Global Fund. IBBS Survey in Sri Lanka 2015.
127. Plan Benin. Benin Consommateurs de Drogues Injectables (CDI). 2015.
128. Plan Bénin. Enquête de surveillance de deuxième génération du VIH et des IST auprès des utilisateurs de drogues injectables au Bénin. 2014.
129. USAID. Rapport Annuel 2014, 2015.
130. Bouscaillou J, Evanno J, Prouté M, et al. Prevalence and factors associated with HIV and tuberculosis in people who use drugs in Abidjan, Ivory Coast. *International Journal of Drug Policy* 2016: 8.
131. Webale MK, Kilongosi MW, Budambula V, et al. Hepatitis B virus sero-profiles and genotypes in HIV-1 infected and uninfected injection and Non-injection drug users from coastal Kenya. *BMC Infectious Diseases* 2015; **15**: 299.

132. Mwatelah RS, Lwembe RM, Osman S, et al. Co-infection burden of hepatitis C virus and human immunodeficiency virus among injecting heroin users at the Kenyan coast. *PLoS ONE [Electronic Resource]* 2015; **10 (7) (no pagination)**(e0132287).
133. International AIDS Society. Hepatitis C virus (HCV) and Human immunodeficiency virus type 1 (HIV-1) co-infection among injecting drug users at the Kenyan coast. 2014.
134. Kurth AE, Cleland CM, Des Jarlais DC, et al. HIV Prevalence, Estimated Incidence, and Risk Behaviors Among People Who Inject Drugs in Kenya. *Journal of Acquired Immune Deficiency Syndromes: JAIDS* 2015; **70(4)**: 420-7.
135. Tun W, Sheehy M, Broz D, et al. HIV and STI prevalence and injection behaviors among people who inject drugs in Nairobi: results from a 2011 bio-behavioral study using respondent-driven sampling. *AIDS and Behavior* 2015; **19 Suppl 1**: S24-35.
136. Singh K, Brodish P, Mbai F, et al. A venue-based approach to reaching MSM, IDUs and the general population with VCT: A three study site in Kenya. *AIDS and Behavior* 2012; **16(4)**: 818-28.
137. African Development Bank Group. Etude comportementale et biologique chez les consommateurs de drogues injectables dans les zones urbaines à Madagascar-2012. 2012.
138. Mauritius: Ministry of Health and Quality of Life. Integrated Biological Behavioral Survey Among People Who Inject Drugs in Mauritius. 2011.
139. Johnston L, Saumtally A, Corceal S, Mahadoo I, Oodally F. High HIV and hepatitis C prevalence amongst injecting drug users in Mauritius: findings from a population size estimation and respondent driven sampling survey. *International Journal of Drug Policy* 2011; **22(4)**: 252-8.
140. Teodoro E, Boothe M, Baltazar C, et al. Urgent Need for Harm-Reduction Interventions in Mozambique: Results from the Integrated Bio-Behavioral Survey among People Who Inject Drugs. 2015.
141. Federal Ministry of Health Nigeria. Nigeria IBBSS 2014.
142. Lepretre A, Ba I, Lacombe K, et al. Prevalence and behavioural risks for HIV and HCV infections in a population of drug users of Dakar, Senegal: The ANRS 12243 UDSEN study. *Journal of the International AIDS Society* 2015; **18 (1) (no pagination)**(19888).
143. Bibi J, Faure J, Johnston L, Sinon F, Isnard R, Mangroo G. Injection Drug Use in the Republic of Seychelles, 2011. Integrated Biological and Behavioral Surveillance Survey - Round 1, 2011.
144. National HIV and AIDS Secretariat Sierra Leone. Seroprevalence Study for Key Populations. 2015.
145. Scheibe A, Makapela D, Brown B, et al. HIV prevalence and risk among people who inject drugs in five South African cities. *International Journal of Drug Policy* 2016; **30**: 107-15.
146. National AIDS and Control Programme (NACP), Muhimnili University of Health and Allied Sciences. Integrated Bio-Behavioral Survey Among People Who Inject Drugs in Dar es Salaam, Tanzania, 2014: Muhimnili University of Health and Allied Sciences,, 2014.
147. Lambdin BH, Masao F, Chang O, et al. Methadone treatment for HIV prevention- Feasibility, retention, and predictors of attrition in Dar es Salaam, Tanzania: A Retrospective cohort study. *Clinical Infectious Diseases* 2014; **59(5)**: 735-42.
148. Matiko E, Khatib A, Khalid F, et al. HIV prevalence and risk behaviors among people who inject drugs in two serial cross-sectional respondent-driven sampling surveys, Zanzibar 2007 and 2012. *AIDS & Behavior* 2015; **19 Suppl 1**: S36-45.
149. Gupta A, Mbwambo J, Mteza I, et al. Active case finding for tuberculosis among people who inject drugs on methadone treatment in Dar es Salaam, Tanzania. *International Journal of Tuberculosis and Lung Disease* 2014; **18(7)**: 793-8+i.
150. Bowring AL, Luhmann N, Pont S, et al. An urgent need to scale-up injecting drug harm reduction services in Tanzania: prevalence of blood-borne viruses among drug users in Temeke District, Dar-es-Salaam, 2011. *International Journal of Drug Policy* 2013; **24(1)**: 78-81.
151. Boci A, Hallkaj E, Bani R. HIV and HCV prevalence and risky behaviors among needle exchange program users in Albania. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).

152. Handanagic S, Bozicevic I, Civljak M, et al. HIV and hepatitis C prevalence, and related risk behaviours among people who inject drugs in three cities in Croatia: Findings from respondent-driven sampling surveys. *International Journal of Drug Policy* 2016; **32**: 57-63.
153. Mossner BK, Skamling M, Jorgensen TR, Georgsen J, Pedersen C, Christensen PB. Decline in hepatitis B infection observed after 11 years of regional vaccination among Danish drug users. *Journal of Medical Virology* 2010; **82**(10): 1635-9.
154. Hope VD, Hickman M, Ngu SL, et al. Measuring the incidence, prevalence and genetic relatedness of hepatitis C infections among a community recruited sample of injecting drug users, using dried blood spots. *Journal of Viral Hepatitis* 2011; **18**(4): 262-70.
155. Hickman M, Hope V, Coleman B, et al. Assessing IDU prevalence and health consequences (HCV, overdose and drug-related mortality) in a primary care trust: implications for public health action. *Journal of Public Health* 2009; **31**(3): 374-82.
156. Weill-Barillet L, Pillonel J, Semaille C, et al. Hepatitis C virus and HIV seroprevalences, sociodemographic characteristics, behaviors and access to syringes among drug users, a comparison of geographical areas in France, ANRS-Coquelicot 2011 survey. *Rev Epidemiol Sante Publique* 2016; **12**.
157. Wenz B, Nielsen S, Gassowski M, et al. High variability of HIV and HCV seroprevalence and risk behaviours among people who inject drugs: results from a cross-sectional study using respondent-driven sampling in eight German cities (2011-14). *BMC Public Health* 2016; **16**(927): 14.
158. Hatzakis A, Sypsa V, Paraskevis D, et al. Design and baseline findings of a large-scale rapid response to an HIV outbreak in people who inject drugs in Athens, Greece: the Aristotle programme. *Addiction* 2015; **110**(9): 1453-67.
159. Tsang MA, Schneider JA, Sypsa V, et al. Network Characteristics of People Who Inject Drugs Within a New HIV Epidemic Following Austerity in Athens, Greece. *Journal of Acquired Immune Deficiency Syndromes: JAIDS* 2015; **69**(4): 499-508.
160. Nosotti L, Fagetti R, Rocchi L, et al. Prevalence of HCV infection and adherence to DOT therapy in Italian and non-Italian IV drug users in Rome, Italy. *Heroin Addiction and Related Clinical Problems* 2014; **16**(1): 41-4.
161. Bacak V, Lausevic D, Mugosa B, Vratnica Z, Terzic N. Hepatitis C virus infection and related risk factors among injection drug users in Montenegro. *European Addiction Research* 2013; **19**(2): 68-73.
162. Judd A, Rhodes T, Johnston LG, et al. Improving survey methods in sero-epidemiological studies of injecting drug users: a case example of two cross sectional surveys in Serbia and Montenegro. *BMC Infectious Diseases* 2009; **9**: 14.
163. Munro A, Taylor A, Knox T, et al. Needle Exchange Surveillance Initiative (NESI): Prevalence of HCV and injecting risk behaviours among people who inject drugs (PWID) attending injecting equipment provision services (IEPs) in Scotland, 2008/2009-2013/2014. Scotland: University of the West of Scotland, 2015.
164. National Institute of Public Health: Kosovo. HIV Integrated Behavioral and Biological Surveillance Surveys-Kosovo. 2014.
165. Klavs I, Kastelic Z, Kustec T, Poljak M. Unlinked anonymous testing for monitoring HIV prevalence in sentinel groups in Slovenia, 2002-2011. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).
166. Pares-Badell O, Espelt A, Folch C, et al. Undiagnosed HIV and Hepatitis C infection in people who inject drugs: From new evidence to better practice. *Journal of Substance Abuse Treatment* 2017; **77**: 13-20.
167. Folch C, Casabona J, Espelt A, et al. Gender differences in HIV risk behaviours among intravenous drug users in Catalonia, Spain. *Gaceta Sanitaria* 2013; **27**(4): 338-43.
168. Hillgren K, Sarkar K, Elofsson S, Britton S. Widespread risk behavior among injecting drug users. *Lakartidningen* 2012; **109**(25): 1221-5.
169. Blome MA, Bjorkman P, Flamholc L, Jacobsson H, Molnegren V, Widell A. Minimal transmission of HIV despite persistently high transmission of hepatitis C virus in a Swedish needle exchange program. *Journal of Viral Hepatitis* 2011; **18**(12): 831-9.

Appendix 12: Grade and sources for country-level estimates of anti-HCV prevalence among people who inject drugs

	New estimate ?	Year of estimate	Anti-HCV among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Australasia								
Australia	Yes	2011; 2012; 2013; 2014	53.5 (50.2,56.9)	32	B1	National	B3	¹
New Zealand	Yes	2013; 2015	71.9 (63.2,80.6)	6	B1	National	A1; B2	^{2,3}
Caribbean								
Antigua & Barbuda	No		--					
Bahamas	No		NK					
Barbados	No		--					
Bermuda	No		NK					
Comm. of Puerto Rico	Yes	2015	78.4 (73.5,82.8)	1	B1	Sub-national	A1	⁴
Cuba	No		--					
Dominica	No		--					
Dominican Republic	No		NK					
Grenada	No		--					
Haiti	No		NK					
Jamaica	No		NK					
Saint Kitts & Nevis	No		--					
Saint Lucia	No		--					
St Vincent & the Grenadines	No		--					
Trinidad & Tobago	No		--					
Central Asia								
Kazakhstan	No	2005	58.8 (54.0,63.6)	1	C		A1	⁵
Kyrgyzstan	Yes	2013	43.9 (40.6,47.2)	1	B1	National	B2	⁶
Tajikistan	Yes	2004	61.3 (56.8,65.6)	1	B1	City	A1	⁷
Turkmenistan	No		NK					
Uzbekistan	No	2001	51.7 (46.8,56.6)	1	A		A1	⁵
East and South East Asia								
Brunei Darussalam	No		NK					
Cambodia	No		NK					
China	Yes	2012; 2013; 2014; 2015	43.1 (27.5,58.6)	11	A; B1; C	National	A1	⁸⁻¹⁵
Hong Kong (China)	No	2006	85.4 (82.2,88.2)	1	B1	National	A1	¹⁶
Indonesia	Yes	2015	89.2 (85.3,92.3)	1	C	City	B3	¹⁷
Japan	Yes	1994	64.8 (55.0,74.5)	1	C		A1	⁵
Lao PDR	No		NK					
Malaysia	Yes	2007	67.1 (62.9,71.1)	1	B1	National	A1	¹⁸
Mongolia	No		NK					
Myanmar	Yes	2009; 2010	29.5 (26.9,32.2)	2	B1; C	Sub-national	A1; B3	^{19,20}
North Korea	No		--					
Philippines	Yes	2009; 2011	35.2 (15.9,54.5)	7	B1	Sub-national	B3	^{21,22}
Republic of Korea	Yes	2010	48.4 (42.8,54.1)	1	C	National	A1	²³
Singapore	No	2006	42.5 (39.1,45.9)	1	C		A1	⁵
Taiwan	Yes	2010; 2011	91.0 (89.5,92.4)	2	C	National	A1; C	^{24,25}
Thailand	Yes	2005	88.5 (82.6,92.9)	1	C	National	A1	²⁶
Timor Leste	No		NK					
Viet Nam	Yes	2010; 2014	58.3 (42.7,74)	11	A; B1	Sub-national	A; B1	^{27,28}
Eastern Europe								
Armenia	Yes	2011; 2012	42.7 (29.3,56.1)	4	B1	City	B2; B3	^{29,30,31}
Azerbaijan	Yes	2012	62.1 (47.1,77.2)	7	B2	City	B2	³²
Belarus	Yes	2015	58.3 (43.3,73.3)	6	B1	City	B2	³³

	New estimate ?	Year of estimate	Anti-HCV among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Bosnia & Herzegovina	Yes	2012; 2014	39.9 (27.5,52.4)	6	B1; C	City	B3; A1	34,35
Bulgaria	Yes	2011; 2012; 2013; 2014	68.7 (64.3,73.0)	6	A	Sub-national	B2	29
Czech Republic	Yes	2012; 2013; 2014; 2015	18.3 (14.5,22.1)	4	B1	National	A1; B2	29,36
Estonia	Yes	2010; 2011; 2012; 2013; 2014	79.2 (67.4,91.0)	4	B1; C	City	A1; B2	29,37,38
Georgia	Yes	2012; 2015	69.1 (58.0,80.2)	8	B1; C	Sub-national	A1; B2	39,40
Hungary	Yes	2012; 2013; 2014; 2015	46.6 (30.4,62.8)	4	A	National	A1; B2	29,41-43
Latvia	Yes	2011; 2012; 2013; 2014	74.4 (67.6,81.2)	5	B1	National	B2	29
Lithuania	Yes	2012; 2014	41.1 (38.1,44.2)	2	B1; C	Sub-national	B2	29
Moldova	Yes	2013	50.1 (34.1,66.1)	4	B2	Sub-national	B2	44
Poland	Yes	2005	58.7 (55.1,62.2)	1	A	Sub-national	A1	45
Romania	Yes	2009	83.8 (80.6,87.1)	2	B1; C	City	A1; B2	46,47
Russian Federation	Yes	2009; 2010; 2011; 2012	68.7 (59.6,77.9)	12	B1; B2	City	A1; C	48-51
Slovakia	Yes	2008; 2014	56.1 (35.6,76.7)	2	B1; C	National	A1; B2	29,52
Ukraine	Yes	2013, 2015	53.9 (49.2,58.7)	30	B1	National	B2	53,54
Latin America								
Argentina	No	2001	54.6 (51.1-58.1)	1	B1		A1	5
Belize	No		--					
Bolivia	No		NK					
Brazil	No	2001	63.9 (60.5-67.3)	1	B1		A1	5
Chile	No		NK					
Colombia	Yes	2014	28.8 (26.2,31.6)	1	B1		A1	55
Costa Rica	No		NK					
Ecuador	No		NK					
El Salvador	No		NK					
Guatemala	No		NK					
Guyana	No		NK					
Honduras	No		NK					
Mexico	Yes	2005	95.3 (93.3,97.3)	2	A		A1	56,57
Nicaragua	No		NK					
Panama	No		NK					
Paraguay	No	2006	9.8 (7.7-11.9)	1	C		A1	5
Peru	No		NK					
Suriname	No		NK					
Uruguay	No	2003	21.9 (19.0-24.8)	1	C		A1	5
Venezuela	No		NK					
Middle East & North Africa								
Algeria	No		NK					
Bahrain	No		NK					
Cyprus	Yes	2011; 2012; 2013; 2014	49.7 (44.4,55.0)	4	A; B1	National	B2	29
Egypt	No	1995	49.4 (35.8,63.0)	1	C		A1	5
Iraq	No		NK					

	New estimate ?	Year of estimate	Anti-HCV among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Israel	Yes	2010	45.3 (38.1,52.6)	1	C	Sub-national	B2	58
Jordan	No		NK					
Kuwait	No		NK					
Lebanon	Yes	2013	23.4 (15.3,33.3)	1	C	City	A1	59
Libyan Arab Jamahiriya	Yes	2010	94.5 (91.5,96.7)	1	B1	City	A1	60
Morocco	Yes	2011; 2013	53.9 (33.7,74.0)	3	B1	Sub-national	B3	61,62
Occ. Palestinian Terr.	Yes	2010; 2013	41.6 (35.2,47.9)	4	B1	Sub-national	A1; B2	63,64
Oman	No		NK					
Qatar	No		NK					
Saudi Arabia	Yes	2012	77.8 (73.2,81.9)	1	C	City	A1	65
South Sudan	No		--					
Sudan	No		NK					
Syrian Arab Rep.	Yes	2014	3.3 (1.8,5.6)	1	B1	Sub-national	B2	66
Tunisia	Yes	2009	29.1 (25.7,32.6)	1	B1	Sub-national	B2	67
Turkey	Yes	2012; 2013; 2014; 2015	44.9 (41.7,48.2)	5	B1	National	A1; B2	29,68
United Arab Emirates	No		NK					
Yemen	No		NK					
North America								
Canada	Yes	2011; 2012; 2013; 2014	70.6 (60.1,65.4)	24	A; B1	Sub-national	A2; B3; D	69-75
United States	Yes	2013; 2014; 2015; 2016	53.1 (38.1,68.0)	8	C; B2; A	Sub-national	A1; A2	76-81
Pacific Island States & Terr.								
American Samoa	No		NK					
Fed. States of Micronesia	No		NK					
Fiji	No		NK					
French Polynesia	No		NK					
Guam	No		NK					
Kiribati	No		NK					
Marshall Islands	No		NK					
Nauru	No		--					
New Caledonia	No		NK					
Northern Mariana Islands	No		NK					
Palau	No		NK					
Papua New Guinea	No		NK					
Samoa	No		NK					
Solomon Islands	No		NK					
Tonga	No		NK					
Tuvalu	No		--					
Vanuatu	No		NK					
South Asia								
Afghanistan	Yes	2012; 2009	37.8 (27.5,48.1)	10	A; B1; C	Sub-national	A1; B3	82-85
Bangladesh	Yes	2011; 2013	33.9 (22.4,45.4)	24	A; C	City	A1; B3	86,87
Bhutan	No		NK					
India	Yes	2012; 2013; 2014; 2015	40.0 (33.9,46.1)	7	B1; C	Sub-national	A1; A2; C	88-95
Iran	Yes	2012; 2013; 2014	44.1 (28.2,59.9)	5	C; B1; A	Sub-national	A1	96-100
Maldives	Yes	2008	0.7 (0.0,1.7)	2	B1	Sub-national	B2	101

	New estimate ?	Year of estimate	Anti-HCV among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Nepal	Yes	2013; 2014; 2015	44.5 (30.8,58.2)	9	B1	Sub-national	A1; B3; C	102-107
Pakistan	Yes	2007; 2008; 2009; 2010; 2011; 2012; 2013	36.5 (0.0,79.1)	5	C; B1	Sub-national	A1	108-111
Sri Lanka	No		NK					
Sub Saharan Africa								
Angola	No		NK					
Benin	No		NK					
Botswana	No		--					
Burkina Faso	No		NK					
Burundi	No		NK					
Cameroon	No		NK					
Cape Verde	No		NK					
Central African Republic	No		--					
Chad	No		NK					
Comoros	No		--					
Congo (Kinshasa)	No							
Cote d'Ivoire	Yes	2014	1.8 (0.0,9.4)	1	B1	City	A1	112
Djibouti	No		NK					
Equatorial Guinea	No		--					
Eritrea	No		--					
Ethiopia	No		NK					
Gabon	No		NK					
Gambia	No		NK					
Ghana	No	2005	40.1 (34.8,45.4)	1	B1		A1	5
Guinea	No		NK					
Guinea-Bissau	No		--					
Kenya	Yes	2013	16.4 (10.9,23.3)	1	C	Sub-national	A1	113
Lesotho	No		--					
Liberia	No		NK					
Madagascar	Yes	2012	5.5 (2.1,9.0)	3	B1	Sub-national	B2	114
Malawi	No		NK					
Mali	No		NK					
Mauritania	No		--					
Mauritius	Yes	2009; 2010; 2011	97.1 (96.0,98.1)	2	B1	National	A1; B3	115,116
Mozambique	Yes	2014	67.1 (62.9,71.2)	2	B1	City	B2; B3	117
Namibia	No		--					
Niger	No		NK					
Nigeria	Yes	2010	5.8 (3.5,8.9)	1	C	City	A1	118
Rep. of the Congo	No		--					
Rwanda	No		NK					
Sao Tome & Principe	No		--					
Senegal	Yes	2011	39.3 (31.1,47.9)	1	B1	City	A1	119
Seychelles	Yes	2011	42.0 (36.8,47.4)	1	B1	National	B2	120
Sierra Leone	No		NK					
Somalia	No		NK					
South Africa	No		NK					
Swaziland	No		NK					
Togo	No		NK					
Uganda	No		NK					
United Rep. of Tanzania	Yes	2011	27.7 (22.4,33.5)	1	A	Sub-national	A1	121
Zambia	No		NK					
Zimbabwe	No		NK					
Western Europe								
Albania	Yes	2011	34.0 (27.5,41.0)	1	B1	City	C	122
Andorra	No		NK					
Austria	Yes	2011; 2012;	60.9 (54.8,67.0)	14	A; B1; C	Sub-national	B2	29

	New estimate ?	Year of estimate	Anti-HCV among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
		2013; 2014						
Belgium	Yes	2011; 2012; 2013; 2014	58.4 (47.0,69.7)	7	B1; C	City	B2	29
Croatia	Yes	2015	36.7 (28.1,45.3)	3	B1	City	A1	123
Denmark	Yes	2011	42.6 (36.1,49.1)	1	B1	Sub-national	A1	124
England	Yes	2011; 2012; 2013	30.7 (26.9,34.6)	4	A; B1; C	Sub-national	A1; C	125-128
Finland	Yes	2014	73.7 (69.9,77.2)	1	B1	National	B2	29
Form. Yug. Rep. Macedonia	Yes	2013	64.0 (60.8,67.0)	1	B1	National	A1	129
France	Yes	2011	62.2 (59.4,64.9)	1	A	Sub-national	A1	130
Germany	Yes	2014	65.0 (60.6,69.4)	8	B1	City	A1	131
Greece	Yes	2012; 2013; 2014	65.7 (61.8,69.5)	12	A	National	B2	29
Greenland	No		--					
Iceland	No	1993	63.0 (59.8,66.2)	1	C		A1	5
Ireland	No	2003	74.6 (72.3,76.9)	1	C		A1	5
Italy	Yes	2011; 2012; 2013; 2014	57.9 (52.5,63.3)	23	B1; C	National	A2; B2	29,132
Liechtenstein	No		--					
Luxembourg	Yes	2005	81.3 (76.2,85.8)	1	A	National	A1	133
Malta	Yes	2011; 2012; 2013; 2014	25.2 (13.1,37.3)	4	A	National	B2	29
Monaco	No		NK					
Montenegro	Yes	2005; 2008	43.4 (39.8,47.1)	2	B1	National	A1	134,135
Netherlands	Yes	2011; 2012; 2013; 2014	55.3 (49.7,60.9)	5	A; B1	National	B2	29
Northern Ireland	No		NK					
Norway	Yes	2010; 2011; 2012	64.8 (60.4,69.1)	3	A	City	B2	29
Portugal	Yes	2013; 2014; 2015; 2016	87.7 (80.5,95.0)	3	B1	National	A1; B2	29,136
San Marino	No		NK					
Scotland	Yes	2012; 2014	52.2 (45.5,58.8)	11	B1	National	B3	137
Serbia	Yes	2014	25.9 (22.1,29.7)	2	B1	Sub-national	B3	138
Slovenia	Yes	2011; 2012; 2013; 2014	30.5 (26.4,34.5)	4	B1	National	B2	29
Spain	Yes	2011; 2012	71.0 (69.5,72.5)	2	B1	City	A1	139,140
Sweden	Yes	2014	81.7 (79.6,83.6)	1	C	National	A1	141
Switzerland	Yes	2014	74.6 (69.3,79.4)	1	B1	National	C	142
Wales	Yes	2006	26.8 (23.4,30.4)	1	A	Sub-national	A1	143

References

1. The Kirby Institute. Prevalence of HIV, HCV and injecting and sexual behaviour among Needle and Syringe Program attendees 1995-2014. 2015.
2. Noller G, Leafe K. Brief analysis of the New Zealand population of people who inject drugs (PWID): Estimates of population size, prevalence of BBVs, demographics and risk behaviours, and service provision. 2016.
3. O'Connor P, Judson G, Loan RA, Roberts RH, Robinson G. Prevalence of hepatitis C among injecting drug users attending drug clinics. *New Zealand Medical Journal* 2016; **129**(1434): 44-8.
4. Abadie R, Welch-Lazoritz M, Gelpi-Acosta C, Reyes JC, Dombrowski K. Understanding differences in HIV/HCV prevalence according to differentiated risk behaviors in a sample of PWID in rural Puerto Rico. *Harm Reduction Journal* 2016; **13 (1) (no pagination)**(10).
5. Nelson P, Mathers B, Cowie B, et al. The epidemiology of viral hepatitis among people who inject drugs: Results of global systematic reviews. *Lancet* 2011; **378**(9791): 571-83.
6. Chokmorova U, Ismailova A, Bubusara S, et al. IBBS 2013 Report. 2013.
7. Beyerer C, Patel Z, Stachowiak JA, et al. Characterization of the emerging HIV type 1 and HCV epidemics among injecting drug users in Dushanbe, Tajikistan. *AIDS Research & Human Retroviruses* 2009; **25**(9): 853-60.
8. Chen F, Zhang J, Guo F, et al. Hepatitis B, C, and D virus infection showing distinct patterns between injection drug users and the general population. *Journal of Gastroenterology and Hepatology (Australia)* 2017; **32**(2): 515-20.
9. Zhou YB, Wang QX, Yang MX, et al. Geographical variations of risk factors associated with HCV infection in drug users in southwestern China. *Epidemiology & Infection* 2016; **144**(6): 1291-300.
10. Li N, Wang XW, Nie YG, et al. HCV infection status and related risk factors in drug users under HIV sentinel surveillance in Henan province, 2011-2015. *Zhonghua liu xing bing xue za zhi = Zhonghua liuxingbingxue zazhi* 2016; **37**(6): 821-5.
11. Wang, Chen. 年四川省达州市吸毒人群艾滋病哨点监测结果分析. 2014.
12. Deng X. Analysis of HIV and HPC in drug users (in Mandarin). 2014.
13. Li L, Assanangkornchai S, Duo L, McNeil E, Li J. Risk behaviors, prevalence of HIV and hepatitis C virus infection and population size of current injection drug users in a China-Myanmar border city: results from a Respondent-Driven Sampling Survey in 2012. *PLoS ONE [Electronic Resource]* 2014; **9**(9): e106899.
14. Gupta S, Iudicello JE, Shi C, et al. Absence of neurocognitive impairment in a large Chinese sample of HCV-infected injection drug users receiving methadone treatment. *Drug & Alcohol Dependence* 2014; **137**: 29-35.
15. Wang L, Li DM, Ge L, et al. HCV prevalence among the populations under the HIV sentinel surveillance data from 2009 to 2012 in China. *Chung-Hua Liu Hsing Ping Hsueh Tsa Chih Chinese Journal of Epidemiology* 2013; **34**(6): 543-7.
16. Lee KCK, Lim WWL, Lee SS. High prevalence of HCV in a cohort of injectors on methadone substitution treatment. *Journal of Clinical Virology* 2008; **41**(4): 297-300.
17. Persaudaraan Korban Napza Indonesia (PKNI). Peer-Driven Intervention on Hepatitis C Testing and Treatment Literacy among People Who Inject Drugs in Jakarta, Indonesia. 2014.
18. Vicknasingam B, Narayanan S, Navaratnam V. The relative risk of HIV among IDUs not in treatment in Malaysia. *AIDS Care* 2009; **21**(8): 984-91.
19. Zhou YH, Liu FL, Yao ZH, et al. Comparison of HIV-, HBV-, HCV- and Co-infection prevalence between Chinese and Burmese intravenous drug users of the China-Myanmar border region. *PloS one* 2011; **6 (1) (no pagination)**(e16349).
20. WHO. HIV Sentinel Sero-Surveillance Survey Report 2010. 2011.
21. HIV and AIDS Data Hub for Asia-Pacific. IHBSS Philippines. 2011.
22. AIDS Data Hub. IHBSS Philippines. 2009.

23. Min JA, Yoon Y, Lee HJ, et al. Prevalence and associated clinical characteristics of hepatitis B, C, and HIV infections among injecting drug users in Korea. *Journal of Medical Virology* 2013; **85**(4): 575-82.
24. Shi MD, Zhang KX, Tsai LY. Injecting drug users (IDUs) prevalence of hepatitis virus, HIV and syphilis in Southern Taiwan. *Hepatology International* 2013; **7**: S116.
25. Yen YF, Rodwell TC, Yen MY, et al. HIV infection risk among injection drug users in a methadone maintenance treatment program, Taipei, Taiwan 2007-2010. *American Journal of Drug and Alcohol Abuse* 2012; **38**(6): 544-50.
26. Luksamijarulkul P, Triamchaisri SK. Relationship between antibodies to hepatitis C virus and human immunodeficiency virus among Thai selected groups. *Hepatitis Monthly* 2009; **9**(1): 66-9.
27. Nadol P, O'Connor S, Duong H, et al. Findings from integrated behavioral and biologic survey among males who inject drugs (MWID) - Vietnam, 2009-2010: evidence of the need for an integrated response to HIV, hepatitis B virus, and hepatitis C virus. *PLoS ONE [Electronic Resource]* 2015; **10**(2): e0118304.
28. Des Jarlais D, Huong DT, Oanh KTH, et al. Prospects for ending the HIV epidemic among persons who inject drugs in Haiphong, Vietnam. *International Journal of Drug Policy* 2016; **32**.
29. EMCDDA. Data tables: Infectious diseases > Prevalence > HCV > All - Table: INF-111. 2016. www.emcdda.europa.eu/data/stats2016#displayTable:INF-111 (accessed 30 July 2016).
30. Global Fund. Armenia IBBS. 2012.
31. Grigoryan S, Hakobyan A, Papoyan A, et al. Results from the HIV Biological and Behavioural Surveillance in the Republic of Armenia. 2013.
32. WHO. The report on results of a surveillance survey on knowledge, risks and prevalence of HIV and sexually and parenterally transmitted infections in most-at-risk populations in Azerbaijan. 2012.
33. Arkad'yevna YK. ПОВЕДЕНЧЕСКИЕ ОСОБЕННОСТИ И УРОВЕНЬ ЗНАНИЙ ПО ПРОБЛЕМЕ ВИЧ/СПИД СРЕДИ ПОТРЕБИТЕЛЕЙ ИНЪЕКЦИОННЫХ НАРКОТИКОВ. 2015.
34. Bacak V, Dominkovic Z. Report on behavioral and biological surveillance among injection drug users in Bosnia and Herzegovina, 2009: a respondent driven sampling survey, 2009. 2012.
35. Skocibasic S, Martinac M, Arapovic J, et al. HBV and HCV serological monitoring among injection drugs users in opiate substitution treatment in Bosnia and Herzegovina. *Journal of Infection in Developing Countries* 2016; **10**(9): 968-72.
36. Chlibek R, Smetana J, Sosovickova R, et al. Prevalence of hepatitis C virus in adult population in the Czech Republic - Time for birth cohort screening. *Plos one* 2017; **12** (4) (no pagination)(e0175525).
37. Reitox National Focal Point, Abel-Oollo K, Talu A, et al. 2011 National Report (2010 data) to the EMCDDA. Estonia: New developments, trends and in-depth information on selected issues, 2012.
38. Kallas E, Huik K, Pauskar M, et al. Influence of interleukin 10 polymorphisms -592 and -1082 to the HIV, HBV and HCV serostatus among intravenous drug users. *Infection, Genetics & Evolution* 2015; **30**: 175-80.
39. Bouscaillou J, Champagnat J, Luhmann N, et al. Hepatitis C among people who inject drugs in Tbilisi, Georgia: an urgent need for prevention and treatment. *International Journal of Drug Policy* 2014; **25**(5): 871-8.
40. Curatio International Foundation, Public Union Bemoni. HIV risk and prevention behaviors among People Who Inject Drugs in seven cities of Georgia 2015. 2015.
41. Tarjan A, Dudas M, Gyarmathy V, Rusvai E, Treso B, Csohan A. Emerging risks due to new injecting patterns in Hungary during austerity times. *Substance Use & Misuse* 2015; **50**(7): 848-58.
42. National Centre for Epidemiology Hungary. A 2014 éven regisztrált HIV-fertőzöttek, és az újonnan bejelentett AIDS betegek korcsoportok szerint. 2015.
43. Tarjan A, Dudas M, Wiessing L, et al. HCV prevalence and risk behaviours among injectors of new psychoactive substances in a risk environment in Hungary-An expanding public health burden. *International Journal of Drug Policy* 2017; **41**: 1-7.
44. Global Fund. Integrated Bio-Behavioural Study in key populations at higher risk: key indicators. 2013.

45. Rosinska M, Sieroslawski J, Wiessing L. High regional variability of HIV, HCV and injecting risks among people who inject drugs in Poland: comparing a cross-sectional bio-behavioural study with case-based surveillance. *BMC Infectious Diseases* 2015; **15**: 83.
46. Sultana C, Vagu C, Temereanca A, Grancea C, Slobozeanu J, Ruta S. Hepatitis C virus genotypes in injecting drug users from Romania. *Central European Journal of Medicine* 2011; **6**(5): 672-8.
47. UNODC. HIV, HBV and HCV Behavioral Surveillance Survey among Injecting Drug Users in Bucharest, Romania. 2011.
48. Demianenko E, Zohrabyan L, Sultanov L, Vagaitseva N, Malkin J, Toskin I. The gap between knowledge of hiv prevention and high risk injection practise in people who inject drugs (PWID) in Barnaul, Russia. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).
49. Vagaitseva N, Demyanenko E. Evaluation of HIV, HBV, HCV, syphilis and related risk behaviour prevalence among the injecting drug users (IDU) in the City of Barnaul, Russia. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).
50. Eritsyan K, Heimer R, Barbour R, et al. Individual-level, network-level and city-level factors associated with HIV prevalence among people who inject drugs in eight Russian cities: A cross-sectional study. *BMJ Open* 2013; **3**(6): 1-11.
51. Cepeda JA, Niccolai LM, Eritsyan K, Heimer R, Levina O. Moderate/heavy alcohol use and HCV infection among injection drug users in two Russian cities. *Drug & Alcohol Dependence* 2013; **132**(3): 571-9.
52. Gazdikova K, Gazdik F, Kajaba I, Huckova D, Okruhlica L, Farkasova D. The seroprevalence of HCV among injecting drug users in the years 2004-2008 in Slovakia. *Vnitrni Lekarstvi* 2012; **58**(3): 179-82.
53. Global Fund. МОНІТОРИНГ ПОВЕДІНКИ ТА ПОШИРЕННЯ ВІЛ-ІНФЕКЦІЇ СЕРЕД СПОЖИВАЧІВ ІН'ЄКЦІЙНИХ НАРКОТИКІВ ЯК КОМПОНЕНТ ЕПІДН А Г Л Я Д У ЗА ВІЛ ДРУГОГО ПОКОЛІННЯ. 2014.
54. Barska G, Sazonov JO. Survey Results 2015. Monitoring Behaviour and HIV Prevalence among People who use Injectable Drugs and their Sexual Partners, 2016.
55. Berbesi D, Segura A, Cardona D, Agudelo A. Factors associated with syringe exchange among injection drug users in Colombia. *Journal of Substance Use* 2016: 1-7.
56. Baumbach JP, Foster LN, Mueller M, et al. Seroprevalence of select bloodborne pathogens and associated risk behaviors among injection drug users in the Paso del Norte region of the United States-Mexico border. *Harm Reduction Journal* 2008; **5**: 33.
57. Brouwer K, Lozada R, Cornelius W, et al. Deportation along the U.S.-Mexico border: Its relation to drug use patterns and accessing care. *Journal of Immigrant and Minority Health* 2009; **11**(1): 1-6.
58. WHO. HIV Bio-Behavioral Survey among Injecting Drug Users in the East Jerusalem Governorate. 2010.
59. Merabi Z, Naja WJ, Soufia M, et al. Intranasal heroin use - an emerging trend in Lebanon: A single institution study presenting sociodemographic profiles of intranasal versus intravenous users. *Journal of Substance Use* 2016: 1-6.
60. Mirzoyan L, Berendes S, Jeffery C, et al. New evidence on the HIV epidemic in Libya: Why countries must implement prevention programs among people who inject drugs. *JAIDS Journal of Acquired Immune Deficiency Syndromes* 2013; **62**(5): 577-83.
61. Ministere de la Sante. Enquete integree de surveillance bio-comportementale aupres des Usagers de Drogues Injectables a Tanger et a Nador: Maroc 2011-2012. 2012.
62. Toufik A. Enquêtes intégrées de surveillance bio-comportementale auprès des Usagers de Drogues Injectables à Tétouan. 2014.
63. Chatty A, AbuRabie R, Dibeh S, et al. HIV Bio-Behavioural Suvery among Injecting Drug Users in the East Jerusalem Governorate, 2010, 2010.
64. Stulhofer A, Jwehan I, AbuRabie R. HIV and HCV prevalence and incarceration-related risks among injecting drug users in three West Bank governorates. *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV* 2016; **28**(9): 1159-65.

65. Alshomrani AT. Prevalence of human immunodeficiency virus, hepatitis C virus, and hepatitis B virus infection among heroin injectors in the central region of Saudi Arabia. *Saudi Medical Journal* 2015; **36**(7): 802-6.
66. UNDP. Syria IBBS. 2014.
67. Benzineb S, Hsairi M. Enquête de séroprévalence du VIH et des Hépatites virales auprès des usagers de drogues injectables en Tunisie. 2009.
68. Alaei A, Alaei K, Waye K, et al. Hepatitis C infection and other drug-related harms among inpatients who injected drugs in Turkey. *Journal of Viral Hepatitis* 2016.
69. Rashidi B, Tossonian H, Sharma S, et al. Engaging high risk populations of downtown vancouver through Hepatitis C and HIV portable pop-up clinics. *Canadian Journal of Infectious Diseases and Medical Microbiology* 2014; **25**: 19A.
70. Leclerc P, Roy E, Morissette C, Alary M, Parent R, Blouin K. Surveillance des maladies infectieuses chez les utilisateurs de drogue par injection: Epidemiologie du VIH/VHC de 1995 a 2014. 2016.
71. Gratrix J, Plitt S, Singh AE, Edmonton Site I-Track Phase 3 Investigators. I-Track Phase 3: Enhanced Surveillance of Risk Behaviours among People who Inject Drugs in Canada (Edmonton Site). 2014.
72. Machalek K, Hanley BE, Bacon P. Whitehorse I-Track Report: Monitoring Behaviour among People Who Inject or Inhale Drugs in Whitehorse, Yukon. Blood Ties Four Directions Centre, 2014.
73. Shoemaker M, Taylor L, Callaghan R. Prince George 2012 I-Track Survey Results: Findings and Discussion, 2013.
74. Caldarelli H, Locker A, Warshawsky B. I-Track Survey, Phase 3: A Profile of People Who Inject Drugs in London, Ontario, 2013.
75. Millson P, White S, Leonard L, Public Health Agency of Canada. Enhanced Surveillance of Risk Behaviours and Prevalence of HIV and Hepatitis C among People who Inject Drugs, 2016.
76. Armenta RF, Collins KM, Strathdee SA, et al. Mycobacterium tuberculosis infection among persons who inject drugs in San Diego, California. *International Journal of Tuberculosis and Lung Disease* 2017; **21**(4): 425-31.
77. Blackburn NA, Patel RC, Zibbell JE. Improving screening methods for hepatitis C among people who inject drugs: Findings from the HepTLC initiative, 2012-2014. *Public Health Reports* 2016; **131**: 91-7.
78. Carey KJ, Huang W, Linas BP, Tsui JI. Hepatitis C virus testing and treatment among persons receiving buprenorphine in an office-based program for opioid use disorders. *Journal of Substance Abuse Treatment* 2016; **66**: 54-9.
79. Geboy AG, Mahajan S, Daly AP, et al. High hepatitis C infection rate among baby boomers in an urban primary care clinic: Results from the HepTLC initiative. *Public Health Reports* 2016; **131**: 49-56.
80. Dimova RB, Martinez AD, Weinberg E, Drobnik A, Talal AH. Age and risk factor-based serologic screening for hepatitis C virus among an urban high-risk population. *Hepatology* 2015; **62**: 1098A.
81. Jordan AE, Des Jarlais DC, Arasteh K, McKnight C, Nash D, Perlman DC. Incidence and prevalence of hepatitis c virus infection among persons who inject drugs in New York City: 2006-2013. *Drug & Alcohol Dependence* 2015; **152**: 194-200.
82. Ruisenor-Escudero H. Injecting drug use in Afghanistan: Risk factors for HIV, HCV, STIS, injecting drug practices, and outcomes of an opiate substitution therapy program. *Dissertation Abstracts International: Section B: The Sciences and Engineering* 2014; **75**(2-B(E)): No Pagination Specified.
83. Todd CS, Nasir A, Stanekzai M, et al. Prevalence and correlates of HIV, syphilis, and hepatitis B and C infection and harm reduction program use among male injecting drug users in Kabul, Afghanistan: A cross-sectional assessment. *Harm Reduction Journal* 2011; **8**: 22.
84. Ruisenor-Escudero H, Vu A, Wirtz AL, et al. Cross-sectional assessments of participants' characteristics and loss to follow-up in the first Opioid Substitution Therapy Pilot Program in Kabul, Afghanistan. *Harm Reduction Journal* 2015; **12 (1) (no pagination)**(28).
85. National AIDS Control Program Afghanistan. Integrated Biological & Behavioral Surveillance (IBBS) in Selected Cities of Afghanistan. 2012.
86. Azim T, Rahman M, Rahman M, et al. National HIV Serological Surveillance, 2011 Bangladesh. 2011.

87. Hossain KJ, Nandi AK. Hepatitis-B Infections among the Injection Drug Abusers: An Emerging Risk in Public Health, Bangladesh. *Mymensingh Medical Journal: MMJ* 2015; **24**(4): 813-24.
88. Saraswati LR, Sarna A, Sebastian MP, et al. HIV, Hepatitis B and C among people who inject drugs: high prevalence of HIV and Hepatitis C RNA positive infections observed in Delhi, India. *BMC Public Health* 2015; **15**: 726.
89. Sharma AK, Bn S, Basu D. HCV and HIV co-infection and related risks in injecting drug users from a superspeciality centre. *Hepatology* 2014; **60**: 933A.
90. Solomon SS, Mehta SH, Srikrishnan AK, et al. Burden of hepatitis C virus disease and access to hepatitis C virus services in people who inject drugs in India: a cross-sectional study. *The Lancet Infectious Diseases* 2015; **15**(1): 36-45.
91. Solomon SS, Srikrishnan AK, McFall AM, et al. Burden of liver disease among community-based people who inject drugs (PWID) in Chennai, India. *PLoS ONE [Electronic Resource]* 2016; **11** (1) (no pagination)(e0147879).
92. Basu D, Sharma AK, Gupta S, Nebhinani N, Kumar V. Hepatitis C virus (HCV) infection & risk factors for HCV positivity in injecting & non-injecting drug users attending a de-addiction centre in northern India. *Indian Journal of Medical Research* 2015; **142**(September): 311-6.
93. Chalana H, Singh H, Sachdeva JK, Sharma S. Seroprevalence of human immunodeficiency virus, hepatitis B surface antigen, and hepatitis C in substance dependents admitted in a tertiary hospital at Amritsar, India. *Asian Journal of Psychiatry* 2013; **6**(6): 552-5.
94. Solomon SS, Mehta SH, Srikrishnan AK, et al. Limited access to HCV testing and treatment among injection drug users across India. *Journal of Hepatology* 2014; **1**: S15.
95. Gupta D, Saha K, Biswas A, Firdaus R, Ghosh M, Sadhukhan PC. Recombination in hepatitis C virus is not uncommon among people who inject drugs in Kolkata, India. *Infection, Genetics and Evolution* 2017; **48**: 156-63.
96. Kakavand-Ghalehnoei R, Shoja Z, Najafi A, et al. Prevalence of human herpesvirus-8 among HIV-infected patients, intravenous drug users and the general population in Iran. *Sexual Health* 2016; **13**(3): 295-8.
97. Honarvar B, Odoomi N, Moghadami M, et al. Blood-borne hepatitis in opiate users in Iran: A poor outlook and urgent need to change nationwide screening policy. *PLoS one* 2013; **8** (12) (no pagination)(e82230).
98. Noori S, Gol-Mohamadi A, Sarbazi MR, Safaei A, Farsar AR. Epidemiological features of hepatitis B and C infection in a high risk population: Results of screening programs. *Gastroenterology and Hepatology from Bed to Bench* 2013; **6**(3): 136-40.
99. Nobari RF, Meshkati M, Ataei B, et al. Identification of patients with hepatitis c virus infection in persons with background of intravenous drug use: The first community announcementbased study from Iran. *Hepatology International* 2012; **7**: S406-S7.
100. Ramezani A, Amirmoezi R, Volk JE, et al. HCV, HBV, and HIV seroprevalence, coinfections, and related behaviors among male injection drug users in Arak, Iran. *AIDS Care* 2014; **26**(9): 1122-6.
101. Republic of Maldives. Biological and Behavioral Survey (BBS) on HIV and AIDS 2008. 2008.
102. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWID- Male) in the Eastern Terai Highway Districts (Jhapa, Morang and Sunsari) of Nepal. 2015.
103. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWID) in Kathmandu Valley. 2015.
104. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWIDs) in Pokhara Valley. 2015.
105. Bista B. Injecting drug users (IDUs) are prone to Hepatitis B because of the high risk behaviour. Hepatitis B can be prevented through vaccines but the IDUs and their sexual partners from Kathmandu, Nepal are not getting preventive hepatitis B vaccinations. *Journal of Viral Hepatitis* 2015; **22**: 40-1.

106. Kinkel HT, Karmacharya D, Shakya J, et al. Prevalence of HIV, hepatitis B and C infections and an assessment of HCV-genotypes and two IL28B SNPs among people who inject drugs in three regions of Nepal. *PLoS ONE [Electronic Resource]* 2015; **10 (8) (no pagination)**(e0134455).
107. Ojha SP, Sigdel S, Verthien U, Khadga PK. HIV epidemiology in Nepal—"South Asian cocktail" a drug use pattern in Nepal and its correlation with spread of HIV. *Indian Journal of Psychiatry* 2014; **55**: S46-S7.
108. Akhtar AM, Jamil M, Rehman A, Majeed S. Hepatitis-C virus infection among injecting drug users in Lahore, Pakistan: A cross sectional study. *Pakistan Journal of Medical Sciences* 2016; **32**(2): 373-8.
109. Maan MA, Hussain F, Jamil M. Epidemiology of hepatitis C viral infection in Faisalabad, Pakistan: a retrospective study (2010-2012). *African Health Sciences* 2014; **14**(4): 810-5.
110. ur Rehman L, Ullah I, Ali I, et al. Active hepatitis C infection and HCV genotypes prevalent among the IDUs of Khyber Pakhtunkhwa. *Virology Journal* 2011; **8**: 327.
111. Platt L, Vickerman P, Collombien M, et al. Prevalence of HIV, HCV and sexually transmitted infections among injecting drug users in Rawalpindi and Abbottabad, Pakistan: evidence for an emerging injection-related HIV epidemic. *Sexually Transmitted Infections* 2009; **85 Suppl 2**: ii17-22.
112. Bouscaillou J, Evanno J, Prouté M, et al. Prevalence and factors associated with HIV and tuberculosis in people who use drugs in Abidjan, Ivory Coast. *International Journal of Drug Policy* 2016; **8**.
113. Mwatelah RS, Lwembe RM, Osman S, et al. Co-infection burden of hepatitis C virus and human immunodeficiency virus among injecting heroin users at the kenyan coast. *PLoS ONE [Electronic Resource]* 2015; **10 (7) (no pagination)**(e0132287).
114. African Development Bank Group. Etude comportementale et biologique chez les consommateurs de drogues injectables dans les zones urbaines à Madagascar-2012. 2012.
115. Mauritius: Ministry of Health and Quality of Life. Integrated Biological Behavioral Survey Among People Who Inject Drugs in Mauritius. 2011.
116. Johnston L, Saumtally A, Corceal S, Mahadoo I, Oodally F. High HIV and hepatitis C prevalence amongst injecting drug users in Mauritius: findings from a population size estimation and respondent driven sampling survey. *International Journal of Drug Policy* 2011; **22**(4): 252-8.
117. Teodoro E, Boothe M, Baltazar C, et al. Urgent Need for Harm-Reduction Interventions in Mozambique: Results from the Integrated Bio-Behavioral Survey among People Who Inject Drugs. 2015.
118. Tun W, Vu L, Adebajo SB, et al. Population-based prevalence of hepatitis B and C virus, HIV, syphilis, gonorrhoea and chlamydia in male injection drug users in Lagos, Nigeria. *International Journal of STD & AIDS* 2013; **24**(8): 619-25.
119. Lepretre A, Ba I, Lacombe K, et al. Prevalence and behavioural risks for HIV and HCV infections in a population of drug users of Dakar, Senegal: The ANRS 12243 UDSEN study. *Journal of the International AIDS Society* 2015; **18 (1) (no pagination)**(19888).
120. Bibi J, Faure J, Johnston L, Sinon F, Isnard R, Mangroo G. Injection Drug Use in the Republic of Seychelles, 2011. Integrated Biological and Behavioral Surveillance Survey - Round 1, 2011.
121. Bowring AL, Luhmann N, Pont S, et al. An urgent need to scale-up injecting drug harm reduction services in Tanzania: prevalence of blood-borne viruses among drug users in Temeke District, Dar-es-Salaam, 2011. *International Journal of Drug Policy* 2013; **24**(1): 78-81.
122. Boci A, Hallkaj E, Bani R. HIV and HCV prevalence and risky behaviors among needle exchange program users in Albania. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).
123. Handanagic S, Bozicevic I, Civljak M, et al. HIV and hepatitis C prevalence, and related risk behaviours among people who inject drugs in three cities in Croatia: Findings from respondent-driven sampling surveys. *International Journal of Drug Policy* 2016; **32**: 57-63.
124. Madsen LW, Fabricius T, Moessner BK, Birkemose I, Skamling M, Christensen PB. Depression is frequent among drug users but not related to hepatitis c infection. *Hepatology* 2011; **54**: 1187A.
125. Abou-Saleh MT, Rice P, Foley S. Hepatitis C testing in drug users using the dried blood spot test and the uptake of an innovative self-administered DBS test. *Addictive Disorders and their Treatment* 2013; **12**(1): 40-9.

126. Appleby VJ, Darnbrough E, Forrester K, Simpson R, Clarke C, Moreea S. An audit of the prevalence of chronic hepatitis c and treatment outcomes in drug users attending substance misuse centres in bradford-planning for future service provision. *Gut* 2015; **64**: A114.
127. Marufu M, Williams H, Hill SL, Tibble J, Verma S. Gender differences in hepatitis C seroprevalence and suboptimal vaccination and hepatology services uptake amongst substance misusers. *Journal of Medical Virology* 2012; **84**(11): 1737-43.
128. Bishton E, Oluboyede F, Grylls E, Woods L, Thomas S. Screening for Hepatitis C in injecting and ex-injecting drug users in North East Essex. *Public Health* 2014; **128**(11): 1036-8.
129. Kiprijanovska S, Davalieva K, Noveski P, Sukarova-Stefanovska E, Plaseska-Karanfilska D, Polenakovic M. Prevalence of hepatitis C virus genotypes in four risk groups in the Republic of Macedonia. *Journal of Viral Hepatitis* 2013; **20**: 18.
130. Weill-Barillet L, Pillonel J, Semaille C, et al. Hepatitis C virus and HIV seroprevalences, sociodemographic characteristics, behaviors and access to syringes among drug users, a comparison of geographical areas in France, ANRS-Coquelicot 2011 survey. *Rev Epidemiol Sante Publique* 2016; 12.
131. Wenz B, Nielsen S, Gassowski M, et al. High variability of HIV and HCV seroprevalence and risk behaviours among people who inject drugs: results from a cross-sectional study using respondent-driven sampling in eight German cities (2011-14). *BMC Public Health* 2016; **16**(927): 14.
132. Nosotti L, Fagetti R, Rocchi L, et al. Prevalence of HCV infection and adherence to DOT therapy in Italian and non-Italian IV drug users in Rome, Italy. *Heroin Addiction and Related Clinical Problems* 2014; **16**(1): 41-4.
133. Origer A, Schmit J. Prevalence of hepatitis B and C and HIV infections among problem drug users in Luxembourg: self-report versus serological evidence. *Journal of Epidemiology & Community Health* 2012; **66**(1): 64-8.
134. Bacak V, Lausevic D, Mugosa B, Vratnica Z, Terzic N. Hepatitis C virus infection and related risk factors among injection drug users in Montenegro. *European Addiction Research* 2013; **19**(2): 68-73.
135. Judd A, Rhodes T, Johnston LG, et al. Improving survey methods in sero-epidemiological studies of injecting drug users: a case example of two cross sectional surveys in Serbia and Montenegro. *BMC Infectious Diseases* 2009; **9**: 14.
136. Silva MJ, Pereira C, Loureiro R, et al. Hepatitis C in a Mobile Low-Threshold Methadone Program. *European Journal of Gastroenterology and Hepatology* 2017; **01**.
137. Munro A, Taylor A, Knox T, et al. Needle Exchange Surveillance Initiative (NESI): Prevalence of HCV and injecting risk behaviours among people who inject drugs (PWID) attending injecting equipment provision services (IEPs) in Scotland, 2008/2009-2013/2014. Scotland: University of the West of Scotland, 2015.
138. National Institute of Public Health: Kosovo. HIV Integrated Behavioral and Biological Surveillance Surveys-Kosovo. 2014.
139. Pares-Badell O, Espelt A, Folch C, et al. Undiagnosed HIV and Hepatitis C infection in people who inject drugs: From new evidence to better practice. *Journal of Substance Abuse Treatment* 2017; **77**: 13-20.
140. Folch C, Casabona J, Espelt A, et al. Gender differences in HIV risk behaviours among intravenous drug users in Catalonia, Spain. *Gaceta Sanitaria* 2013; **27**(4): 338-43.
141. Fraser H, Martin NK, Brummer-Korvenkontio H, et al. HCV Treatment as Prevention in Europe: Model Projections and Impact of Current and Scaled-up Treatment Rates. 2016.
142. Moriggia A, Bregenzer A, Bruggmann P, et al. Prospective data on people who use drugs in Switzerland: the SAMMSU cohort. 2016.
143. Craine N, Hickman M, Parry JV, Smith J, McDonald T, Lyons M. Characteristics of injecting drug users accessing different types of needle and syringe programme or using secondary distribution. *Journal of Public Health* 2010; **32**(3): 328-35.

Appendix 13: Grade and sources for country-level estimates of HBsAg prevalence among people who inject drugs

	New estimate?	Year of estimate	HBsAg among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Australasia								
Australia	Yes	2006; 2007	3.8 (2.4,5.2)	2	B1/C	City	A1	^{1,2}
New Zealand	No	1994	2.8 (1.2,4.4)	1	C		A1	³
Caribbean								
Antigua & Barbuda	No		--					
Bahamas	No		NK					
Barbados	No		--					
Bermuda	No		NK					
Comm. of Puerto Rico	No		NK					
Cuba	No		--					
Dominica	No		--					
Dominican Republic	No		NK					
Grenada	No		--					
Haiti	No		NK					
Jamaica	No		NK					
Saint Kitts & Nevis	No		--					
Saint Lucia	No		--					
St Vincent & the Grenadines	No		--					
Trinidad & Tobago	No		--					
Central Asia								
Kazakhstan	No	2002	7.9 (5.7-10.1)	1	A		A1	³
Kyrgyzstan	No		NK					
Tajikistan	No		NK					
Turkmenistan	No		NK					
Uzbekistan	No		NK					
East and South East Asia								
Brunei Darussalam	No		NK					
Cambodia	No		NK					
China	Yes	2012; 2013; 2014	23.4 (10.4,36.4)	3	C	Sub-national	A1	⁴⁻⁶
Hong Kong (China)	No		NK					
Indonesia	No		NK					
Japan	No	1993	3.2 (2.0,4.3)	1	C		A1	³
Lao PDR	No		NK					
Malaysia	No		NK					
Mongolia	No		NK					
Myanmar	Yes	2009; 2010	17.1 (14.9,19.2)	2	B1/C	Sub-national	B3; A1	^{7,8}
North Korea	No		--					
Philippines	No		NK					
Republic of Korea	Yes	2010	6.6 (4.1,9.9)	1	C	National	A1	⁹
Singapore	No	2006	8.5 (7.0,10.0)	1	C		A1	³
Taiwan	Yes	2011	8.0 (3.3,15.9)	1	C	National	C	¹⁰
Thailand	Yes	2005	30.5 (28.2,32.9)	1	B1	City	A1	¹¹
Timor Leste	No		NK					
Viet Nam	Yes	2007; 2008; 2009; 2010	14.7 (12.2,17.2)	11	A/B1	Sub-national	A1	^{12,13}
Eastern Europe								
Armenia	No		NK					
Azerbaijan	Yes	2012	10.4 (7.2,13.5)	7	B2	City	B3	¹⁴
Belarus	Yes	2015	11.2 (4.9,17.5)	6	B1	City	B2	¹⁵

	New estimate?	Year of estimate	HBsAg among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Bosnia & Herzegovina	Yes	2012; 2014	0.5 (0.0,1.4)	2	B1, C	City	B3; A1	16,17
Bulgaria	Yes	2011; 2012; 2013; 2014	6.6 (4.7,8.5)	6	A	Sub-national	B2	18
Czech Republic	No	2010	15.1 (12.5,17.7)	1	C		A1	3
Estonia	Yes	2010; 2013	4.7 (3.1,6.3)	2	C/B1	City	B2	18
Georgia	No	2003	7.2 (5.4,9.1)	1	A		A1	3
Hungary	Yes	2015	2.2 (1.2,3.7)	1	A	National	B2	18
Latvia	Yes	2011; 2012; 2013	2.8 (1.7,3.9)	3	B1	Sub-national	B2	18
Lithuania	Yes	2014	10.5 (6.6,15.6)	1	B1	City	B2	18
Moldova	Yes	2013	5.7 (1.1,10.3)	4	B2	City	B2	19
Poland	No	2005	4.9 (1.2,8.5)	1	A		A1	3
Romania	Yes	2009	5.2 (3.3,7.2)	2	C/B1	City	A1; B2	20,21
Russian Federation	No	2002	9.0 (7.0,11.0)	1	C		A1	3
Slovakia	Yes	2012-2015	1.7 (0.0,4.1)	5	B1	City	B2	18
Ukraine	Yes	2015	5.6 (5.1,6.0)	1	B1	National	B2	22
Latin America								
Argentina	No	2001	8.6 (6.3-10.9)	1	B1		A1	3
Belize	No		--					
Bolivia	No		NK					
Brazil	No	2000	2.3 (1.1-3.5)	1	C		A1	3
Chile	No		NK					
Colombia	No		NK					
Costa Rica	No		NK					
Ecuador	No		NK					
El Salvador	No		NK					
Guatemala	No		NK					
Guyana	No		NK					
Honduras	No		NK					
Mexico	No		NK					
Nicaragua	No		NK					
Panama	No		NK					
Paraguay	No		NK					
Peru	No		NK					
Suriname	No		NK					
Uruguay	No	2003	4.5 (2.8-6.2)	1	C		A1	3
Venezuela	No		NK					
Middle East & North Africa								
Algeria	No		NK					
Bahrain	No		NK					
Cyprus	Yes	2011; 2012; 2013; 2014	1.4 (0.0,2.8)	4	A/B1	National	B2	18
Egypt	No	1995	13.5 (10.9,16.0)	1	C		A1	3
Iraq	No		NK					
Israel	Yes	2010	6.3 (3.3,10.7)	1	C	Sub-national	B2	23
Jordan	No		NK					
Kuwait	No		NK					
Lebanon	Yes	2008	2.5 (0.3,8.6)	1	C	City	A1	24
Libyan Arab Jamahiriya	No		NK					
Morocco	No		NK					
Occ. Palestinian Terr.	Yes	2010	6.3 (3.3,10.7)	1	B1	Sub-national	B2	25
Oman	No		NK					
Qatar	No		NK					
Saudi Arabia	Yes	2012	7.7 (5.2,10.8)	1	C	City	A1	26
South Sudan	No		--					
Sudan	No		NK					
Syrian Arab Rep.	Yes	2014	0.5 (0.1,1.8)	1	B1	Sub-national	B2	27
Tunisia	Yes	2009	3.1 (2.0,4.7)	1	B1	Sub-national	B2	28
Turkey	Yes	2013; 2015	5.4 (4.1,6.7)	5	B1	National	B2; A1	18,29
United Arab Emirates	No		NK					

	New estimate?	Year of estimate	HBsAg among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Yemen	No		NK					
North America								
Canada	No		NK					
United States	Yes	2011	4.8 (3.0,7.2)	1	A	Sub-national	A1	30
Pacific Island States & Terr.								
American Samoa	No		NK					
Fed. States of Micronesia	No		NK					
Fiji	No		NK					
French Polynesia	No		NK					
Guam	No		NK					
Kiribati	No		NK					
Marshall Islands	No		NK					
Nauru	No		--					
New Caledonia	No		NK					
Northern Mariana Islands	No		NK					
Palau	No		NK					
Papua New Guinea	No		NK					
Samoa	No		NK					
Solomon Islands	No		NK					
Tonga	No		NK					
Tuvalu	No		--					
Vanuatu	No		NK					
South Asia								
Afghanistan	Yes	2009; 2012	6.0 (5.0,7.1)	9	B1/A	Sub-national	B3; A1	31-33
Bangladesh	Yes	2013	7.0 (4.7,10.0)	1	C	City	A1	34
Bhutan	No		NK					
India	Yes	2012; 2013; 2015	4.7 (0.9,8.5)	6	C/B1	Sub-national	A1; C	35-40
Iran	Yes	2012; 2013; 2014	3.9 (2.9,4.9)	6	C/B1/A	Sub-national	A1	41-46
Maldives	Yes	2008	0.5 (0.0,1.3)	2	B1	City	B2	47
Nepal	Yes	2014; 2015	1.8 (0.5,3.2)	5	B1	Sub-national	B3; C; A1	48-52
Pakistan	No	2003; 2004	6.8 (6.0,7.5)	1	C	Sub-national	A1	3
Sri Lanka	No		NK					
Sub Saharan Africa								
Angola	No		NK					
Benin	No		NK					
Botswana	No		--					
Burkina Faso	No		NK					
Burundi	No		NK					
Cameroon	No		NK					
Cape Verde	No		NK					
Central African Republic	No		--					
Chad	No		NK					
Comoros	No		--					
Congo (Kinshasa)	No		NK					
Cote d'Ivoire	Yes	2014	10.5 (4.0,21.5)	1	B1	City	A1	53
Djibouti	No		NK					
Equatorial Guinea	No		--					
Eritrea	No		--					
Ethiopia	No		NK					
Gabon	No		NK					
Gambia	No		NK					
Ghana	No		NK					
Guinea	No		NK					
Guinea-Bissau	No		--					
Kenya	Yes	2013	5.4 (3.3,8.2)	1	B2	City	A1	54
Lesotho	No		--					
Liberia	No		NK					
Madagascar	Yes	2012	5.0 (3.3,6.8)	3	B1	City	B2	55

	New estimate?	Year of estimate	HBsAg among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Malawi	No		NK					
Mali	No		NK					
Mauritania	No		--					
Mauritius	Yes	2009; 2011	6.1 (4.7,7.6)	2	B1	National	B3; A1	56,57
Mozambique	No		NK					
Namibia	No		--					
Niger	No		NK					
Nigeria	Yes	2010	6.7 (4.3,10.0)	1	C	City	A1	58
Rep. of the Congo	No		NK					
Rwanda	No		NK					
Sao Tome & Principe	No		--					
Senegal	No		NK					
Seychelles	Yes	2011	0.3 (0,1.6)	1	B1	National	B2	59
Sierra Leone	No		NK					
Somalia	No		NK					
South Africa	No		NK					
Swaziland	No		NK					
Togo	No		NK					
Uganda	No		NK					
United Rep. of Tanzania	Yes	2014	1.1 (0.5,2.4)	1	B1	City	B3	60
Zambia	No		NK					
Zimbabwe	No		NK					
Western Europe								
Albania	No		NK					
Andorra	No		NK					
Austria	Yes	2011; 2012; 2013; 2014	3.9 (2.4,5.5)	4	A	City	B2	18
Belgium	Yes	2011; 2012; 2013; 2014	2.1 (1.4,2.8)	7	B1, C	City	B2	18
Croatia	Yes	2007	0.9 (0.0,1.8)	3	B1	City	A1	61
Denmark	Yes	2007	1.3 (0.3,3.6)	1	B1	Sub-national	A1	62
England	No		NK					
Finland	No		NK					
Form. Yug. Rep. Macedonia	No		NK					
France	Yes	2011	0.8 (0.3,1.6)	1	A	Sub-national	B2	18
Germany	Yes	2014	0.7 (0.3,1.0)	8	B1	City	A1	63
Greece	Yes	2011; 2012; 2013; 2014	2.4 (1.8,3.0)	12	A	National	B2	18
Greenland	No		--					
Iceland	No		NK					
Ireland	No	2003	0.0 (0.0,0.0)	1	C		A1	3
Italy	No	1990; 1993	5.1 (0.9,9.3)	2	C		A1	3
Liechtenstein	No		--					
Luxembourg	Yes	2005	0.8 (0.1,3.0)	1	A	National	A1	64
Malta	No		NK					
Monaco	No		NK					
Montenegro	No	2008	0.0 (0.0,0.0)	1	C		A1	3
Netherlands	No	2000	3.0 (1.6,4.4)	1	A		A1	3
Northern Ireland	No		NK					
Norway	Yes	2010; 2011; 2012	1.3 (0.3,2.4)	3	A	City	B2	18
Portugal	Yes	2011; 2012; 2013; 2014	5.0 (4.1,5.9)	4	B1	National	B2	18
San Marino	No		NK					
Scotland	Yes	2014	0.9 (0.6,1.4)	1	B1	National	B3	65
Serbia	Yes	2014	3.6 (2.0,5.2)	2	B1	Sub-national	B3	66
Slovenia	No	2002	3.4 (1.9,4.9)	1	B1		A1	3
Spain	Yes	2006	1.8 (0.4,5.2)	1	B1	City	B1	67
Sweden	Yes	2010	1.9 (0.2,6.6)	1	B1	Sub-national	A1	68
Switzerland	No	1996	4.0 (2.4,5.6)	1	C		A1	3

	New estimate?	Year of estimate	HBsAg among PWID % (range)	No. estimates	Estimate(s) grade	Geographic area	Literature grade	References
Wales	No		NK					

References

1. Sacks-Davis R, Daraganova G, Aitken C, et al. Hepatitis C virus phylogenetic clustering is associated with the social-injecting network in a cohort of people who inject drugs. *PLoS ONE [Electronic Resource]* 2012; **7**(10): e47335.
2. Miller ER, Hellard ME, Bowden S, Bharadwaj M, Aitken CK. Markers and risk factors for HCV, HBV and HIV in a network of injecting drug users in Melbourne, Australia. *Journal of Infection* 2009; **58**(5): 375-82.
3. Nelson P, Mathers B, Cowie B, et al. The epidemiology of viral hepatitis among people who inject drugs: Results of global systematic reviews. *Lancet* 2011; **378**(9791): 571-83.
4. Chen F, Zhang J, Guo F, et al. Hepatitis B, C, and D virus infection showing distinct patterns between injection drug users and the general population. *Journal of Gastroenterology and Hepatology (Australia)* 2017; **32**(2): 515-20.
5. Wu Q, Zu J, Wei X, et al. Survey of Hepatitis B infection and vaccination status among drug users in Xi'an. *Chung-Hua Yu Fang i Hsueh Tsa Chih [Chinese Journal of Preventive Medicine]* 2014; **48**(10): 862-6.
6. Li L, Assanangkornchai S, Duo L, McNeil E, Li J. Risk behaviors, prevalence of HIV and hepatitis C virus infection and population size of current injection drug users in a China-Myanmar border city: results from a Respondent-Driven Sampling Survey in 2012. *PLoS ONE [Electronic Resource]* 2014; **9**(9): e106899.
7. WHO. HIV Sentinel Sero-Surveillance Survey Report 2010. 2011.
8. Zhou YH, Liu FL, Yao ZH, et al. Comparison of HIV-, HBV-, HCV- and Co-infection prevalence between Chinese and Burmese intravenous drug users of the China-Myanmar border region. *PloS one* 2011; **6** (1) (no pagination)(e16349).
9. Min JA, Yoon Y, Lee HJ, et al. Prevalence and associated clinical characteristics of hepatitis B, C, and HIV infections among injecting drug users in Korea. *Journal of Medical Virology* 2013; **85**(4): 575-82.
10. Shi MD, Zhang KX, Tsai LY. Injecting drug users (IDUs) prevalence of hepatitis virus, HIV and syphilis in Southern Taiwan. *Hepatology International* 2013; **7**: S116.
11. Sunthornchart S, Linkins RW, Natephisarnwanish V, et al. Prevalence of hepatitis B, tetanus, hepatitis A, human immunodeficiency virus and feasibility of vaccine delivery among injecting drug users in Bangkok, Thailand, 2003-2005. *Addiction* 2008; **103**(10): 1687-95.
12. Nadol P, O'Connor S, Duong H, et al. Findings from integrated behavioral and biologic survey among males who inject drugs (MWID) - Vietnam, 2009-2010: evidence of the need for an integrated response to HIV, hepatitis B virus, and hepatitis C virus. *PLoS ONE [Electronic Resource]* 2015; **10**(2): e0118304.
13. Nguyen CH, Ishizaki A, Chung PTT, et al. Prevalence of HBV infection among different HIV-risk groups in Hai Phong, Vietnam. *Journal of Medical Virology* 2011; **83**(3): 399-404.
14. Ministry of Health the Republic of Azerbaijan. Prevalence of HIV, Hepatitis and Syphilis, and Behavioural Risk Factors Among Most-At-Risk Groups in the Republic of Azerbaijan. 2008.
15. Arkad'yevna YK. ПОВЕДЕНИЧЕСКИЕ ОСОБЕННОСТИ И УРОВЕНЬ ЗНАНИЙ ПО ПРОБЛЕМЕ ВИЧ/СПИД СРЕДИ ПОТРЕБИТЕЛЕЙ ИНЪЕКЦИОННЫХ НАРКОТИКОВ. 2015.
16. Bacak V, Dominkovic Z. Report on behavioral and biological surveillance among injection drug users in Bosnia and Herzegovina, 2009: a respondent driven sampling survey, 2009. 2012.
17. Skocibasic S, Martinac M, Arapovic J, et al. HBV and HCV serological monitoring among injection drugs users in opiate substitution treatment in Bosnia and Herzegovina. *Journal of Infection in Developing Countries* 2016; **10**(9): 968-72.
18. EMCDDA. Data tables: Infectious diseases > Prevalence > HBV > HbsAg-All - Table: INF-114. 2016. www.emcdda.europa.eu/data/stats2016#displayTable:INF-114 (accessed 30 July 2016).
19. Global Fund. Integrated Bio-Behavioural Study in key populations at higher risk: key indicators. 2013.
20. Sultana C, Vagu C, Temereanca A, Grancea C, Slobozeanu J, Ruta S. Hepatitis C virus genotypes in injecting drug users from Romania. *Central European Journal of Medicine* 2011; **6**(5): 672-8.

21. UNODC. HIV, HBV and HCV Behavioral Surveillance Survey among Injecting Drug Users in Bucharest, Romania. 2011.
22. Barska G, Sazonov JO. Survey Results 2015. Monitoring Behaviour and HIV Prevalence among People who use Injectable Drugs and their Sexual Partners, 2016.
23. WHO. HIV Bio-Behavioral Survey among Injecting Drug Users in the East Jerusalem Governorate. 2010.
24. Mahfoud Z, Afifi R, Ramia S, et al. HIV/AIDS among female sex workers, injecting drug users and men who have sex with men in Lebanon: Results of the first biobehavioral surveys. *Aids* 2010; **24**(SUPPL. 2): S45-S54.
25. Chatty A, AbuRabie R, Dibeh S, et al. HIV Bio-Behavioural Suvery among Injecting Drug Users in the East Jerusalem Governorate, 2010, 2010.
26. Alshomrani AT. Prevalence of human immunodeficiency virus, hepatitis C virus, and hepatitis B virus infection among heroin injectors in the central region of Saudi Arabia. *Saudi Medical Journal* 2015; **36**(7): 802-6.
27. UNDP. Syria IBBS. 2014.
28. Benzineb S, Hsairi M. Enquête de séroprévalence du VIH et des Hépatites virales auprès des usagers de drogues injectables en Tunisie. 2009.
29. Alaei A, Alaei K, Waye K, et al. Hepatitis C infection and other drug-related harms among inpatients who injected drugs in Turkey. *Journal of Viral Hepatitis* 2016.
30. Grau LE, Zhan W, Heimer R. Prevention knowledge, risk behaviours and seroprevalence among nonurban injectors of southwest Connecticut. *Drug and Alcohol Review* 2016; **35**(5): 628-36.
31. National AIDS Control Program Afghanistan. Integrated Biological & Behavioral Surveillance (IBBS) in Selected Cities of Afghanistan. 2012.
32. Ruisenor-Escudero H. Injecting drug use in Afghanistan: Risk factors for HIV, HCV, STIS, injecting drug practices, and outcomes of an opiate substitution therapy program. *Dissertation Abstracts International: Section B: The Sciences and Engineering* 2014; **75**(2-B(E)): No Pagination Specified.
33. Todd CS, Nasir A, Stanekzai M, et al. Prevalence and correlates of HIV, syphilis, and hepatitis B and C infection and harm reduction program use among male injecting drug users in Kabul, Afghanistan: A cross-sectional assessment. *Harm Reduction Journal* 2011; **8**: 22.
34. Hossain KJ, Nandi AK. Hepatitis-B Infections among the Injection Drug Abusers: An Emerging Risk in Public Health, Bangladesh. *Mymensingh Medical Journal: MMJ* 2015; **24**(4): 813-24.
35. Solomon SS, Srikrishnan AK, McFall AM, et al. Burden of liver disease among community- based people who inject drugs (PWID) in Chennai, India. *PLoS ONE [Electronic Resource]* 2016; **11** (1) (no pagination)(e0147879).
36. Sharma AK, Bn S, Basu D. HCV and HIV co-infection and related risks in injecting drug users from a superspeciality centre. *Hepatology* 2014; **60**: 933A.
37. Basu D, Sharma AK, Gupta S, Nebhinani N, Kumar V. Hepatitis C virus (HCV) infection & risk factors for HCV positivity in injecting & non-injecting drug users attending a de-addiction centre in northern India. *Indian Journal of Medical Research* 2015; **142**(September): 311-6.
38. Chalana H, Singh H, Sachdeva JK, Sharma S. Seroprevalence of human immunodeficiency virus, hepatitis B surface antigen, and hepatitis C in substance dependents admitted in a tertiary hospital at Amritsar, India. *Asian Journal of Psychiatry* 2013; **6**(6): 552-5.
39. Ghosh I, Ghosh P, Bharti AC, Mandal R, Biswas J, Basu P. Prevalence of human papillomavirus and co-existent sexually transmitted infections among female sex workers, men having sex with men and injectable drug abusers from eastern India. *Asian Pacific Journal of Cancer Prevention: Apjcp* 2012; **13**(3): 799-802.
40. Saraswati LR, Sarna A, Sebastian MP, et al. HIV, Hepatitis B and C among people who inject drugs: high prevalence of HIV and Hepatitis C RNA positive infections observed in Delhi, India. *BMC Public Health* 2015; **15**: 726.

41. Khodadoostan M, Ataei B, Shavakhi A, Tavakoli T, Nokhodian Z, Yaran M. The assessment of hepatitis B seroprevalence in persons with intravenous drug use history in the Isfahan province: Community-based study. *Journal of Research in Medical Sciences* 2014; **19**(1): 65-8.
42. Kakavand-Ghalehnoei R, Shoja Z, Najafi A, et al. Prevalence of human herpesvirus-8 among HIV-infected patients, intravenous drug users and the general population in Iran. *Sexual Health* 2016; **13**(3): 295-8.
43. Asli M, Kandelouei T, Rahimyan K, Davoodbeglou F, Vaezjalali M. Characterization of occult hepatitis B infection among injecting drug users in Tehran, Iran. *Hepatitis Monthly* 2016; **16** (3) (no pagination)(e34763).
44. Kandelouei T, Hosseini SM, Gachkar L, Keyvani H, Davoodbeglou F, Vaezjalali M. Reduction in prevalence of hepatitis B surface antigen among intravenous drug users in Tehran drop-in-centers. *Archives of Clinical Infectious Diseases* 2013; **8** (2) (no pagination)(e15531).
45. Honarvar B, Odomi N, Moghadami M, et al. Blood-borne hepatitis in opiate users in Iran: A poor outlook and urgent need to change nationwide screening policy. *PloS one* 2013; **8** (12) (no pagination)(e82230).
46. Ramezani A, Amirmoezi R, Volk JE, et al. HCV, HBV, and HIV seroprevalence, coinfections, and related behaviors among male injection drug users in Arak, Iran. *AIDS Care* 2014; **26**(9): 1122-6.
47. Republic of Maldives. Biological and Behavioral Survey (BBS) on HIV and AIDS 2008. 2008.
48. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWID- Male) in the Eastern Terai Highway Districts (Jhapa, Morang and Sunsari) of Nepal. 2015.
49. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWID) in Kathmandu Valley. 2015.
50. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWIDs) in Pokhara Valley. 2015.
51. Bista B. Injecting drug users (IDUs) are prone to Hepatitis B because of the high risk behaviour. Hepatitis B can be prevented through vaccines but the IDUs and their sexual partners from Kathmandu, Nepal are not getting preventive hepatitis B vaccinations. *Journal of Viral Hepatitis* 2015; **22**: 40-1.
52. Kinkel HT, Karmacharya D, Shakya J, et al. Prevalence of HIV, hepatitis B and C infections and an assessment of HCV-genotypes and two IL28B SNPs among people who inject drugs in three regions of Nepal. *PLoS ONE [Electronic Resource]* 2015; **10** (8) (no pagination)(e0134455).
53. Bouscaillou J, Evanno J, Prouté M, et al. Prevalence and factors associated with HIV and tuberculosis in people who use drugs in Abidjan, Ivory Coast. *International Journal of Drug Policy* 2016: 8.
54. Webale MK, Kilongosi MW, Budambula V, et al. Hepatitis B virus sero-profiles and genotypes in HIV-1 infected and uninfected injection and Non-injection drug users from coastal Kenya. *BMC Infectious Diseases* 2015; **15**: 299.
55. African Development Bank Group. Etude comportementale et biologique chez les consommateurs de drogues injectables dans les zones urbaines à Madagascar-2012. 2012.
56. Mauritius: Ministry of Health and Quality of Life. Integrated Biological Behavioral Survey Among People Who Inject Drugs in Mauritius. 2011.
57. Johnston L, Saumtally A, Corceal S, Mahadoo I, Oodally F. High HIV and hepatitis C prevalence amongst injecting drug users in Mauritius: findings from a population size estimation and respondent driven sampling survey. *International Journal of Drug Policy* 2011; **22**(4): 252-8.
58. Tun W, Vu L, Adebajo SB, et al. Population-based prevalence of hepatitis B and C virus, HIV, syphilis, gonorrhoea and chlamydia in male injection drug users in Lagos, Nigeria. *International Journal of STD & AIDS* 2013; **24**(8): 619-25.
59. Bibi J, Faure J, Johnston L, Sinon F, Isnard R, Mangroo G. Injection Drug Use in the Republic of Seychelles, 2011. Integrated Biological and Behavioral Surveillance Survey - Round 1, 2011.

60. National AIDS and Control Programme (NACP), Muhimnili University of Health and Allied Sciences. Integrated Bio-Behavioral Survey Among People Who Inject Drugs in Dar es Salaam, Tanzania, 2014: Muhimnili University of Health and Allied Sciences,, 2014.
61. Kolarić B, Štajduhar D, Gajnik D, Rukavina T, Wiessing L. Seroprevalence of Blood-Borne Infections and Population Size Estimates in a Population of Injecting Drug Users in Croatia. *Central European Journal of Public Health* 2010; **18**(2): 104-9.
62. Mossner BK, Skamling M, Jorgensen TR, Georgsen J, Pedersen C, Christensen PB. Decline in hepatitis B infection observed after 11 years of regional vaccination among Danish drug users. *Journal of Medical Virology* 2010; **82**(10): 1635-9.
63. Wenz B, Nielsen S, Gassowski M, et al. High variability of HIV and HCV seroprevalence and risk behaviours among people who inject drugs: results from a cross-sectional study using respondent-driven sampling in eight German cities (2011-14). *BMC Public Health* 2016; **16**(927): 14.
64. Origer A, Schmit J. Prevalence of hepatitis B and C and HIV infections among problem drug users in Luxembourg: self-report versus serological evidence. *Journal of Epidemiology & Community Health* 2012; **66**(1): 64-8.
65. Munro A, Taylor A, Knox T, et al. Needle Exchange Surveillance Initiative (NESI): Prevalence of HCV and injecting risk behaviours among people who inject drugs (PWID) attending injecting equipment provision services (IEPs) in Scotland, 2008/2009-2013/2014. Scotland: University of the West of Scotland, 2015.
66. National Institute of Public Health: Kosovo. HIV Integrated Behavioral and Biological Surveillance Surveys-Kosovo. 2014.
67. Rivas I, Martinez E, Sanvisens A, et al. Hepatitis B virus serum profiles in injection drug users and rates of immunization over time in Barcelona: 1987-2006. *Drug & Alcohol Dependence* 2010; **110**(3): 234-9.
68. Jerkeman A, Westin J, Lagging M, et al. Chronic hepatitis C in Swedish subjects receiving opiate substitution therapy-Factors associated with advanced fibrosis. *Scandinavian Journal of Infectious Diseases* 2014; **46**(5): 340-7.

Appendix 14a: Source for country-level estimates of sociodemographic and risk characteristics of people who inject drugs

	% women		% young injectors ¹		% homeless or unstable housing		% history of arrest		% history of incarceration	
	% (range)	References	% (range)	References	% (range)	References	% (range)	References	% (range)	References
Eastern Europe										
Armenia	1.9 (0.3, 3.5)	148,149	17.7 (9.6, 25.9)	148,149	--	--	--	--	--	--
Azerbaijan	1.8 (1.1, 2.6)	150,151	--	--	--	--	--	--	27.9 (16.5, 39.2)	150
Belarus	36.9 (28.8, 45.0)	48,152	20.1 (10.3, 30.0)	152	--	--	--	--	--	--
Bosnia & Herzegovina	10.1 (6.5, 13.6)	153	17.3 (9.1, 25.4)	--	--	--	--	--	41.8 (32.3, 51.3)	153,154
Bulgaria	18.9 (17.1, 20.8)	155,156	--	--	3.2 (2.4, 3.9)	155,157	64.5 (61.6, 67.3)	157	--	--
Czech Republic	21.7 (16.6, 27.4)	158	42.6 (28.3, 57.8)	159	48.1 (41.9, 54.9)	158	--	--	--	--
Estonia	19.5 (17.1, 21.8)	161-171	37.6 (27.3, 47.9)	161,162,165,168-170	--	--	--	--	57.0 (50.1, 63.9)	161,163,165,166,170
Georgia	1.6 (1.0, 2.1)	172-176	11.5 (8.1, 14.8)	173-175,177	2.8 (1.0, 5.9)	172	38.5 (28.4, 48.7)	175	--	--
Hungary	26.0 (23.9, 28.0)	178-185	31.0 (24.9, 37.1)	178-185	19.8 (6.6, 32.9)	181,182,185,186	41.6 (34.7, 48.8)	182	43.0 (39.6, 46.4)	185,186
Latvia	21.9 (7.4, 36.4)	165,188,189	36.1 (20.6, 51.5)	165,188,189	1.2 (0.4, 2.8)	189	--	--	48.3 (43.9, 52.7)	165,188,189
Lithuania	18.7 (15.9, 21.4)	189,190	18.0 (14.4, 22.1)	189	6.0 (3.9, 8.8)	189	--	--	70.7 (66.0, 75.2)	189
Moldova	20.0 (15.2, 24.8)	192,193	13.8 (6.9, 20.8)	193	7.1 (4.7, 10.4)	192	--	--	--	--
Poland	28.5 (26.0, 31.0)	194-197	38.2 (17.1, 59.3)	194,197,198	18.4 (16.2, 20.5)	194,198	--	--	44.0 (39.6, 48.3)	194,197,198
Romania	19.2 (15.7, 22.7)	192,199-205	41.3 (20.2, 62.3)	200,204,205	16.6 (1.9, 31.3)	192,200,205	52.9 (49.5, 56.3)	200,205	40.3 (27.4, 53.3)	192,199,205
Russian Federation	27.9 (24.0, 31.7)	48,206-217	49.7 (42.3, 57.2)	208,211,212,214	4.4 (2.2, 6.6)	211,213,214,217	26.5 (22.4, 30.8)	211	33.8 (30.5, 37.2)	213
Slovakia	30.1 (27.0, 33.2)	219	--	--	--	--	--	--	--	--
Ukraine	23.2 (20.8, 23.6)	48,220-229	18.4 (16.7, 20.1)	220,222,225,227,228	0.4 (0.2, 0.8)	222,225,229	60.4 (50.8, 70.0)	223,224,229	35.3 (30.1, 40.6)	220-222
Western Europe										
Albania	--	--	--	--	27.3 (19.6, 36.1)	192	--	--	47.1 (38.0, 56.4)	192
Andorra	--	--	--	--	--	--	--	--	--	--
Austria	35.4 (14.7, 56.0)	496-498	44.9 (36.9, 53.0)	498	14.7 (9.6, 21.3)	498	--	--	--	--
Belgium	21.9 (20.0, 23.9)	499-504	22.2 (8.8, 35.6)	499,504	27.8 (15.4, 40.2)	499-504	--	--	--	--
Croatia	18.6 (16.0, 21.3)	505-510	22.1 (10.7, 33.5)	--	16.1 (8.6, 23.7)	510,511	--	--	45.2 (41.1, 49.4)	508,510,511
Denmark	20.2 (12.2, 28.1)	513-515	26.8 (14.2, 42.9)	514	26.8 (14.2, 42.9)	514	--	--	--	--
England	33.0 (20.1, 45.9)	335,336,516-519	19.1 (16.0, 22.3)	335,336	40.7 (26.4, 55.0)	335,336,519,520	--	--	47.2 (41.4, 53.0)	336
Finland	--	--	--	--	--	--	--	--	--	--
Former Yugoslav Rep. of Macedonia	9.7 (8.3, 11.2)	522	54.1 (51.7, 56.5)	522	--	--	--	--	--	--
France	18.9 (16.9, 21.2)	523	--	--	--	--	--	--	--	--
Germany	24.5 (21.3, 27.6)	526-531	14.2 (5.2, 23.3)	526,530,531	14.5 (10.7, 18.2)	529,531	--	--	76.7 (67.8, 85.5)	526,528,529,531
Greece	17.4 (12.1, 22.6)	533-541	--	--	34.5 (33.1, 36.0)	537,539	--	--	38.1 (17.4, 58.8)	537,539,541
Greenland	--	--	--	--	--	--	--	--	--	--
Iceland	41.7 (32.3, 51.5)	543	--	--	34.3 (25.4, 44.0)	543	64.8 (55.0, 73.8)	543	38.0 (28.8, 47.8)	543
Ireland	27.0 (13.3, 40.6)	544-547	8.7 (5.9, 12.2)	545	5.5 (3.4, 7.6)	544,545	--	--	69.6 (57.3, 80.1)	544
Italy	32.8 (0.9, 64.7)	548-550	43.9 (41.4, 46.4)	548	14.7 (13.5, 16.0)	550	--	--	8.4 (4.6, 12.2)	550
Luxembourg	--	--	--	--	--	--	--	--	--	--
Malta	--	--	--	--	--	--	--	--	--	--
Monaco	--	--	--	--	--	--	--	--	--	--
Montenegro	8.0 (5.9, 10.1)	552,553	38.7 (33.4, 44.3)	553	--	--	61.5 (55.9, 66.8)	552	42.7 (37.3, 48.2)	553
Netherlands	25.0 (18.1, 33.0)	554	--	--	--	--	--	--	--	--
Northern Ireland	--	--	--	--	--	--	--	--	--	--
Norway	32.4 (25.8, 38.9)	555-561	46.1 (41.8, 50.5)	556,559	26.9 (16.9, 36.9)	555,556,560,561	78.0 (73.1, 82.4)	556	68.0 (60.5, 74.9)	559
Portugal	27.4 (20.1, 35.7)	562	--	--	--	--	--	--	--	--
San Marino	--	--	--	--	--	--	--	--	--	--

	% women		% young injectors ¹		% homeless or unstable housing		% history of arrest		% history of incarceration	
	% (range)	References	% (range)	References	% (range)	References	% (range)	References	% (range)	References
Scotland	31.0 (28.4, 33.5)	332,333,337-339,563	10.3 (7.5, 13.1)	332,333,337-339	24.8 (20.3, 29.3)	332,338,339	--	--	60.7 (55.3, 66.0)	338,339,563
Serbia	14.4 (8.6, 20.2)	192,553,564-566	29.6 (16.0, 43.3)	553,564,566	1.1 (0.2, 2.0)	566	--	--	42.8 (29.8, 55.8)	192,553,565,566
Slovenia	23.2 (19.7, 26.6)	567-569	10.8 (6.9, 15.9)	568	7.8 (4.5, 12.4)	568	--	--	--	--
Spain	19.0 (16.9, 21.2)	570-584	18.5 (12.1, 25.0)	571-575,577-579,581,583	24.9 (15.4, 34.4)	576,583,584	50.2 (47.7, 52.8)	582	51.8 (37.2, 66.5)	576,579,580,584
Sweden	27.6 (25.5, 29.6)	--	--	--	34.9 (21.2, 48.7)	585-589	77.0 (74.0, 79.8)	590	64.2 (47.3, 81.1)	586,589,590
Switzerland	21.7 (19.5, 24.0)	592	--	--	12.8 (11.0, 14.7)	592	--	--	--	--
Wales	26.0 (22.8, 29.4)	334	27.4 (24.0, 31.0)	334	--	--	--	--	--	--
East and South East Asia										
Brunei Darussalam	--	--	--	--	--	--	--	--	--	--
Cambodia	11.6 (7.9, 15.3)	46,47	--	--	17.6 (14.4, 20.8)	--	--	--	29.4 (21.4, 38.5)	47
China	26.5 (20.9, 32.1)	48-79	25.4 (16.7, 34.0)	53,54,56-60,66,67,73-75,80	8.9 (6.3, 12.2)	71	--	--	78.4 (73.8, 82.5)	60
Hong Kong (China)	15.9 (13.0, 19.1)	91	--	--	--	--	--	--	--	--
Indonesia	5.4 (3.8, 7.1)	92-100	14.4 (5.4, 23.5)	97,99,101	--	--	16.0 (15.0, 17.1)	--	--	--
Japan	--	--	--	--	--	--	--	--	--	--
Lao PDR	--	--	--	--	--	--	--	--	--	--
Malaysia	4.4 (2.3, 6.5)	104-107	--	--	--	--	--	--	--	--
Mongolia	--	--	--	--	--	--	--	--	--	--
Myanmar	1.9 (1.0, 2.8)	76,108	29.0 (24.3, 33.7)	108-115	--	--	18.9 (14.5, 21.7)	110	32.9 (25.7, 40.8)	111
Philippines	4.8 (3.4, 6.3)	116,117	55.5 (37.0, 73.9)	116	--	--	--	--	--	--
Republic of Korea	10.6 (7.7, 13.5)	119,120	--	--	--	--	--	--	--	--
Singapore	--	--	--	--	--	--	--	--	--	--
Taiwan	13.8 (12.7, 14.9)	121-127	16.7 (12.6, 21.6)	127	0.7 (0.3, 1.3)	126	--	--	89.4 (87.7, 91.2)	125,127
Thailand	15.2 (10.3, 20.1)	128-136	10.9 (5.9, 16.0)	133-136	--	--	--	--	75.7 (72.5, 78.9)	128,131
Timor Leste	--	--	--	--	--	--	--	--	--	--
Viet Nam	9.1 (5.1, 13.1)	48,137-140	27.7 (20.8, 34.5)	139,141-144	8.6 (0.3, 26.1)	138,139,145	--	--	--	--
South Asia										
Afghanistan	--	--	48.4 (37.4, 59.5)	343-348	--	--	--	--	51.8 (39.9, 63.7)	344-347,349
Bangladesh	3.2 (2.8, 3.7)	350,351	28.7 (26.3, 31.1)	351	14.0 (4.6, 23.3)	352,353	--	--	--	--
Bhutan	--	--	--	--	--	--	--	--	--	--
India	6.4 (5.2, 7.5)	354-366	42.2 (37.3, 47.0)	360,363,366-383	43.6 (25.4, 61.9)	355,365-367,370,380,381,384-386	--	--	50.8 (38.9, 62.7)	359,370
Iran	3.8 (2.9, 4.6)	242,392-414	18.7 (14.3, 23.0)	392,393,401,403-405,409,415-418	32.8 (23.5, 42.1)	393,405,407,412,417,419	--	--	69.0 (63.1, 74.8)	393,398,400,401,404-406,411,414,415,418,420
Maldives	3.2 (1.1, 5.2)	422	39.1 (33.4, 44.9)	422	--	--	--	--	76.6 (71.9, 81.4)	422
Nepal	8.9 (4.7, 13.1)	423-428	37.8 (22.1, 53.5)	425,427-439	1.2 (0.4, 2.0)	429,436	80.6 (76.0, 84.7)	431	68.4 (56.7, 80.1)	424,426,430,435,436
Pakistan	0.9 (0.1, 1.7)	440-443	23.1 (19.6, 26.7)	441-446	23.1 (18.3, 28.0)	441-447	--	--	52.1 (18.4, 85.7)	440,447,448
Sri Lanka	2.1 (0.9, 4.4)	451	8.6 (5.8, 12.2)	451	2.1 (0.9, 4.4)	451	--	--	--	--
Central Asia										
Kazakhstan	11.3 (9.5, 13.1)	41,42	--	--	13.5 (10.9, 16.5)	42	--	--	--	--
Kyrgyzstan	14.6 (8.3, 20.9)	41-43	6.7 (5.2, 8.6)	43	17.6 (15.1, 20.2)	42	--	--	--	--
Tajikistan	16.6 (12.4, 20.9)	41,44,45	--	--	--	--	--	--	--	--
Turkmenistan	--	--	--	--	--	--	--	--	--	--
Uzbekistan	--	--	--	--	--	--	--	--	--	--
Caribbean										
Bahamas	--	--	--	--	--	--	--	--	--	--
Bermuda	--	--	--	--	--	--	--	--	--	--
Comm. of Puerto Rico	11.1 (8.2, 14.0)	36,37	12.2 (6.3, 20.8)	38	21.5 (17.5, 25.5)	36,38	--	--	82.4 (79.0, 85.7)	39,40

	% women		% young injectors ¹		% homeless or unstable housing		% history of arrest		% history of incarceration	
	% (range)	References	% (range)	References	% (range)	References	% (range)	References	% (range)	References
Dominican Republic	--	--	--	--	--	--	--	--	--	--
Haiti	--	--	--	--	--	--	--	--	--	--
Jamaica	--	--	--	--	--	--	--	--	--	--
Latin America										
Argentina	--	--	--	--	--	--	--	--	--	--
Bolivia	--	--	--	--	--	--	--	--	--	--
Brazil	--	--	--	--	--	--	--	--	--	--
Chile	--	--	--	--	--	--	--	--	--	--
Colombia	8.9 (5.3, 12.5)	230-232	53.8 (46.3, 61.3)	230-232	--	--	--	--	--	--
Costa Rica	--	--	--	--	--	--	--	--	--	--
Ecuador	--	--	--	--	--	--	--	--	--	--
El Salvador	--	--	--	--	--	--	--	--	--	--
Guatemala	--	--	--	--	--	--	--	--	--	--
Guyana	--	--	--	--	--	--	--	--	--	--
Honduras	--	--	--	--	--	--	--	--	--	--
Mexico	17.2 (4.8, 29.7)	233-236	--	--	19.6 (13.0, 26.3)	233-236	91.0 (85.0, 97.0)	233,234,236	71.0 (68.2, 74.4)	236
Nicaragua	12.2 (4.1, 26.2)	238	29.3 (16.1, 45.4)	238	--	--	--	--	--	--
Panama	--	--	--	--	--	--	--	--	--	--
Paraguay	--	--	--	--	--	--	--	--	--	--
Peru	--	--	--	--	--	--	--	--	--	--
Suriname	--	--	--	--	--	--	--	--	--	--
Uruguay	--	--	--	--	--	--	--	--	--	--
Venezuela	--	--	--	--	--	--	--	--	--	--
North America										
Canada	32.6 (29.4, 35.8)	260-285	28.4 (20.9, 35.9)	261,263,266,273-275,279,282,286	41.9 (30.6, 53.1)	263-266,269,271,274,280,282	--	--	82.8 (80.6, 84.8)	274
United States	29.6 (28.4, 30.9)	37,39,233,287-331	13.5 (9.8, 26.4)	291,292,294,296,299,300,306,309,312,316,322,327,332-340	51.5 (40.9, 62.1)	37,287,288,290,291,294,298,300,301,303,306-309,312,314,317,318,322,325-327,330,331,341,342	90.3 (88.4, 92.3)	304,328	70.7 (59.2, 82.3)	37,288,290,301,304,300
Pacific Island States & Territories										
American Samoa	--	--	--	--	--	--	--	--	--	--
Fed. States of Micronesia	--	--	--	--	--	--	--	--	--	--
Fiji	--	--	--	--	--	--	--	--	--	--
French Polynesia	--	--	--	--	--	--	--	--	--	--
Guam	--	--	--	--	--	--	--	--	--	--
Kiribati	--	--	--	--	--	--	--	--	--	--
Marshall Islands	--	--	--	--	--	--	--	--	--	--
New Caledonia	--	--	--	--	--	--	--	--	--	--
Northern Mariana Islands	--	--	--	--	--	--	--	--	--	--
Palau	--	--	--	--	--	--	--	--	--	--
Papua New Guinea	--	--	--	--	--	--	--	--	--	--
Samoa	--	--	--	--	--	--	--	--	--	--
Solomon Islands	--	--	--	--	--	--	--	--	--	--
Tonga	--	--	--	--	--	--	--	--	--	--

	% women		% young injectors ¹		% homeless or unstable housing		% history of arrest		% history of incarceration	
	% (range)	References	% (range)	References	% (range)	References	% (range)	References	% (range)	References
Vanuatu	--	--	--	--	--	--	--	--	--	--
Australasia										
Australia	33.1 (30.7, 35.4)	1-30	14.9 (9.5, 20.3)	5,10,14,15,18,21,23	17.5 (12.5, 22.5)	9,13,15,20,23,28	--	--	52.8 (44.6, 60.9)	5-8,13,20,22,24,28
New Zealand	34.4 (32.2, 36.6)	31-35	--	--	12.6 (6.9, 20.6)	35	81.6 (72.7, 88.5)	35	44.7 (34.9, 54.8)	35
Sub Saharan Africa										
Angola	--	--	--	--	--	--	--	--	--	--
Benin	2.9 (1.5, 4.4)	452,453	17.7 (14.3, 21.0)	452,453	--	--	--	--	--	--
Botswana	--	--	--	--	--	--	--	--	--	--
Burkina Faso	--	--	--	--	--	--	--	--	--	--
Burundi	--	--	--	--	--	--	--	--	--	--
Cameroon	--	--	--	--	--	--	--	--	--	--
Cape Verde	--	--	--	--	--	--	--	--	--	--
Central African Rep.	--	--	--	--	--	--	--	--	--	--
Chad	--	--	--	--	--	--	--	--	--	--
Comoros	--	--	--	--	--	--	--	--	--	--
Dem. Republic of Congo	--	--	5.1 (1.7, 11.5)	--	--	--	--	--	--	--
Cote d'Ivoire	7.0 (1.9, 17.0)	455	--	--	10.5 (4.0, 21.5)	455	--	--	56.1 (42.4, 69.3)	455
Djibouti	--	--	--	--	--	--	--	--	--	--
Equatorial Guinea	--	--	--	--	--	--	--	--	--	--
Eritrea	--	--	--	--	--	--	--	--	--	--
Ethiopia	--	--	--	--	--	--	--	--	--	--
Gabon	--	--	--	--	--	--	--	--	--	--
Gambia	--	--	--	--	--	--	--	--	--	--
Ghana	20.0 (12.3, 29.8)	456	6.7 (2.5, 14.1)	456	--	--	--	--	--	--
Guinea	--	--	--	--	--	--	--	--	--	--
Guinea-Bissau	--	--	--	--	--	--	--	--	--	--
Kenya	17.8 (13.3, 22.4)	48,457-465	23.5 (14.6, 32.5)	457,458,460,461,464,466	--	--	88.7 (82.5, 93.3)	463	--	--
Lesotho	--	--	--	--	--	--	--	--	--	--
Liberia	--	--	26.7 (21.7, 32.1)	--	--	--	--	--	--	--
Madagascar	19.2 (1.9, 36.5)	468	43.6 (11.0, 76.2)	468,469	--	--	--	--	--	--
Malawi	--	--	--	--	--	--	--	--	--	--
Mali	--	--	--	--	--	--	--	--	--	--
Mauritania	--	--	--	--	--	--	--	--	--	--
Mauritius	7.2 (5.7, 8.8)	470,471	12.8 (10.8, 14.8)	470,471	--	--	--	--	79.6 (75.8, 83.0)	471
Mozambique	5.1 (3.1, 7.0)	473	--	--	--	--	--	--	--	--
Namibia	--	--	--	--	--	--	--	--	--	--
Niger	--	--	--	--	--	--	--	--	--	--
Nigeria	6.2 (4.9, 7.6)	48#1870,474	19.6 (8.0, 31.1)	474-476	--	--	--	--	--	--
Rwanda	--	--	--	--	--	--	--	--	--	--
Sao Tome & Principe	--	--	--	--	--	--	--	--	--	--
Senegal	--	--	--	--	--	--	--	--	--	--
Seychelles	3.8 (2.0, 6.4)	480	28.0 (23.4, 33.1)	480	--	--	--	--	--	--
Sierra Leone	7.4 (4.5, 11.3)	481	10.4 (6.6, 15.5)	481	--	--	--	--	--	--
Somalia	--	--	--	--	--	--	--	--	--	--
South Africa	19.1 (15.5, 22.8)	483	--	--	39.9 (21.1, 58.7)	483	--	--	41.5 (32.5, 51.0)	484

	% women		% young injectors ¹		% homeless or unstable housing		% history of arrest		% history of incarceration	
	% (range)	References	% (range)	References	% (range)	References	% (range)	References	% (range)	References
Swaziland	--	--	--	--	--	--	--	--	--	--
Togo	9.7 (6.4, 13.8)	485	9.7 (6.4, 13.8)	485	13.0 (9.2, 17.6)	485	--	--	--	--
Uganda	--	--	--	--	--	--	--	--	--	--
United Rep. of Tanzania	13.4 (8.3, 18.4)	486-494	19.4 (11.5, 27.4)	489-491,493,494	23.7 (10.0, 37.3)	486,493,494	73.8 (46.7, 93.7)	488,490,494	35.2 (32.0, 38.4)	488,492
Zambia	--	--	--	--	--	--	--	--	--	--
Zimbabwe	--	--	--	--	--	--	--	--	--	--
Middle East and North Africa										
Algeria	--	--	36.8 (27.2, 47.4)	239	--	--	--	--	--	--
Bahrain	--	--	--	--	--	--	--	--	--	--
Cyprus	13.1 (9.8, 16.5)	240,241	--	--	--	--	--	--	27.5 (14.6, 43.9)	240
Egypt	--	--	--	--	--	--	--	--	--	--
Iraq	1.7 (0.2, 5.9)	242	--	--	--	--	--	--	--	--
Israel	1.5 (0.3, 4.3)	243	--	--	8.0 (4.7, 12.7)	243	--	--	95.5 (91.6, 97.9)	243
Jordan	--	--	--	--	--	--	--	--	--	--
Kuwait	--	--	--	--	--	--	--	--	--	--
Lebanon	1.1 (0.0, 5.8)	244	39.3 (33.0, 45.6)	244,245	--	--	--	--	85.2 (75.6, 92.1)	245
Libyan Arab Jamahiriya	1.5 (0.5, 3.5)	246	19.5 (15.4, 24.2)	246	--	--	--	--	--	--
Morocco	2.3 (1.1, 3.5)	247-249	9.1 (4.0, 14.3)	248-250	11.1 (4.6, 17.7)	248,249	--	--	77.0 (70.2, 83.9)	248,249
Occ. Palestinian Terr.	0.7 (0.1, 1.8)	251,252	--	--	--	--	--	--	93.5 (89.1, 96.5)	251
Oman	--	--	--	--	--	--	--	--	--	--
Qatar	--	--	--	--	--	--	--	--	--	--
Saudi Arabia	--	--	13.0 (9.7, 16.8)	253	--	--	--	--	--	--
South Sudan	--	--	--	--	--	--	--	--	--	--
Sudan	--	--	--	--	--	--	--	--	--	--
Syrian Arab Rep.	--	--	24.4 (20.2, 28.9)	254	--	--	--	--	--	--
Tunisia	9.0 (7.0, 11.3)	255	14.6 (12.2, 17.2)	256	4.8 (3.3, 6.6)	255	--	--	--	--
Turkey	4.5 (3.9, 5.1)	257,258	71.8 (70.4, 73.0)	257	--	--	--	--	--	--
United Arab Emirates	--	--	--	--	--	--	--	--	--	--
Yemen	--	--	--	--	--	--	--	--	--	--

Notes:

-- Indicates that although there is evidence that injecting drug use is occurring in this country, no eligible studies involving PWID were located that examined this characteristic.

1. "Young injectors" were defined as younger than 25 years where possible. Some countries had studies that used slightly different age groupings.

The following countries are not listed in this table, as we did not find documented evidence or reports of injecting drug use in these countries: Antigua and Barbuda, Barbados, Belize, Botswana, Central African Republic, Comoros, Cuba, Democratic People's Republic of Korea, Dominica, Equatorial Guinea, Eritrea, Greenland, Grenada, Guinea-Bissau, Lesotho, Liechtenstein, Mauritania, Namibia, Nauru, Republic of Congo, Saint Kitts and Nevis, Saint Lucia, Sao Tome and Principe, Saint Vincent and Grenadines, South Sudan, Trinidad and Tobago, and Tuvalu.

Please see Appendix 8 for decision rules and data extraction procedures for these characteristics.

Appendix 14b: Source for country-level estimates of sociodemographic and risk characteristics of people who inject drugs

	% recent sex work		% recent injecting risk ¹		% recent sexual risk ²		% main drug injected opioids ³		% main drug injected stimulants ³	
	% (range)	References	% (range)	References	% (range)	References	% (range)	References	% (range)	References
Eastern Europe										
Armenia	--	--	40.6 (14.7, 66.5) ⁵	148,149	52.8 (34.8, 70.8)	148,149	--	--	--	--
Azerbaijan	49.7 (44.1, 55.2)	150	66.0 (53.6, 78.3)	150,151	65.5 (56.1, 75.0)	150,151	99.6 (99.0, 100.0)	151	0.9 (0.3, 1.6)	151
Belarus	7.4 (3.9, 10.9)	48,152	12.0 (7.0, 17.0)	152	9.5 (6.8, 12.8)	48	83.8 (74.8, 92.9)	48,152	27.0 (13.7, 40.4)	152
Bosnia & Herzegovina	--	--	25.3 (9.3, 41.4)	153	27.2 (18.2, 36.1)	153	98.6 (97.4, 99.7)	153	0.2 (0.0, 0.5)	153
Bulgaria	9.0 (7.2, 11.0)	155	47.0 (44.7, 49.3)	155,156	36.0 (32.7, 39.3)	156	94.3 (92.6, 95.8)	156	16.8 (15.2, 18.5)	156,157
Czech Republic	--	--	--		--		21.6 (17.3, 26.3)	160	80.5 (75.9, 84.5)	160
Estonia	--	--	27.4 (21.7, 33.1)	162,164,169,170	51.9 (48.3, 55.6)	168,170	71.1 (61.5, 80.8)	161-163,168,170	33.6 (15.4, 51.7)	161,163,168,170
Georgia	27.5 (24.9, 30.2)	177	14.8 (11.2, 18.5) ⁵	173,174	9.5 (7.4, 11.6)	173,174	75.3 (67.4, 83.3)	172-174,176,177	24.3 (15.0, 33.6)	173,174,176,177
Hungary	7.7 (5.2, 10.8)	185	29.6 (19.5, 39.7)	181,182,184-186	72.6 (69.4, 75.8)	181,185	39.3 (23.1, 55.4)	178-181,183,185,187	34.0 (25.9, 42.1)	178-181,183,185,187
Latvia	--		29.5 (26.1, 32.9)	188,189	37.9 (35.3, 40.6)	188,189	53.9 (50.1, 57.6)	188,189	42.4 (38.7, 46.1)	188,189
Lithuania	3.0 (1.6, 5.2)	189	6.1 (4.7, 7.4)	189,190	81.6 (79.1, 84.1)	189,190	80.1 (71.6, 88.6)	189-191	5.3 (0.8, 9.7)	189-191
Moldova	--	--	11.5 (4.3, 18.7)	192,193	--	--	76.5 (60.2, 92.9)	193	29.4 (26.2, 32.6)	193
Poland	7.1 (5.0, 9.8)	194	13.7 (1.4, 26.1)	194,197,198	50.3 (43.0, 57.5)	197	76.3 (73.1, 79.3)	198	20.1 (17.3, 23.1)	198
Romania	--	--	30.5 (5.3, 55.7)	192,200,205	36.7 (32.2, 41.3)	205	79.0 (64.2, 93.9)	200-203,205	1.2 (0.7, 1.7)	200,201
Russian Federation	12.1 (4.7, 19.6)	48,206,208,215,217,200	27.6 (18.9, 36.3)	206,210,212,214-216,218	34.2 (31.0, 37.4)	206,218	69.3 (47.6, 90.9)	206,211,212,214,217	47.4 (44.5, 50.4)	206,212
Slovakia	--	--	--		--		--	--	--	--
Ukraine	4.4 (3.2, 5.7)	48,220-222,225	7.8 (6.1, 9.4)	220,225,227,228	53.6 (46.7, 60.5)	221-223,225,227,228	78.6 (75.7, 81.5)	221,222,228	18.9 (16.3, 21.5)	221,222,228
Western Europe										
Albania	--	--	25.6 (21.1, 30.2)	192,495	--	--	86.7 (83.4, 90.0)	192,495	8.5 (5.0, 13.3)	--
Andorra	--	--	--	--	--	--	--	--	--	--
Austria	--	--	29.0 (18.2, 41.9)	496	--	--	82.7 (75.8, 88.3)	498	5.8 (2.7, 10.7)	498
Belgium	--	--	17.9 (14.6, 21.1)	500,503	--	--	57.6 (40.1, 75.1)	157,500,501,503	55.6 (42.6, 68.5)	500,501
Croatia	3.4 (0.2, 6.6)	508	26.6 (17.9, 35.2)	510-512	20.8 (17.4, 24.1)	508,510	100 (99.9, 100)	511,512	0.0 (0.0, 0.1)	512
Denmark	--	--	--	--	--	--	82.9 (67.9, 92.8)	514	70.7 (54.5, 83.9)	--
England	--	--	--	--	--	--	93.0 (92.6, 93.4)	521	3.0 (2.7, 3.3)	521
Finland	--	--	--	--	--	--	--	--	--	--
Former Yugoslav Rep. of Macedonia	--	--	--	--	--	--	--	--	--	--
France	--	--	9.3 (7.6, 11.0)	523-525	--	--	81.0 (79.2, 82.7)	525	8.0 (6.2, 9.3)	525
Germany	3.5 (2.3, 4.7)	531	14.2 (10.9, 17.5)	529,531,532	41.4 (36.6, 46.2)	531	55.2 (51.6, 58.8)	529,530	44.3 (40.9, 47.8)	529
Greece	7.1 (6.3, 8.0)	537	35.3 (26.5, 44.0)	: 533-535,537,539,542	54.0 (50.9, 57.1)	539	86.8 (78.7, 94.9)	533,535,537-539	2.6 (2.2, 3.0)	533,537
Greenland	--	--	--	--	--	--	--	--	--	--
Iceland	2.8 (0.6, 7.9)	543	28.7 (20.4, 38.2)	543	65.7 (56.0, 74.6)	543	--	--	--	--
Ireland	--	--	26.9 (22.3, 32.0)	545	--	--	--	--	--	--
Italy	--	--	--	--	--	--	70.1 (64.8, 75.5)	549,551	15.2 (13.5, 17.0)	549,551
Luxembourg	--	--	--	--	--	--	--	--	--	--
Malta	--	--	--	--	--	--	--	--	--	--
Monaco	--	--	--	--	--	--	--	--	--	--
Montenegro	--	--	21.6 (17.3, 26.5)	553	--	--	87.8 (83.8, 91.1)	553	--	--
Netherlands	--	--	--	--	--	--	--	--	--	--
Northern Ireland	--	--	--	--	--	--	--	--	--	--

	% recent sex work		% recent injecting risk ¹		% recent sexual risk ²		% main drug injected opioids ³		% main drug injected stimulants ³	
	% (range)	References	% (range)	References	% (range)	References	% (range)	References	% (range)	References
Norway	15.4 (10.6, 21.2)	561	15.3 (11.6, 19.7)	556	--	--	86.8 (83.6, 89.5)	556,559	17.4 (13.5, 22.0)	556
Portugal	--	--	--	--	--	--	--	--	--	--
San Marino	--	--	--	--	--	--	--	--	--	--
Scotland	--	--	2.2 (1.1, 3.3)	338	--		76.8 (75.1, 78.5)	332,339	13.7 (10.6, 17.3)	339
Serbia	3.2 (1.6, 4.7)	566	15.3 (7.2, 23.4)	192,553,564-566	33.5 (29.3, 37.6)	566	81.9 (78.9, 84.8)	553,565	59.9 (56.2, 63.7)	566
Slovenia	--	--	--		--	--	60.8 (53.7, 67.5)	568	66.2 (59.2, 72.6)	--
Spain	18.0 (3.9, 32.2)	570,576,584	41.4 (30.1, 52.6)	576,579	8.0 (6.6, 9.6)	576	74.9 (73.7, 76.0)	573,581	12.7 (11.8, 13.5)	573,581
Sweden	10.3 (4.5, 19.2)	588	43.1 (39.4, 46.8)	586	--	--	60.8 (28.1, 93.5)	585,587,589,591	37.2 (4.9, 69.5)	585,587,589
Switzerland	--	--	--	--	--	--	71.5 (69.0, 73.9)	592	--	--
Wales	--	--	--	--	--	--	--	--	--	--
East and South East Asia										
Brunei Darussalam	--	--	--	--	--	--	--	--	--	--
Cambodia	--	--	33.9 (28.4, 39.3)	46,47	--	--	--	--	--	--
China	20.3 (2.5, 38.1)	54,56,74,80	20.9 (10.4, 31.4)	50,54,56-58,60,63,64,67,68,72-74,77,79-90	35.1 (27.1, 43.1)	50,52,54,56-58,60,64,66-68,72-74,77,81	99.9 (99.3, 100.0)	64	--	--
Hong Kong (China)	--	--	--	--	--	--	--	--	--	--
Indonesia	5.7 (5.1, 6.3)	97,101	10.7 (7.8, 13.6)	96-99,101,102	54.0 (38.6, 69.3)	97,99,103	97.0 (96.5, 97.5)	97	1.0 (0.7, 1.3)	97
Japan	--	--	--	--	--	--	--	--	--	--
Lao PDR	--	--	--	--	--	--	--	--	--	--
Malaysia	--	--	47.0 (8.1, 86.0)	104-106	29.5 (25.4, 33.9)	105	68.6 (64.5, 72.6)	107	9.0 (0, 19.7)	48#18,106
Mongolia	--	--	--	--	--	--	--	--	--	--
Myanmar	--	--	18.9 (14.4, 23.3)	108,110	16.0 (10.4, 21.7)	110	95.0 (94.2, 95.8)	110	--	--
Philippines	23.3 (11.8, 34.9)	116,117	65.6 (49.3, 82.0)	116-118	--	--	98.7 (98.0, 99.3)	116,118	0.7 (0.0, 1.4)	116
Republic of Korea	--	--	--	--	--	--	--	--	--	--
Singapore	--	--	--	--	--	--	--	--	--	--
Taiwan	--		6.9 (0.1, 22.6)	123,125,126	38.9 (34.9, 43.0)	123	80.9 (78.9, 82.9)	123,125	--	--
Thailand	6.6 (1.2, 12.0)	130,134	26.1 (9.4, 42.7)	129,130,134,136	20.7 (2.7, 38.8)	134,136	75.8 (60.6, 91.0)	128,130,131,133,134,136	50.8 (37.5, 64.0)	128,130,131,133,134,136
Timor Leste	--	--	--	--	--	--	--	--	--	--
Viet Nam	29.2 (13.1, 45.2)	48,137,145	23.5 (18.0, 29.0)	137,138,141,142,144-147	61.9 (36.8, 86.9)	137,139,144	99.9 (99.7, 100)	48,137	0.1 (0.0, 0.3)	48,137
South Asia										
Afghanistan	--	--	29.4 (19.9, 38.9)	347,349	72.9 (68.1, 77.4)	344	--	--	--	--
Bangladesh	0.5 (0.0, 1.3)	352	62.1 (47.5, 76.8)	352	59.3 (57.1, 61.4)	351,353	93.9 (88.2, 99.6)	352	--	--
Bhutan	--	--	--	--	--	--	--	--	--	--
India	10.8 (2.5, 19.0)	354,381	34.5 (28.9, 40.2)	359,361,362,365-367,369,372,376,377,381,383-390	25.6 (21.2, 30.0)	359,362,370,372,375-377,381,383,384,388,390	90.5 (86.8, 94.1)	369,370,376,377,380	0.9 (0.7, 1.1)	359,375
Iran	30.4 (28.5, 32.3)	416	34.4 (17.5, 51.3)	393,407,409,414,417	34.9 (13.8, 56.0)	404,407,409	86.9 (78.8, 95.1)	393,406,417,419,421	4.9 (3.6, 6.2)	393,418
Maldives	--	--	14.0 (8.5, 21.2)	422	--	--	100 (99.3, 100)	422	--	--
Nepal	--	--	24.9 (11.8, 38.0)	425,426,429,430,439	23.5 (15.9, 31.1)	430-433,435-437	87.3 (81.2, 91.9)	427	6.1 (2.9, 10.9)	427
Pakistan	15.2 (11.7, 18.7)	441-443,445,448	25.5 (20.5, 30.5)	441-444,449	28.1 (24.7, 31.4)	447	92.0 (87.4, 95.4)	450	--	--
Sri Lanka	--	--	--	--	50.3 (44.7, 55.9)	451	99.7 (98.3, 100.0)	451	0.3 (0.0, 1.7)	451
Central Asia										
Kazakhstan	--	--	54.1 (49.6, 58.5) ⁵	41	--	--	--	--	--	--
Kyrgyzstan	--	--	12.1 (10.4, 13.8) ⁵	41,43	13.7 (11.5, 16.1)	43	86.0 (83.5, 88.2)	43	--	--
Tajikistan	--	--	53.6 (48.8, 58.4) ⁵	41	--	--	--	--	--	--

	% recent sex work		% recent injecting risk ¹		% recent sexual risk ²		% main drug injected opioids ³		% main drug injected stimulants ³	
	% (range)	References	% (range)	References	% (range)	References	% (range)	References	% (range)	References
Turkmenistan	--	--	--	--	--	--	--	--	--	--
Uzbekistan	--	--	--	--	--	--	--	--	--	--
Caribbean										
Bahamas	--	--	--	--	--	--	--	--	--	--
Bermuda	--	--	--	--	--	--	--	--	--	--
Comm. of Puerto Rico	3.3 (1.2, 7.1)	40	16.3 (13.1, 19.6)	39,40	24.4 (18.4, 31.4)	40	98.3 (95.2, 99.7)	40	92.8 (88.0, 96.1)	40
Dominican Republic	--	--	--	--	--	--	--	--	--	--
Haiti	--	--	--	--	--	--	--	--	--	--
Jamaica	--	--	--	--	--	--	--	--	--	--
Latin America										
Argentina	--	--	--	--	--	--	--	--	--	--
Bolivia	--	--	--	--	--	--	--	--	--	--
Brazil	--	--	--	--	--	--	--	--	--	--
Chile	--	--	--	--	--	--	--	--	--	--
Colombia	--	--	42.7 (35.2, 50.2)	230,232	11.4 (8.7, 14.0)	230	--	--	--	--
Costa Rica	--	--	--	--	--	--	--	--	--	--
Ecuador	--	--	--	--	--	--	--	--	--	--
El Salvador	--	--	--	--	--	--	--	--	--	--
Guatemala	--	--	--	--	--	--	--	--	--	--
Guyana	--	--	--	--	--	--	--	--	--	--
Honduras	--	--	--	--	--	--	--	--	--	--
Mexico	13.2 (11.2, 15.4)	236	66.5 (55.7, 77.2)	233,234,236	54.3 (35.2, 73.5)	234,236,237	91.3 (84.7, 97.9)	233,234,236	49.4 (39.3, 59.4)	233,234,236
Nicaragua	26.8 (14.2, 42.9)	238	46.3 (30.7, 62.6) ⁵	238	80.5 (65.1, 91.2)	238	--	--	--	--
Panama	--	--	--	--	--	--	--	--	--	--
Paraguay	--	--	--	--	--	--	--	--	--	--
Peru	--	--	--	--	--	--	--	--	--	--
Suriname	--	--	--	--	--	--	--	--	--	--
Uruguay	--	--	--	--	--	--	--	--	--	--
Venezuela	--	--	--	--	--	--	--	--	--	--
North America										
Canada	10.0 (5.5, 14.5)	271,275,280,282,286	17.1 (14.7, 19.4) ⁵	263,266,273-275,282,286	64.6 (60.2, 69.0)	263,274,275	44.8 (39.6, 50.0)	18,263,264,274,275,282,286	46.3 (41.4, 51.2)	18,263,264,273-275,282,286
United States	22.8 (11.8, 33.9)	294,300,322,328,331	29.5 (22.0, 36.9)	290,294,298,300,301,304,305,3 13,314,318,322,325,328,330,33 1	34.2 (18.3, 50.0)	294,298,300,307,331	76.5 (67.9, 85.1)	233,287,296,301,304,320	37.7 (15.2, 60.2)	233,296,301,304
Pacific Island States & Territories										
American Samoa	--	--	--	--	--	--	--	--	--	--
Fed. States of Micronesia	--	--	--	--	--	--	--	--	--	--
Fiji	--	--	--	--	--	--	--	--	--	--
French Polynesia	--	--	--	--	--	--	--	--	--	--
Guam	--	--	--	--	--	--	--	--	--	--
Kiribati	--	--	--	--	--	--	--	--	--	--
Marshall Islands	--	--	--	--	--	--	--	--	--	--
New Caledonia	--	--	--	--	--	--	--	--	--	--
Northern Mariana Islands	--	--	--	--	--	--	--	--	--	--

	% recent sex work		% recent injecting risk ¹		% recent sexual risk ²		% main drug injected opioids ³		% main drug injected stimulants ³	
	% (range)	References	% (range)	References	% (range)	References	% (range)	References	% (range)	References
Palau	--	--	--	--	--	--	--	--	--	--
Papua New Guinea	--	--	--	--	--	--	--	--	--	--
Samoa	--	--	--	--	--	--	--	--	--	--
Solomon Islands	--	--	--	--	--	--	--	--	--	--
Tonga	--	--	--	--	--	--	--	--	--	--
Vanuatu	--	--	--	--	--	--	--	--	--	--
Australasia										
Australia	--	--	11.9 (8.8, 14.9)	3,4,7,10,18,22,25,28,29	7.9 (4.8, 11.1)	14,18,22	64.5 (58.6, 70.4)	7,17,21,26-28	32.9 (24.5, 41.3)	7,21,26-28
New Zealand	19.4 (12.3, 28.4)	35	32.9 (29.4, 36.4)	33	22.3 (14.7, 31.6)	35	61.6 (56.9, 66.3)	31	31.3 (26.9, 35.7)	31
Sub Saharan Africa										
Angola	--	--	--	--	--	--	--	--	--	--
Benin	--	--	25.0 (17.5, 33.7)	452	11.1 (8.2, 14.7)	453	--	--	--	--
Botswana	--	--	--	--	--	--	--	--	--	--
Burkina Faso	--	--	--	--	--	--	--	--	--	--
Burundi	--	--	--	--	--	--	--	--	--	--
Cameroon	--	--	--	--	--	--	--	--	--	--
Cape Verde	--	--	--	--	--	--	--	--	--	--
Central African Rep.	--	--	--	--	--	--	--	--	--	--
Chad	--	--	20.0 (10.0, 33.7)	454	--	--	--	--	--	--
Comoros	--	--	--	--	--	--	--	--	--	--
Dem. Republic of Congo	--	--	--	--	--	--	--	--	--	--
Cote d'Ivoire	22.8 (12.7, 35.8)	455	1.8 (0.0, 9.4)	455	36.8 (24.4, 50.7)	455	--	--	--	--
Djibouti	--	--	--	--	--	--	--	--	--	--
Equatorial Guinea	--	--	--	--	--	--	--	--	--	--
Eritrea	--	--	--	--	--	--	--	--	--	--
Ethiopia	--	--	--	--	--	--	--	--	--	--
Gabon	--	--	--	--	--	--	--	--	--	--
Gambia	--	--	--	--	--	--	--	--	--	--
Ghana	--	--	--	--	--	--	--	--	--	--
Guinea	--	--	--	--	--	--	--	--	--	--
Guinea-Bissau	--	--	--	--	--	--	--	--	--	--
Kenya	36.1 (7.2, 64.9)	48,457,461,466	31.1 (18.5, 43.6)	457,459,462-464,466	46.1 (25.2, 67.0)	48,457,459,462-464,466	94.3 (91.8, 96.8)	459,464	3.7 (1.8, 6.7)	--
Lesotho	--	--	--	--	--	--	--	--	--	--
Liberia	8.7 (5.7, 12.4)	467	--	--	63.0 (57.3, 68.5)	467	--	--	--	--
Madagascar	--	--	19.3 (8.1, 30.4)	468	66.2 (59.4, 73.0)	468	43.4 (6.6, 80.2)	468	28.6 (6.8, 50.4)	468
Malawi	--	--	--	--	--	--	--	--	--	--
Mali	--	--	--	--	--	--	--	--	--	--
Mauritania	--	--	--	--	--	--	--	--	--	--
Mauritius	--	--	30.6 (24.2, 37.1)	470-472	10.1 (8.7, 11.4)	470,471	99.4 (98.9, 99.9)	471	--	--
Mozambique	--	--	--	--	55.3 (51.0, 59.6)	473	--	--	--	--
Namibia	--	--	--	--	--	--	--	--	--	--
Niger	--	--	--	--	--	--	--	--	--	--
Nigeria	2.1 (1.4, 2.8)	48,475	13.8 (6.2, 21.3)	474-476	26.6 (19.0, 34.2)	48,475,477	77.5 (63.8, 91.2)	48,474,476	69.9 (59.3, 80.5)	48
Rwanda	--	--	--	--	--	--	--	--	--	--
Sao Tome & Principe	--	--	--	--	--	--	--	--	--	--
Senegal	--	--	12.9 (7.8, 19.6)	479	--	--	46.4 (38.0, 55.0)	479	--	--

	% recent sex work		% recent injecting risk ¹		% recent sexual risk ²		% main drug injected opioids ³		% main drug injected stimulants ³	
	% (range)	References	% (range)	References	% (range)	References	% (range)	References	% (range)	References
Seychelles	--	--	59.0 (53.6, 64.2)	480	9.0 (6.2, 12.5)	480	97.7 (95.5, 99.0)	480	5.2 (3.1, 8.1)	480
Sierra Leone	91.9 (87.8, 94.9)	482	--	--	--	--	--	--	--	--
Somalia	--	--	--	--	--	--	--	--	--	--
South Africa	31.4 (23.1, 40.5)	484	46.2 (35.9, 56.5)	483	28.0 (20.1, 37.0)	484	89.9 (83.5, 96.2)	483	6.1 (2.1, 10.0)	483
Swaziland	--	--	--	--	--	--	--	--	--	--
Togo	--	--	24.2 (19.2, 29.7)	485	--	--	--	--	--	--
Uganda	--	--	--	--	--	--	--	--	--	--
United Rep. of Tanzania	17.8 (4.7, 30.9)	486,489,491,493	29.4 (21.2, 37.5)	486,489-494	69.3 (55.1, 83.6)	486,489-493	--	--	--	--
Zambia	--	--	--	--	--	--	--	--	--	--
Zimbabwe	--	--	--	--	--	--	--	--	--	--
Middle East and North Africa										
Algeria	--	--	--	--	--	--	--	--	--	--
Bahrain	--	--	--	--	--	--	--	--	--	--
Cyprus	--	--	--	--	--	--	--	--	--	--
Egypt	--	--	--	--	--	--	--	--	--	--
Iraq	--	--	--	--	--	--	--	--	--	--
Israel	13.1 (8.7, 18.6)	243	59.8 (52.6, 66.7)	243	48.7 (41.6, 55.9)	243	--	--	--	--
Jordan	--	--	--	--	--	--	--	--	--	--
Kuwait	--	--	--	--	--	--	--	--	--	--
Lebanon	--	--	--	--	35.8 (25.4, 47.2)	245	--	--	--	--
Libyan Arab Jamahiriya	--	--	18.3 (14.3, 22.9)	246	34.5 (29.3, 39.9)	246	98.5 (96.5, 99.5)	246	--	--
Morocco	--	--	29.1 (18.3, 39.9)	248,249	34.0 (27.4, 40.6)	248,249	90.9 (88.4, 93.3)	248,249	15.6 (2.7, 28.5)	--
Occ. Palestinian Terr.	8.0 (4.7, 12.7)	251	31.7 (25.3, 38.6)	251	76.9 (70.4, 82.6)	251	86.9 (81.4, 91.3)	251	13.1 (8.7, 18.6)	251
Oman	--	--	--	--	--	--	--	--	--	--
Qatar	--	--	--	--	--	--	--	--	--	--
Saudi Arabia	--	--	--	--	--	--	--	--	--	--
South Sudan	--	--	--	--	--	--	--	--	--	--
Sudan	--	--	--	--	--	--	--	--	--	--
Syrian Arab Rep.	--	--	1.0 (0.3, 2.6)	254	33.0 (28.4, 37.9)	254	94.4 (91.7, 96.5)	254	11.4 (8.5, 15.0)	--
Tunisia	--	--	30.5 (28.2, 32.7) ⁵	255,256	55.5 (52.0, 59.0)	256	99.5 (98.7, 99.9)	256	14.3 (12.0, 17.0)	--
Turkey	--	--	--	--	--	--	99.9 (99.8, 99.9)	257,259	--	--
United Arab Emirates	--	--	--	--	--	--	--	--	--	--
Yemen	--	--	--	--	--	--	--	--	--	--

Notes:

- Indicates that although there is evidence that injecting drug use is occurring in this country, no eligible studies involving PWID were located that examined this characteristic.
- 1. Recent injecting risk defined as receptive needle-syringe sharing (i.e. using a needle-syringe after someone else). Some exceptions to this terminology occurred for some estimates in countries – see **Appendix 14**. All estimates were for behaviours within the past year.
- 2. Recent sexual risk defined as unprotected sex with a non-regular (casual) sexual partner. Some exceptions to this terminology occurred for some estimates in countries – see **Appendix 14**. All estimates were for behaviours within the past year.
- 3. Note that for the “main drug” column estimates are not exactly additive; estimates from different samples of PWID may have been used for each indicator (opioids or stimulants), and additionally, in some countries (e.g. Mexico), there was a large proportion of PWID who reported injecting a combination of opioids and stimulants together as their main drug (“speedballs”), in which case these were counted as BOTH opioids and stimulants being the main drugs injected.

The following countries are not listed in this table, as we did not find documented evidence or reports of injecting drug use in these countries: Antigua and Barbuda, Barbados, Belize, Botswana, Central African Republic, Comoros, Cuba, Democratic People's Republic of Korea, Dominica, Equatorial Guinea, Eritrea, Greenland, Grenada, Guinea-Bissau, Lesotho, Liechtenstein, Mauritania, Namibia, Nauru, Republic of Congo, Saint Kitts and Nevis, Saint Lucia, Sao Tome and Principe, Saint Vincent and Grenadines, South Sudan, Trinidad and Tobago, and Tuvalu.

Please see **Appendix 8** for decision rules and data extraction procedures for these characteristics.

References

1. Aspinall EJ, Weir A, Sacks-Davis R, et al. Does informing people who inject drugs of their hepatitis C status influence their injecting behaviour? Analysis of the Networks II study. *International Journal of Drug Policy* 2014; **25**(1): 179-82.
2. Bryant J. A study of young people who inject drugs: An opportunity to decrease high risk injecting by improving knowledge about hepatitis C prevention. *Vulnerable Children and Youth Studies* 2014; **9**(2): 104-13.
3. Bryant J, Paquette D, Wilson H. Syringe coverage in an Australian setting: does a high level of syringe coverage moderate syringe sharing behaviour? *AIDS & Behavior* 2012; **16**(5): 1156-63.
4. Cama E, Brener L, Wilson H, von Hippel C. Internalized stigma among people who inject drugs. *Substance Use & Misuse* 2016; **51**(12): 1664-8.
5. Conroy E, Kimber J, Dolan K, Day C. An examination of the quality of life among rural and outer metropolitan injecting drug users in NSW, Australia. *Addiction Research & Theory* 2008; **16**(6): 607-17.
6. Darke S, Torok M. The association of childhood physical abuse with the onset and extent of drug use among regular injecting drug users. *Addiction* 2014; **109**(4): 610-6.
7. Day C, White B, Thein H, et al. Experience of hepatitis C testing among injecting drug users in Sydney, Australia. *AIDS Care* 2008; **20**(1): 116-23.
8. Deacon RM, Topp L, Wand H, et al. Correlates of susceptibility to hepatitis B among people who inject drugs in Sydney, Australia. *Journal of Urban Health* 2012; **89**(5): 769-78.
9. Dwyer R, Topp L, Maher L, et al. Prevalences and correlates of non-viral injecting-related injuries and diseases in a convenience sample of Australian injecting drug users. *Drug and Alcohol Dependence* 2009; **100**(1-2): 9-16.
10. Fisher K, Smith T, Nairn K, Anderson D. Rural people who inject drugs: A cross-sectional survey addressing the dimensions of access to secondary needle and syringe program outlets. *the Australian Journal of Rural Health* 2016.
11. Fisher DG, Wilson H, Bryant J. Harm reduction knowledge and information exchange among secondary distributors in Sydney, Australia. *Drugs: Education, Prevention & Policy* 2013; **20**(1): 67-73.
12. Gibbie TM, Hides LM, Cotton SM, Lubman DI, Aitken C, Hellard M. The relationship between personality disorders and mental health, substance use severity and quality of life among injecting drug users. *Medical Journal of Australia* 2011; **195**(3 SUPPL.): S16-S21.
13. Horyniak D, Higgs P, Jenkinson R, et al. Establishing the Melbourne Injecting Drug User Cohort Study (MIX): Rationale, methods, and baseline and twelve-month follow-up results. *Harm Reduction Journal* 2013; **10**: 11.
14. Islam M, Stern T, Conigrave KM, Wodak A. Client satisfaction and risk behaviours of the users of syringe dispensing machines: a pilot study. *Drug & Alcohol Review* 2008; **27**(1): 13-9.
15. KPMG. Further evaluation of the Medically Supervised Injecting Centre during its extended Trial period (2007-2011). 2010.
16. Kerr D, Dietze P, Kelly AM, Jolley D. Attitudes of Australian heroin users to peer distribution of naloxone for heroin overdose: Perspectives on intranasal administration. *Journal of Urban Health* 2008; **85**(3): 352-60.
17. Kimber J, Mattick RP, Kaldor J, van Beek I, Gilmour S, Rance JA. Process and predictors of drug treatment referral and referral uptake at the Sydney Medically Supervised Injecting Centre. *Drug and Alcohol Review* 2008; **27**(6): 602-12.
18. The Kirby Institute. Prevalence of HIV, HCV and injecting and sexual behaviour among Needle and Syringe Program attendees 1995-2014. 2015.

19. Larance B, Degenhardt L, Lintzeris N, et al. Post-marketing surveillance of buprenorphine-naloxone in Australia: Diversion, injection and adherence with supervised dosing. *Drug & Alcohol Dependence* 2011; **118**.
20. Larance B, Lintzeris N, Ali R, et al. The diversion and injection of a buprenorphine-naloxone soluble film formulation. *Drug & Alcohol Dependence* 2014; **136**: 21-7.
21. Laslett AM, Dietze P, Dwyer R. The oral health of street-recruited injecting drug users: Prevalence and correlates of problems. *Addiction* 2008; **103**(11): 1821-5.
22. McKetin R, Ross J, Kelly E, et al. Characteristics and harms associated with injecting versus smoking methamphetamine among methamphetamine treatment entrants. *Drug & Alcohol Review* 2008; **27**(3): 277-85.
23. Miller ER, Hellard ME, Bowden S, Bharadwaj M, Aitken CK. Markers and risk factors for HCV, HBV and HIV in a network of injecting drug users in Melbourne, Australia. *Journal of Infection* 2009; **58**(5): 375-82.
24. O'Brien S, Day C, Black E, Dolan K. Injecting drug users' understanding of hepatitis C. *Addictive Behaviors* 2008; **33**(12): 1602-5.
25. Paquette DM, Bryant J, Crawford S, de Wit JB. Conducting a respondent-driven sampling survey with the use of existing resources in Sydney, Australia. *Drug and Alcohol Dependence* 2011; **116**(1-3): 125-31.
26. Sacks-Davis R, Daraganova G, Aitken C, et al. Hepatitis C virus phylogenetic clustering is associated with the social-injecting network in a cohort of people who inject drugs. *PLoS ONE [Electronic Resource]* 2012; **7**(10): e47335.
27. Salmon AM, Van Beek I, Amin J, Grulich A, Maher L. High HIV testing and low HIV prevalence among injecting drug users attending the Sydney Medically Supervised Injecting Centre. *Australian and New Zealand Journal of Public Health* 2009; **33**(3): 280-3.
28. Stafford J, Breen C. Australian Drug Trends 2015: Findings from the Illicit Drug Reporting System (IDRS). *Australian Drug Trends Series* 2016; **145**.
29. Wilson H, Brener L, Mao L, Treloar C. Perceived discrimination and injecting risk among people who inject drugs attending Needle and Syringe Programmes in Sydney, Australia. *Drug and Alcohol Dependence* 2014; **144**: 274-8.
30. Winstock AR, Lea T, Sheridan J. Prevalence of diversion and injection of methadone and buprenorphine among clients receiving opioid treatment at community pharmacies in New South Wales, Australia. *International Journal of Drug Policy* 2008; **19**(6): 450-8.
31. Hay B, Henderson C, Maltby J, Canales JJ. Influence of peer-based needle exchange programs on mental health status in people who inject drugs: A nationwide New Zealand study. *Frontiers in Psychiatry* 2017; **7** (JAN) (no pagination)(211).
32. Judson G, Bird R, O'Connor P, et al. Drug injecting in patients in New Zealand methadone maintenance treatment programs: An anonymous survey. *Drug and Alcohol Review* 2010; **29**(1): 41-6.
33. Noller G, Leafe K. Brief analysis of the New Zealand population of people who inject drugs (PWID): Estimates of population size, prevalence of BBVs, demographics and risk behaviours, and service provision. 2016.
34. O'Connor P, Judson G, Loan RA, Roberts RH, Robinson G. Prevalence of hepatitis C among injecting drug users attending drug clinics. *New Zealand Medical Journal* 2016; **129**(1434): 44-8.
35. Wilkins C, Prasad J, Wong K, Rychert M. Recent Trends in Illegal Drug Use in New Zealand, 2006-2014. Findings from the 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 and 2014 Illicit Drug Monitoring System (IDMS). Massey University: Social and Health Outcomes Research and Evaluation College of Health, 2015.

36. Abadie R, Welch-Lazoritz M, Gelpi-Acosta C, Reyes JC, Dombrowski K. Understanding differences in HIV/HCV prevalence according to differentiated risk behaviors in a sample of PWID in rural Puerto Rico. *Harm Reduction Journal* 2016; **13** (1) (no pagination)(10).
37. Zerden LDS, Marilis Lopez L, Lundgren LM. Needle sharing among Puerto Rican injection drug users in Puerto Rico and Massachusetts: place of birth and residence matter. *Substance Use & Misuse* 2010; **45**(10): 1605-22.
38. Collazo EM. Healthcare Service Access, Sexual Aggression Experiences, and HIV-Related Risk Behaviors among Puerto Rican Female Intravenous Drug Users. ProQuest LLC: Indiana University; 2015.
39. Mino M, Deren S, Colon HM. HIV and drug use in Puerto Rico: Findings from the ARIBBA study. *Journal of the International Association of Physicians in AIDS Care* 2011; **10**(4): 248-59.
40. Reyes-Ortiz VE. Social network correlates of HCV and HIV transmission risk behaviors among injecting drug users. *Dissertation Abstracts International: Section B: The Sciences and Engineering* 2016; **77**(5-B(E)): No Pagination Specified.
41. Population Services International. HIV and TB TRaC study evaluating risk behaviors associated with HIV transmission and utilization of HIV prevention and HIV/TB co-infection prevention among IDUs. Round one. 2010.
42. Rosenkranz M, Kerimi N, Takenova M, et al. Assessment of health services for people who use drugs in Central Asia: findings of a quantitative survey in Kazakhstan and Kyrgyzstan. *Harm Reduction Journal* 2016; **13**: 3.
43. Chokmorova U, Ismailova A, Bubusara S, et al. IBBS 2013 Report. 2013.
44. Bangel SA, Zule W, Otiashvili D, Latypov A, Wechsberg M. Gender disparities in HIV prevalence and risk behaviors among people who inject drugs in Tajikistan. 2016.
45. Beyer C, Patel Z, Stachowiak JA, et al. Characterization of the emerging HIV type 1 and HCV epidemics among injecting drug users in Dushanbe, Tajikistan. *AIDS Research & Human Retroviruses* 2009; **25**(9): 853-60.
46. Chhea C, Seguy N. HIV prevalence among drug users in Cambodia 2007. *NCHADS & NACD* 2010.
47. Chhorvann C, Sopheab H, Sovannary T. National Population Size Estimation, HIV Related Risk Behaviors and HIV Prevalence among People Who Use Drugs in Cambodia. 2012.
48. Arasteh K, Des Jarlais DC. Hazardous drinking and HIV sexual risk behaviors among injection drug users in developing and transitional countries. *AIDS and Behavior* 2010; **14**(4): 862-9.
49. Chen F, Zhang J, Guo F, et al. Hepatitis B, C, and D virus infection showing distinct patterns between injection drug users and the general population. *Journal of Gastroenterology and Hepatology (Australia)* 2017; **32**(2): 515-20.
50. Chen HT, Tuner N, Chen CJ, Lin HY, Liang S, Wang S. Correlations between compulsory drug abstinence treatments and HIV risk behaviors among injection drug users in a border city of South China. *AIDS Education and Prevention* 2013; **25**(4): 336-48.
51. Du W, Xiang Y, Wang Z, et al. Socio-demographic and clinical characteristics of 3129 heroin users in the first methadone maintenance treatment clinic in China. *Drug and Alcohol Dependence* 2008; **94**: 158-64.
52. Du J, Lombardi C, Evans E, Jiang H, Zhao M, Meng YY. A mixed methods approach to identifying factors related to voluntary HIV testing among injection drug users in Shanghai, China. *International Journal of Infectious Diseases* 2012; **16**(7): e498-e503.

53. Gong JM, Li L, Wang HP, Tang WM, Yang HT, Zhang Y. Correlated factors of hepatitis C virus infection among injection drug users. *Pharmaceutical Biotechnology* 2011; **18**(1): 61-5.
54. Gu J, Wang R, Chen H, et al. Prevalence of needle sharing, commercial sex behaviors and associated factors in Chinese male and female injecting drug user populations. *AIDS Care* 2009; **21**(1): 31-41.
55. Gupta S, Iudicello JE, Shi C, et al. Absence of neurocognitive impairment in a large Chinese sample of HCV-infected injection drug users receiving methadone treatment. *Drug & Alcohol Dependence* 2014; **137**: 29-35.
56. Jia Y, Lu F, Zeng G, et al. Predictors of HIV infection and prevalence for syphilis infection among injection drug users in China: Community-based surveys along major drug trafficking routes. *Harm Reduction Journal* 2008; **5** (no pagination)(29).
57. Lau JTF, Zhang L, Zhang Y, et al. Changes in the prevalence of HIV-related behaviors and perceptions among 1832 injecting drug users in Sichuan, China. *Sexually Transmitted Diseases* 2008; **35**(4): 325-35.
58. Li J, Liu H, Li J, Luo J, Jarlais DD, Koram N. Role of sexual transmission of HIV among young noninjection and injection opiate users: a respondent-driven sampling study. *Sexually Transmitted Diseases* 2011; **38**(12): 1161-6.
59. Li J, Gu J, Lau JT, Chen H, Mo PK, Tang M. Prevalence of depressive symptoms and associated factors among people who inject drugs in China. *Drug and Alcohol Dependence* 2015; **151**: 228-35.
60. Li L, Assanangkornchai S, Duo L, McNeil E, Li J. Risk behaviors, prevalence of HIV and hepatitis C virus infection and population size of current injection drug users in a China-Myanmar border city: results from a Respondent-Driven Sampling Survey in 2012. *PLoS ONE [Electronic Resource]* 2014; **9**(9): e106899.
61. Luo W, Wu Z, Poundstone K, et al. Needle and syringe exchange programmes and prevalence of HIV infection among intravenous drug users in China. *Addiction* 2015; **110**(Suppl 1): 61-7.
62. Tan, Zhou. 南宁市2007—2008年静脉吸毒人群艾滋病性病血清检测结果分析. 2010.
63. Tao YL, Tang YF, Qiu JP, et al. Prevalence of hepatitis C infection among intravenous drug users in Shanghai. *World Journal of Gastroenterology* 2013; **19**(32): 5320-5.
64. Wang Y, Guan Y. 乌鲁木齐市静脉吸毒人群艾滋病病毒 感染及危险因素研究. 2009.
65. Wang Z, Du J, Sun H, Wu H, Xiao Z, Zhao M. Patterns of childhood trauma and psychological distress among injecting heroin users in China. *PloS one* 2010; **5**(12).
66. Wang K, Fu H, Longfield K, Modi S, Mundy G, Firestone R. Do community-based strategies reduce HIV risk among people who inject drugs in China? A quasi-experimental study in Yunnan and Guangxi provinces. *Harm Reduction Journal* 2014; **11**: 15.
67. Wang M, Mao W, Zhang L, et al. Methadone maintenance therapy and HIV counseling and testing are associated with lower frequency of risky behaviors among injection drug users in China. *Substance Use & Misuse* 2015; **50**(1): 15-23.
68. Wen J. 2009年桂林市静脉注射吸毒人员基线调查报告. 2009.
69. Williams CT, Liu W, Levy JA. Crossing over: drug network characteristics and injection risk along the China-Myanmar border. *AIDS & Behavior* 2011; **15**(5): 1011-6.
70. Wong NS, Chan PC, Lee SS, Lee SL, Lee CK. A multilevel approach for assessing the variability of hepatitis C prevalence in injection drug users by their gathering places. *International Journal of Infectious Diseases* 2013; **17**(3): e193-8.

71. Yang Y, Latkin C, Luan R, Yang C. Reality and feasibility for pharmacy-delivered services for people who inject drugs in Xichang, China: Comparisons between pharmacy staff and people who inject drugs. *International Journal of Drug Policy* 2016; **27**: 113-20.
72. Yin L, Zhang Y, Qian HZ, et al. Willingness of Chinese injection drug users to participate in HIV vaccine trials. *Vaccine* 2008; **26**(6): 762-8.
73. Zhang L, Zhang D, Chen W, Zou X, Ling L. High prevalence of HIV, HCV and tuberculosis and associated risk behaviours among new entrants of methadone maintenance treatment clinics in Guangdong Province, China. *PLoS ONE [Electronic Resource]* 2013; **8**(10): e76931.
74. Zhang L, Li J, Lai W, et al. Prevalence and correlates of needle-sharing among new and long-term injection drug users in southwest China. *Substance Use & Misuse* 2010; **45**(14): 2503-23.
75. Zhao G. 1996-2009年云南省玉溪市艾滋病吸毒哨点监测结果分析, 2010.
76. Zhou YH, Liu FL, Yao ZH, et al. Comparison of HIV-, HBV-, HCV- and Co-infection prevalence between Chinese and Burmese intravenous drug users of the China-Myanmar border region. *PloS one* 2011; **6** (1) (no pagination)(e16349).
77. Zhou JS, Zhang KL, Zhang LL, et al. A quasi-experimental study on a community-based behaviour change programme among injecting drug users in Sichuan, China. *International Journal of STD and AIDS* 2009; **20**(2): 125-9.
78. Zhou YH, Yao ZH, Liu FL, et al. High prevalence of HIV, HCV, HBV and co-infection and associated risk factors among injecting drug users in Yunnan Province, China. *PloS one* 2012; **7** (8) (no pagination)(e42937).
79. Zhou Y, Luo W, Cao XB, Zhang B, Wu ZY. [Overdose of heroin and influencing factors in intravenous drug users in parts of Yunnan]. *Chung-Hua Liu Hsing Ping Hsueh Tsa Chih Chinese Journal of Epidemiology* 2016; **37**(5): 648-52.
80. Lau JT, Tsui HY, Zhang Y, et al. Comparing HIV-related syringe-sharing behaviors among female IDU engaging versus not engaging in commercial sex. *Drug and Alcohol Dependence* 2008; **97**(1-2): 54-63.
81. Yao Y, Wang N, Chu J, et al. Sexual behavior and risks for HIV infection and transmission among male injecting drug users in Yunnan, China. *International Journal of Infectious Diseases* 2009; **13**(2): 154-61.
82. Hser Y, Du J, Li J, et al. Hepatitis C among methadone maintenance treatment patients in Shanghai and Kunming, China. *Journal of Public Health* 2012; **34**(1): 24-31.
83. Wu N, Ge Q, Feng Q, et al. High prevalence of Hepatitis C virus among injection drug users in Zhenjiang, Jiangsu, China. *Indian Journal of Virology* 2011; **22**(2): 77-83.
84. Wei X, Lirong W, Wang X, Li J, Li H, Wei J. Risk factors of hepatitis C virus infection in drug users from eleven methadone maintenance treatment clinics in Xi'an, China. *Hepat Mon* 2014; **14**(11).
85. Zhang, Gong. 第四轮中国全球基金/中英艾滋病项目部分项目县(吸毒人群艾滋病行为学监测结果分析. 2009.
86. Li XL, Ou QY, Tan HZ, Sun ZQ, Zhang H, Chen MS. Investigation on the Drug Abuser in Methadone Maintenance Treatment Clinic in Changsha. 2008.
87. Liao KK, Zhao XH, Su J, et al. AIDS Surveillance Among Drug Users in Mianyang 2009. 2011.
88. Qiu XQ, Zhou B, Xu M, Tao YB, Wen YM, Wen MX. Investigation into the AIDS Knowledge, Behavior and Serological Test Among the Drug Users in Xiangfan. 2009.
89. Zhang Q, Wu T, Huang Y, Tan DY, Xi DR. The Analysis of Sentinel Surveillance among Drug Users from 2006 to 2010 in Shunqing District of Nanchong City. 2011.

90. Zheng WX, Chen G. Baseline Investigation on Methadone Maintenance Treatment of 334 Drug Users. 2009.
91. Lee KCK, Lim WWL, Lee SS. High prevalence of HCV in a cohort of injectors on methadone substitution treatment. *Journal of Clinical Virology* 2008; **41**(4): 297-300.
92. National AIDS Comission Indonesia. Rapid Behavioral Survey among Injecting Drugs Users. 2010.
93. Achmad YM, Istiqomah AN, Iskandar S, Wisaksana R, van Crevel R, Hidayat T. Integration of methadone maintenance treatment and HIV care for injecting drug users: a cohort study in Bandung, Indonesia. *Acta Medica Indonesiana* 2009; **41 Suppl 1**: 23-7.
94. Afriandi I, Siregar AY, Meheus F, et al. Costs of hospital-based methadone maintenance treatment in HIV/AIDS control among injecting drug users in Indonesia. *Health Policy* 2010; **95**(1): 69-73.
95. Davis SL, Triwahyuno A, Alexander R. Survey of abuses against injecting drug users in Indonesia. *Harm Reduction Journal* 2009; **6**: 28.
96. Iskandar S, Basar D, Hidayat T, et al. High risk behavior for HIV transmission among former injecting drug users: a survey from Indonesia. *BMC Public Health* 2010; **10**: 472.
97. National AIDS Comission, HIV Cooperation Program for Indonesia. Injecting Drug User Behaviour and Service Satisfaction Survey. 2013.
98. Morineau G, Bollen LJ, Syafitri RI, Nurjannah N, Mustikawati DE, Magnani R. HIV prevalence and risk behaviours among injecting drug users in six Indonesian cities implications for future HIV prevention programs. *Harm Reduction Journal* 2012; **9**: 37.
99. Persaudaraan Korban Napza Indonesia (PKNI). Peer-Driven Intervention on Hepatitis C Testing and Treatment Literacy among People Who Inject Drugs in Jakarta, Indonesia. 2014.
100. Sawitri AAS, Blogg J, Angela R. Estimating the number of the people who inject drugs in Bali, 2010. *Drug and Alcohol Review* 2012; **31**(6): 813-7.
101. AIDS Data Hub for Asia-Pacific. Integrated Biological and Behavioural Survey Indonesia. 2011.
102. Ministry of Health and the National AIDS Commission Indonesia. 2013 Sero-Surveillance Survey And 2013 Rapid Behavioral Survey. 2013.
103. Global Fund. IDU Harm Reduction. 2009.
104. Malaysian AIDS Council. The Integrated Bio-Behavioural Surveillance (IBBS) Survey 2009 Malaysia: Preliminary Findings. 2009.
105. Bazazi AR, Crawford F, Zelenev A, Heimer R, Kamarulzaman A, Altice FL. HIV prevalence among people who inject drugs in greater Kuala Lumpur recruited using respondent-driven sampling. *AIDS and behavior* 2015; **19**(12): 2347-57.
106. Chawarski MC, Vicknasingam B, Mazlan M, Schottenfeld RS. Lifetime ATS use and increased HIV risk among not-in-treatment opiate injectors in Malaysia. *Drug and Alcohol Dependence* 2012; **124**(1-2): 177-80.
107. Vicknasingam B, Narayanan S, Navaratnam V. The relative risk of HIV among IDUs not in treatment in Malaysia. *AIDS Care* 2009; **21**(8): 984-91.
108. Swe LA, Rashid A. Prevalence of HIV and the risk behaviours among injecting drug users in Myanmar. *International Journal of Collaborative Research on Internal Medicine and Public Health* 2012; **4**(1): 56-70.
109. AIDS Data Hub. HIV Sentinel Sero-Surveillance Survey Report 2012. 2013.
110. Lou V, Johnston L, Soe PM. Myanmar Integrated Biological and Behavioral Surveillance Survey of People Who Inject Drugs, 2014.
111. Saw YM, Yasuoka J, Saw TN, Poudel KC, Tun S, Jimba M. What are the factors associated with HIV testing among male injecting and non-injecting drug users in Lashio, Myanmar: A cross-sectional study. *BMJ Open* 2013; **3** (6) (no pagination)(e002747).
112. National AIDS Program Myanmar. HIV Sentinel Sero-Surveillance Survey Report 2009. 2010.

113. WHO. HIV Sentinel Sero-Surveillance Survey Report 2014. 2015.
114. WHO. HIV Sentinel Sero-Surveillance Survey Report 2011. 2012.
115. WHO. HIV Sentinel Sero-Surveillance Survey Report 2010. 2011.
116. HIV and AIDS Data Hub for Asia-Pacific. IHBSS Philippines. 2011.
117. AIDS Data Hub. IHBSS Philippines. 2009.
118. HIV and AIDS Data Hub for Asia-Pacific. IHBSS Philippines. 2013.
119. Min JA, Yoon Y, Lee HJ, et al. Prevalence and associated clinical characteristics of hepatitis B, C, and HIV infections among injecting drug users in Korea. *Journal of Medical Virology* 2013; **85**(4): 575-82.
120. Yun H, Kim D, Kim S, et al. High prevalence of HBV and HCV infection among intravenous drug users in Korea. *Journal of Medical Virology* 2008; **80**(9): 1570-5.
121. Fu TST, Tuan YC, Yen MY, et al. Psychometric properties of the World Health Organization quality of life assessment-Brief in methadone patients: A validation study in northern Taiwan. *Harm Reduction Journal* 2013; **10**: 37.
122. Ko NY, Wang PW, Wu HC, et al. Self-efficacy and HIV risk behaviors among heroin users in Taiwan. *Journal of Studies on Alcohol & Drugs* 2012; **73**(3): 469-76.
123. Lee TSH, Shen HC, Wu WH, et al. Clinical characteristics and risk behavior as a function of HIV status among heroin users enrolled in methadone treatment in northern Taiwan. *Substance Abuse Treatment, Prevention, & Policy* 2011; **6**: 6.
124. Shi MD, Zhang KX, Tsai LY. Injecting drug users (IDUs) prevalence of hepatitis virus, HIV and syphilis in Southern Taiwan. *Hepatology International* 2013; **7**: S116.
125. Yen YF, Yen MY, Lin T, et al. Prevalence and factors associated with HIV infection among injection drug users at methadone clinics in Taipei, Taiwan. *BMC Public Health* 2014; **14**: 682.
126. Yen YF, Rodwell TC, Yen MY, et al. HIV infection risk among injection drug users in a methadone maintenance treatment program, Taipei, Taiwan 20072010. *American Journal of Drug and Alcohol Abuse* 2012; **38**(6): 544-50.
127. Yen YF, Hu BS, Lin YS, et al. Latent tuberculosis among injection drug users in a methadone maintenance treatment program, Taipei, Taiwan: TSPOT.TB versus tuberculin skin test. *Scandinavian Journal of Infectious Diseases* 2013; **45**(7): 504-11.
128. Fairbairn N, Hayashi K, Ti L, et al. Compulsory drug detention and injection drug use cessation and relapse in Bangkok, Thailand. *Drug and Alcohol Review* 2015; **34**(1): 74-81.
129. Fairbairn N, Hayashi K, Kaplan K, et al. Factors associated with methadone treatment among injection drug users in Bangkok, Thailand. *Journal of Substance Abuse Treatment* 2012; **43**(1): 108-13.
130. Hayashi K, Wood E, Suwannawong P, Kaplan K, Qi J, Kerr T. Methamphetamine injection and syringe sharing among a community-recruited sample of injection drug users in Bangkok, Thailand. *Drug and Alcohol Dependence* 2011; **115**(1-2): 145-9.
131. Kerr T, Kiatying-Angsulee N, Fairbairn N, et al. High rates of midazolam injection among drug users in Bangkok, Thailand. *Harm Reduction Journal* 2010; **7**: 7.

132. Lurcharchaiwong W, Chieochansin T, Payungporn S, Theamboonlers A, Poovorawan Y. Parvovirus 4 (PARV4) in serum of intravenous drug users and blood donors. *Infection* 2008; **36**(5): 488-91.
133. Pansuwan N, Wisawakam P, Saengwanloy O, Jittakot Y, Pawa D. The 2012 Integrated Behavior and Biological Surveillance (IBBS) of HIV, Sexually Transmitted Infections and Associated Risk Behaviors among Injecting Drug Users. 2012.
134. Prybylski D, Manopaiboon C, Visavakum P, et al. Diverse HIV epidemics among people who inject drugs in Thailand: evidence from respondent-driven sampling surveys in Bangkok and Chiang Mai. *Drug & Alcohol Dependence* 2015; **148**: 126-35.
135. Sunthornchart S, Linkins RW, Natephisarnwanish V, et al. Prevalence of hepatitis B, tetanus, hepatitis A, human immunodeficiency virus and feasibility of vaccine delivery among injecting drug users in Bangkok, Thailand, 2003-2005. *Addiction* 2008; **103**(10): 1687-95.
136. Visavakum P, Punsuwan N, Manopaiboon C, et al. HIV prevalence and risk behaviors among people who inject drugs in Songkhla, Thailand: A respondent-driven sampling survey. *International Journal of Drug Policy* 2016; **31**: 163-7.
137. Des Jarlais D, Huong DT, Oanh KTH, et al. Prospects for ending the HIV epidemic among persons who inject drugs in Haiphong, Vietnam. *International Journal of Drug Policy* 2016; **32**.
138. Goldsamt LA, Clatts MC, Le G, Yu G. Injection and sexual risk practices among young heroin users in Hanoi, Vietnam. *Drugs: Education, Prevention and Policy* 2015; **22**(2): 166-72.
139. Phan HTT. Hepatitis C and human immunodeficiency virus infections in injecting drug users in drug treatment centers in Vietnam. *Dissertation Abstracts International: Section B: The Sciences and Engineering* 2009; **70**(3-B): 1572.
140. Zhang L, Celentano DD, Minh NL, et al. Prevalence and correlates of HCV monoinfection and HIV and HCV coinfection among persons who inject drugs in Vietnam. *European Journal of Gastroenterology and Hepatology* 2015; **27**(5): 550-6.
141. Bergenstrom A, Quan VM, Van Nam L, et al. A cross-sectional study on prevalence of non-fatal drug overdose and associated risk characteristics among out-of-treatment injecting drug users in North Vietnam. *Substance Use & Misuse* 2008; **43**(1): 73-84.
142. Ministry of Health. HIV/STI Integrated Biological and Behavioral Surveillance (IBBS) in Vietnam. Results from Round III 2013 and Trends Across Three Rounds (2005-2009-2013) of Surveys. 2014.
143. Lim TW, Frangakis C, Latkin C, et al. Community-level income inequality and HIV prevalence among persons who inject drugs in Thai Nguyen, Vietnam. *PLoS ONE [Electronic Resource]* 2014; **9**(3): e90723.
144. Nadol P, O'Connor S, Duong H, et al. Findings from integrated behavioral and biologic survey among males who inject drugs (MWID) - Vietnam, 2009-2010: evidence of the need for an integrated response to HIV, hepatitis B virus, and hepatitis C virus. *PLoS ONE [Electronic Resource]* 2015; **10**(2): e0118304.
145. Khuat OT, Morrow M, Nguyen TN, Armstrong G. Social context, diversity and risk among women who inject drugs in Vietnam: Descriptive findings from a cross-sectional survey. *Harm Reduction Journal* 2015; **12**: 35.
146. Hammett TM, Des Jarlais DC, Kling R, et al. Controlling HIV epidemics among injection drug users: eight years of Cross-Border HIV prevention interventions in Vietnam and China. *PloS one* 2012; **7**(8): e43141.
147. Huong NTT, Mundy G, Neukom J, Zule W, Tuan NM, Tam NM. Social marketing of low dead space syringes in Vietnam: Findings from a 1-year pilot program in Hanoi, Thai Nguyen, and Ho Chi Minh City. *Harm Reduction Journal* 2015; **12 (1) (no pagination)**(15).
148. Global Fund. Armenia IBBS. 2012.

149. Grigoryan S, Hakobyan A, Papoyan A, et al. Results from the HIV Biological and Behavioural Surveillance in the Republic of Armenia. 2013.
150. Ministry of Health the Republic of Azerbaijan. Prevalence of HIV, Hepatitis and Syphilis, and Behavioural Risk Factors Among Most-At-Risk Groups in the Republic of Azerbaijan. 2008.
151. WHO. The report on results of a surveillance survey on knowledge, risks and prevalence of HIV and sexually and parenterally transmitted infections in most-at-risk populations in Azerbaijan. 2012.
152. Arkad'evna YK. ПОВЕДЕНЧЕСКИЕ ОСОБЕННОСТИ И УРОВЕНЬ ЗНАНИЙ ПО ПРОБЛЕМЕ ВИЧ/СПИД СРЕДИ ПОТРЕБИТЕЛЕЙ ИНЪЕКЦИОННЫХ НАРКОТИКОВ. 2015.
153. Bacak V, Dominkovic Z. Report on behavioral and biological surveillance among injection drug users in Bosnia and Herzegovina, 2009: a respondent driven sampling survey, 2009. 2012.
154. Skocibusic S, Martinac M, Arapovic J, et al. HBV and HCV serological monitoring among injection drugs users in opiate substitution treatment in Bosnia and Herzegovina. *Journal of Infection in Developing Countries* 2016; **10**(9): 968-72.
155. Reitox National Focal Point. 2013 National Report (2012 data) to the EMCDDA. Bulgaria: New Development, Trends and in-depth information on selected issues, 2014.
156. Reitox National Focal Point. 2011 National Report (2010 data) to the EMCDDA. Bulgaria: New Development, Trends and in-depth information on selected issues, 2012.
157. Reitox National Focal Point. 2014 National Report (2013 data) to the EMCDDA. Bulgaria: New Development, Trends and in-depth information on selected issues, 2015.
158. Reitox National Focal Point. National Report the Czech Republic 2013 Drug Situation, 2015.
159. Chlibek R, Smetana J, Sosovickova R, et al. Prevalence of hepatitis C virus in adult population in the Czech Republic - Time for birth cohort screening. *PloS one* 2017; **12** (4) (no pagination)(e0175525).
160. Reitox National Focal Point, Mravcik V, Pesek R, et al. 2010 National Report (2009 data) to the EMCDDA. The Czech Republic New Development, Trends and in-depth information on selected issues, 2011.
161. Reitox National Focal Point, Talu A, Abel-Oollo K, et al. 2012 National Report (2011 data) to EMCDDA. Estonia: New developments, trends and in-depth information on selected issues: Estonian National Institute for Health Development
Estonian Drug Monitoring Centre/REITOX Estonian Drug Information Centre, 2013.
162. Reitox National Focal Point, Abel-Oollo K, Talu A, et al. 2011 National Report (2010 data) to the EMCDDA. Estonia: New developments, trends and in-depth information on selected issues, 2012.
163. Reitox National Focal Point. 2014 National Report (2013 data) to the EMCDDA by the Reitox National Focal Point: Estonia New Developments, Trends, 2015.
164. Jogeda EL, Avi R, Pauskar M, et al. Human T-lymphotropic virus types 1 and 2 are rare among intravenous drug users in Eastern Europe. *Infection, Genetics and Evolution* 2016; **43**: 83-5.

165. Ruutel K, Karnite A, Talu A, et al. Prevalence of IGRA-positivity and risk factors for tuberculosis among injecting drug users in Estonia and Latvia. *International Journal of Drug Policy* 2014; **25**(1): 175-8.
166. Ruutel K, Parker RD, Sobolev I, Loit HM. Tuberculosis knowledge among injecting drug users visiting syringe exchange programme in Tallinn, Estonia. *Central European Journal of Public Health* 2012; **20**(4): 248-51.
167. Ruutel K, Ustina V, Parker RD. Piloting HIV rapid testing in community-based settings in Estonia. *Scandinavian Journal of Public Health* 2012; **40**(7): 629-33.
168. Talu A, Rajaleid K, Abel-Ollo K, et al. HIV infection and risk behaviour of primary fentanyl and amphetamine injectors in Tallinn, Estonia: implications for intervention. *International Journal of Drug Policy* 2010; **21**(1): 56-63.
169. Uuskula A, Kals M, Rajaleid K, et al. High-prevalence and high-estimated incidence of HIV infection among new injecting drug users in Estonia: need for large scale prevention programs. *Journal of Public Health* 2008; **30**(2): 119-25.
170. Uuskula A, McMahon JM, Raag M, et al. Emergent properties of HIV risk among injection drug users in Tallinn, Estonia: synthesis of individual and neighbourhood-level factors. *Sexually Transmitted Infections* 2010; **86 Suppl 3**: iii79-84.
171. Uuskula A, Raag M, Abel-Ollo K, et al. HSV-2 seroprevalence among current injection drug users in Estonia. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).
172. Bouscaillou J, Champagnat J, Luhmann N, et al. Hepatitis C among people who inject drugs in Tbilisi, Georgia: an urgent need for prevention and treatment. *International Journal of Drug Policy* 2014; **25**(5): 871-8.
173. Curatio International Foundation, Public Union Bemoni. HIV risk and prevention behaviors among People Who Inject Drugs in seven cities of Georgia 2015. 2015.
174. Curatio International Foundation, Public Union Bemoni. HIV risk and prevention behaviours among People Who Inject Drugs in six cities of Georgia Bio-behavioral surveillance survey in Tbilisi, Batumi, Zugdidi, Telavi, Gori, Kutaisi in 2012. 2012.
175. Curatio International Foundation, Public Union Bemoni. Bio-behavioral surveillance surveys among injecting drug users in Georgia (Tbilisi, Batumi, Zugdidi, Telavi, Gori, 2008 - 2009). 2009.
176. Otiashvili D, Zabransky T, Kirtadze I, Piralishvili G, Chavchanidze M, Miovsky M. Why do the clients of Georgian needle exchange programmes inject buprenorphine? *European Addiction Research* 2010; **16**(1): 1-8.
177. Chikovani I, Bozicevic I, Goguadze K, Rukhadze N, Gotsadze G. Unsafe injection and sexual risk behavior among injecting drug users in Georgia. *Journal of Urban Health* 2011; **88**(4): 736-48.
178. Reitox National Focal Point. 2014 National Report (2013 data) to the EMCDDA. Hungary: New Development, Trends, 2015.
179. Reitox National Focal Point, Karoly B, Tamas C, et al. 2010 National Report to the EMCDDA. "Hungary" New developments, trends and in-depth information on selected issues., 2011.
180. Reitox National Focal Point. 2011 National Report (2010 data) to the EMCDDA. Hungary: New developments, trends and in-depth information on selected issues, 2012.
181. Gyarmathy VA, Neagius A, Ujhelyi E. Vulnerability to drug-related infections and co-infections among injecting drug users in Budapest, Hungary. *European Journal of Public Health* 2009; **19**(3): 260-5.

182. Marvanykovi F, Melles K, Racz J. Sex and drugs: The correlations of injecting drug users' risk perception and behavioral patterns. *Substance Use and Misuse* 2009; **44**(4): 569-77.
183. National Centre for Epidemiology Hungary. A 2014 évben regisztrált HIV-fertőzöttek, és az újonnan bejelentett AIDS betegek korcsoportok szerint. 2015.
184. Tamas C, Agnes C, Zsuzsanna E, et al. "Hungary": New developments, trends and in-depth information on selected issues. 2009 National Report to the EMCDDA, 2010.
185. Tarjan A, Dudas M, Gyarmathy V, Rusvai E, Treso B, Csohan A. Emerging risks due to new injecting patterns in Hungary during austerity times. *Substance Use & Misuse* 2015; **50**(7): 848-58.
186. Tarjan A, Dudas M, Wiessing L, et al. HCV prevalence and risk behaviours among injectors of new psychoactive substances in a risk environment in Hungary-An expanding public health burden. *International Journal of Drug Policy* 2017; **41**: 1-7.
187. Csak R, Demetrovics Z, Racz J. Transition to injecting 3,4-methylene-dioxy-pyrovalerone (MDPV) among needle exchange program participants in Hungary. *Journal of Psychopharmacology* 2013; **27**(6): 559-63.
188. Reitox National Focal Point, Pugule I, Trapencieris M, et al. 2012 National Report (2011 data) to the EMCDDA. Latvia: New developments, trends and in-depth information on selected issues. 2013.
189. Expanding Network for Comprehensive and Coordinated Action on HIV/AIDS prevention among IDUs and Bridging Population (ENCAP). Prevalence of HIV and other infections and risk behaviour among Injecting Drug Users in Latvia, Lithuania and Estonia in 2007, 2009. 2009.
190. Gyarmathy VA, Caplinskiene I, Caplinskas S, Latkin CA. Social network structure and HIV infection among injecting drug users in Lithuania: gatekeepers as bridges of infection. *AIDS & Behavior* 2014; **18**(3): 505-10.
191. Reitox National Focal Point. 2014 National Report (2013 data) to the EMCDDA by the Reitox National Focal Point. Lithuania: New Development, Trends, 2015.
192. Busza J, Douthwaite M, Bani R, Scutelniciuc O, Preda M, Simic D. Injecting behaviour and service use among young injectors in Albania, Moldova, Romania and Serbia. *International Journal of Drug Policy* 2013; **24**(5): 423-31.
193. Global Fund. Integrated Bio-Behavioural Study in key populations at higher risk: key indicators. 2013.
194. Czerwinski M, McNutt LA, DeHovitz JA, Zielinski A, Rosinska M. Refining HIV Risk: The Modifying Effects of Youth, Gender and Education among People Who Inject Drugs in Poland. *PloS one* 2013; **8** (7) (no pagination)(e68018).
195. Reitox National Focal Point. 2014 National Drug Report (2013 data) to the EMCDDA. Poland: New Development, Trends and in-depth information on selected issues, 2015.
196. Reitox National Focal Point, Centrum Informacji o Nakotykach i Narkomanii - Reitox Polish National Focal Point, Malczewski A, et al. 2013 National Report (2012 data) to the EMCDDA. "Poland" New Development, Trends and in-depth information on selected issues, 2014.
197. Reitox National Focal Point, Malczewski A, Kidawa M, Struzik M, Strzelecka A. 2010 National Report (2009 data) to the EMCDDA. "Poland" New Development, Trends and in-depth information on selected issues, 2011.
198. Rosinska M, Sierslawski J, Wiessing L. High regional variability of HIV, HCV and injecting risks among people who inject drugs in Poland: comparing a cross-sectional bio-behavioural study with case-based surveillance. *BMC Infectious Diseases* 2015; **15**: 83.

199. National Anti-Drug Agency, Reitox National Focal Point. 2013 National Report (2012 data) to the EMCDDA by the Reitox National Focal Point. Romania: New Developments, Trends and In-depth Information on Selected Issues, 2014.
200. Reitox National Focal Point, Oprea S, Iliescu R, et al. 2011 National Report (2010 data) to the EMCDDA by the Reitox National Focal Point. Romania: New Developments, Trends and In-depth Information on Selected Issues, 2012.
201. Reitox National Focal Point, Iliescu R, Lefter A, et al. 2012 National Report (2011 data) to the EMCDDA. Romania: New Developments, Trends and In-depth Information on Selected Issues, 2013.
202. Reitox National Focal Point. National Report on Drugs 2014. Romania: New Developments and Trends. 2015.
203. Reitox National Focal Point, Iliescu R, Lefter A, Botescu A, Trifan G, Sava L. National Report on Drugs Situation 2009. Romania: New Developments, Trends and In-depth Information on Selected Issues, 2010.
204. Sultana C, Vagu C, Temereanca A, Grancea C, Slobozeanu J, Ruta S. Hepatitis C virus genotypes in injecting drug users from Romania. *Central European Journal of Medicine* 2011; **6**(5): 672-8.
205. UNODC. HIV, HBV and HCV Behavioral Surveillance Survey among Injecting Drug Users in Bucharest, Romania. 2011.
206. Abdala N, Krasnoselskikh TV, Durante AJ, Timofeeva MY, Verevochkin SV, Kozlov AP. Sexually transmitted infections, sexual risk behaviors and the risk of heterosexual spread of HIV among and beyond IDUs in St. Petersburg, Russia. *European Addiction Research* 2008; **14**(1): 19-25.
207. Cepeda JA, Odinokova VA, Heimer R, et al. Drug network characteristics and HIV risk among injection drug users in Russia: the roles of trust, size, and stability. *AIDS & Behavior* 2011; **15**(5): 1003-10.
208. Cepeda JA, Niccolai LM, Eritsyan K, Heimer R, Levina O. Moderate/heavy alcohol use and HCV infection among injection drug users in two Russian cities. *Drug & Alcohol Dependence* 2013; **132**(3): 571-9.
209. Demianenko E, Zohrabyan L, Sultanov L, Vagaitseva N, Malkin J, Toskin I. The gap between knowledge of hiv prevention and high risk injection practise in people who inject drugs (PWID) in Barnaul, Russia. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).
210. Eritsyan K, Heimer R, Barbour R, et al. Individual-level, network-level and city-level factors associated with HIV prevalence among people who inject drugs in eight Russian cities: A cross-sectional study. *BMJ Open* 2013; **3**(6): 1-11.
211. Gyarmathy V, Li N, Tobin KE, et al. Correlates of unsafe equipment sharing among injecting drug users in St. Petersburg, Russia. *European Addiction Research* 2009; **15**(3): 163-70.
212. Heimer R, Barbour R, Shaboltas AV, Hoffman IF, Kozlov AP. Spatial distribution of HIV prevalence and incidence among injection drugs users in St Petersburg: Implications for HIV transmission. *Aids* 2008; **22**(1): 123-30.
213. Heimer R, Lyubimova A, Barbour R, Levina OS. Emergence of methadone as a street drug in St. Petersburg, Russia. *International Journal of Drug Policy* 2016; **27**: 97-104.
214. Niccolai LM, Verevochkin SV, Toussova OV, et al. Estimates of HIV incidence among drug users in St. Petersburg, Russia: continued growth of a rapidly expanding epidemic. *European Journal of Public Health* 2011; **21**(5): 613-9.
215. Platt L, Sutton A, Vickerman P, et al. Measuring risk of HIV and HCV among injecting drug users in the Russian Federation. *European Journal of Public Health* 2009; **19**(4): 428-33.

216. Vagaitseva N, Demyanenko E. Evaluation of HIV, HBV, HCV, syphilis and related risk behaviour prevalence among the injecting drug users (IDU) in the City of Barnaul, Russia. *Sexually Transmitted Infections Conference: STI and AIDS World Congress 2013*; **89**(no pagination).
217. Wall M, Schmidt E, Sarang A, Atun R, Renton A. Sex, drugs and economic behaviour in Russia: A study of socio-economic characteristics of high risk populations. *International Journal of Drug Policy* 2011; **22**(2): 133-9.
218. Girchenko P, King EJ. Correlates of double risk of HIV acquisition and transmission among women who inject drugs in St. Petersburg, Russia. *AIDS and Behavior* 2017; **21**(4): 1054-8.
219. Gazdikova K, Gazdik F, Kajaba I, Huckova D, Okruhlica L, Farkasova D. The seroprevalence of HCV among injecting drug users in the years 2004-2008 in Slovakia. *Vnitri Lekarstvi* 2012; **58**(3): 179-82.
220. Global Fund. МОНІТОРИНГ ПОВЕДІНКИ ТА ПОШИРЕННЯ ВІЛ-ІНФЕКЦІЇ СЕРЕД СПОЖИВАЧІВ ІН'ЄКЦІЙНИХ НАРКОТИКІВ ЯК КОМПОНЕНТ ЕПІДНАГЛЯДУ ЗА ВІЛ ДРУГО Г О ПОКОЛІННЯ. 2014.
221. Balakiryeva OM, Bondar TV, Sereda YV, Sazonova YO. Behavior Monitoring and HIV Prevalence among Injecting Drug Users as a Component of Second Generation Sentinel Surveillance. 2012.
222. Barska G, Sazonov JO. Survey Results 2015. Monitoring Behaviour and HIV Prevalence among People who use Injectable Drugs and their Sexual Partners, 2016.
223. Booth RE, Lehman WEK, Dvoryak S, Brewster JT, Sinitsyna L. Interventions with injection drug users in Ukraine. *Addiction* 2009; **104**(11): 1864-73.
224. Booth RE, Davis JM, Brewster JT, Lisovska O, Dvoryak S. Krokodile injectors in Ukraine: Fueling the HIV epidemic? *AIDS and Behavior* 2016; **20**(2): 369-76.
225. Dumchev KV, Soldyshev R, Qian HZ, et al. HIV and hepatitis C virus infections among hanka injection drug users in central Ukraine: A cross-sectional survey. *Harm Reduction Journal* 2009; **6**: 23.
226. Kutsa O, Marcus R, Bojko MJ, et al. Factors associated with physical and sexual violence by police among people who inject drugs in Ukraine: Implications for retention on opioid agonist therapy. *Journal of the International AIDS Society* 2016; **19** (no pagination)(20897).
227. International HIV/AIDS Alliance in Ukraine. Monitoring the Behavior of Injecting Drug Users. 2008.
228. Pohorila N, Taran Y, Kolodiy I, Diyeva T. Behavior monitoring and HIV-infection prevalence among injection drug users. 2009.
229. Schaub M, Chtenguelov V, Subata E, Weiler G, Uchtenhagen A. Feasibility of buprenorphine and methadone maintenance programmes among users of home made opioids in Ukraine. *International Journal of Drug Policy* 2010; **21**(3): 229-33.
230. Berbesi Fernández D, Montoya Vélez L, Segura Cardona A, Mateu-Gelabert P. Estudio de Prevalencia de VIH y Comportamientos de Riesgo Asociados, en Usuarios de Drogas por Vía Inyectada (UDI) en Medellín y Pereira, 2011.
231. Berbesi D, Segura A, Cardona D, Agudelo A. Factors associated with syringe exchange among injection drug users in Colombia. *Journal of Substance Use* 2016: 1-7.
232. Mateu-Gelabert P, Harris S, Berbesi D, et al. Heroin use and injection risk behaviors in Colombia: Implications for HIV/AIDS prevention. *Substance Use & Misuse* 2016; **51**(2): 230-40.
233. Baumbach JP, Foster LN, Mueller M, et al. Seroprevalence of select bloodborne pathogens and associated risk behaviors among injection drug users in the Paso del Norte region of the United States-Mexico border. *Harm Reduction Journal* 2008; **5**: 33.

234. Brouwer K, Lozada R, Cornelius W, et al. Deportation along the U.S.-Mexico border: Its relation to drug use patterns and accessing care. *Journal of Immigrant and Minority Health* 2009; **11**(1): 1-6.
235. Harvey-Vera AY, Gonzalez-Zuniga P, Vargas-Ojeda AC, et al. Risk of violence in drug rehabilitation centers: Perceptions of people who inject drugs in Tijuana, Mexico. *Substance Abuse Treatment, Prevention, and Policy* 2016; **11**: 5.
236. Rusch ML, Lozada R, Pollini RA, et al. Polydrug use among IDUs in Tijuana, Mexico: correlates of methamphetamine use and route of administration by gender. *Journal of Urban Health* 2009; **86**(5): 760-75.
237. Centro Nacional para la Prevención e el Control del VIH y el sida (CENSIDA). Informe Nacional de Avances en la Respuesta al VIH y el SIDA. Report to UNAIDS. 2014.
238. Ministerio de Salud Nicaragua. Estudio de Vigilancia de Comportamiento Sexual y prevalencia del VIH y sífilis en poblaciones vulnerables y en mayor riesgo al VIH. 2014.
239. ONUSIDA. Rapport d'Activite sur la Riposte Nationale au VIH/Sida. Report to UNAIDS. 2014.
240. Demetriou VL, van de Vijver DAMC, Hezka J, Kostrikis LG, Cyprus Ivdu Network. Hepatitis C infection among intravenous drug users attending therapy programs in Cyprus. *Journal of Medical Virology* 2010; **82**(2): 263-70.
241. Reitox National Focal Point. 2011 National Report (2010 data) to the EMCDDA. Cyprus: New developments, trends and in-depth information on selected issues, 2012.
242. Sahebi L, Abadi MAJ, Mousavi SH, Khalili M, Seyedi M. Relationship between psychiatric distress and criminal history among intravenous drug abusers in Iran. *Iranian Journal of Psychiatry and Behavioral Sciences* 2015; **9**(2): 37-42.
243. WHO. HIV Bio-Behavioral Survey among Injecting Drug Users in the East Jerusalem Governorate. 2010.
244. Merabi Z, Naja WJ, Soufia M, et al. Intranasal heroin use - an emerging trend in Lebanon: A single institution study presenting sociodemographic profiles of intranasal versus intravenous users. *Journal of Substance Use* 2016: 1-6.
245. Mahfoud Z, Afifi R, Ramia S, et al. HIV/AIDS among female sex workers, injecting drug users and men who have sex with men in Lebanon: Results of the first biobehavioral surveys. *Aids* 2010; **24**(SUPPL. 2): S45-S54.
246. Mirzoyan L, Berendes S, Jeffery C, et al. New evidence on the HIV epidemic in Libya: Why countries must implement prevention programs among people who inject drugs. *JAIDS Journal of Acquired Immune Deficiency Syndromes* 2013; **62**(5): 577-83.
247. Abedi F, Madani H, Asadi A, Nejatizadeh A. Significance of blood-related high-risk behaviors and horizontal transmission of hepatitis B virus in Iran. *Archives of Virology* 2011; **156**(4): 629-35.
248. Ministere de la Sante. Enquete integree de surveillance bio-comportementale aupres des Usagers de Drogues Injectables a Tanger et a Nador: Maroc 2011-2012. 2012.
249. Toufik A. Enquêtes intégrées de surveillance bio-comportementale auprès des Usagers de Drogues Injectables à Tétouan. 2014.
250. Ministere de la Sante. Mise en Oeuvre de la Declaration Politique sur le VIH/Sida. Report to UNAIDS. 2014.
251. Chatty A, AbuRabie R, Dibeh S, et al. HIV Bio-Behavioural Suvery among Injecting Drug Users in the East Jerusalem Governorate, 2010, 2010.
252. Stulhofer A, Jwehan I, AbuRabie R. HIV and HCV prevalence and incarceration-related risks among injecting drug users in three West Bank governorates. *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV* 2016; **28**(9): 1159-65.

253. Alshomrani AT. Prevalence of human immunodeficiency virus, hepatitis C virus, and hepatitis B virus infection among heroin injectors in the central region of Saudi Arabia. *Saudi Medical Journal* 2015; **36**(7): 802-6.
254. UNDP. Syria IBBS. 2014.
255. Benzineb S, Hsairi M. Enquête de séroprévalence du VIH et des Hépatites virales auprès des usagers de drogues injectables en Tunisie. 2009.
256. Tunisia Ministry of Health, Tunisian Association for Information and Orientation on HIV. Enquête sérocomportementale du VIH et des hépatites virales C auprès des usagers de drogues injectables en Tunisie. 2015.
257. Alaei A, Alaei K, Waye K, et al. Hepatitis C infection and other drug-related harms among inpatients who injected drugs in Turkey. *Journal of Viral Hepatitis* 2016.
258. Reitox National Focal Point, Tasdemir A, Kocak N, et al. 2011 National Report (2010 data) to the EMCDDA. "Turkey" New Development, Trends and in-depth information on selected issues, 2012.
259. Reitox National Focal Point. 2014 National Report (2013 data) to the EMCDDA. Turkey: New Development, Trends and in-depth information on selected issues, 2015.
260. Artenie AA, Bruneau J, Zang G, et al. Associations of substance use patterns with attempted suicide among persons who inject drugs: Can distinct use patterns play a role? *Drug and Alcohol Dependence* 2015; **147**: 208-14.
261. Bertard MC, Gagne C, Mercure SA, Gagnon M, Godin G, Cote F. [Psychosocial determinants of drug users to use a new syringe]. *Revue d'Épidémiologie et de Santé Publique* 2010; **58**(3): 197-205.
262. Bruneau J, Daniel M, Kestens Y, Abrahamowicz M, Zang G. Availability of body art facilities and body art piercing do not predict hepatitis C acquisition among injection drug users in Montreal, Canada: Results from a cohort study. *International Journal of Drug Policy* 2010; **21**(6): 477-84.
263. Caldarelli H, Locker A, Warshawsky B. I-Track Survey, Phase 3: A Profile of People Who Inject Drugs in London, Ontario, 2013.
264. Cox J, De P, Morissette C, et al. Low perceived benefits and self-efficacy are associated with hepatitis C virus (HCV) infection-related risk among injection drug users. *Social Science and Medicine* 2008; **66**(2): 211-20.
265. Gibson EK, Exner H, Stone R, Lindquist J, Cowen L, Roth EA. A mixed methods approach to delineating and understanding injection practices among clientele of a Victoria, British Columbia needle exchange program. *Drug and Alcohol Review* 2011; **30**(4): 360-5.
266. Gratrix J, Plitt S, Singh AE, Edmonton Site I-Track Phase 3 Investigators. I-Track Phase 3: Enhanced Surveillance of Risk Behaviours among People who Inject Drugs in Canada (Edmonton Site). 2014.
267. Hennink M, Abbas Z, Lloyd K, Population and Public Health Services. Injecting and Sexual Risk Behaviors Among Persons Who Inject Drugs in the Regina Qu'Appelle Health Region: Results from the I-Track Surveys, 2011.
268. Ivsins A, Chow C, Macdonald S, et al. An examination of injection drug use trends in Victoria and Vancouver, BC after the closure of Victoria's only fixed-site needle and syringe programme. *International Journal of Drug Policy* 2012; **23**(4): 338-40.
269. Leclerc P, Gutierrez N, Morissette C, Larouche A, Gagnon V. Towards a supervised injection service in Montreal: What do people who inject think about the proposed SIS? *Canadian Journal of Infectious Diseases and Medical Microbiology* 2012; **23**: 38A-9A.
270. Leclerc P, Roy E, Morissette C, Vaillancourt E. HIV and HCV prevalence among cocaine users in Montreal. *Canadian Journal of Infectious Diseases and Medical Microbiology* 2012; **23**: 82A.

271. Lemstra M, Rogers M, Thompson A, Moraros J, Buckingham R. Risk indicators of depressive symptomatology among injection drug users and increased HIV risk behaviour. *The Canadian Journal of Psychiatry / La Revue canadienne de psychiatrie* 2011; **56**(6): 358-66.
272. Lloyd-Smith E, Wood E, Zhang R, Tyndall MW, Montaner JS, Kerr T. Determinants of Cutaneous Injection-Related Infection Care at a Supervised Injecting Facility. *Annals of Epidemiology* 2009; **19**(6): 404-9.
273. Machalek K, Hanley BE, Bacon P. Whitehorse I-Track Report: Monitoring Behaviour among People Who Inject or Inhale Drugs in Whitehorse, Yukon. Blood Ties Four Directions Centre, 2014.
274. Millson P, White S, Leonard L, Public Health Agency of Canada. Enhanced Surveillance of Risk Behaviours and Prevalence of HIV and Hepatitis C among People who Inject Drugs, 2016.
275. Public Health Agency of Canada. I-Track: Enhanced Surveillance of HIV, Hepatitis C and associated risk behaviours among people who inject drugs in Canada. Phase 2 Report. 2014.
276. Pant Pai N, Behlim T, Landry G, Savard P, Joseph L, Potter M. Will a quad point-of-care multi plexed assay for HIV, HCV, HBV, syphilis be feasible, accurate and preferred by injection drug users: A pilot study from Montreal, Canada. *Canadian Journal of Infectious Diseases and Medical Microbiology* 2013; **24**: 88A-9A.
277. Pilon R, Leonard L, Kim J, et al. Transmission patterns of HIV and hepatitis C virus among networks of people who inject drugs. *PLoS ONE [Electronic Resource]* 2011; **6**(7): e22245.
278. Rashidi B, Tossonian H, Sharma S, et al. Engaging high risk populations of downtown vancouver through Hepatitis C and HIV portable pop-up clinics. *Canadian Journal of Infectious Diseases and Medical Microbiology* 2014; **25**: 19A.
279. Shaw SY, Jolly AM, Wylie JL. Outlier populations: individual and social network correlates of solvent-using injection drug users. *PLoS ONE [Electronic Resource]* 2014; **9**(2): e88623.
280. Shaw A, Lazarus L, Pantalone T, et al. Risk environments facing potential users of a supervised injection site in Ottawa, Canada. *Harm Reduction Journal* 2015; **12**: 49.
281. Shaw SY, Shah L, Jolly AM, Wylie JL. Identifying heterogeneity among injection drug users: A cluster analysis approach. *American Journal of Public Health* 2008; **98**(8): 1430-7.
282. Shoemaker M, Taylor L, Callaghan R. Prince George 2012 I-Track Survey Results: Findings and Discussion, 2013.
283. Strike C, Rotondi M, Kolla G, et al. Interrupting the social processes linked with initiation of injection drug use: Results from a pilot study. *Drug and Alcohol Dependence* 2014; **137**: 48-54.
284. Strike C, Kolla G, Balian R, et al. HIV prevention intervention targets - Injection Initiation and Modeling Behaviour. *Canadian Journal of Infectious Diseases and Medical Microbiology* 2010; **SB**: 88B.
285. Strike C, Rudzinski K, Patterson J, Millson M. Frequent food insecurity among injection drug users: correlates and concerns. *BMC Public Health* 2012; **12**: 1058.
286. Leclerc P, Roy E, Morissette C, Alary M, Parent R, Blouin K. Surveillance des maladies infectieuses chez les utilisateurs de drogue par injection: Epidemiologie du VIH/VHC de 1995 a 2014. 2016.
287. Amodeo M, Lundgren L, Chassler D, Witas J. High-frequency users of detoxification: who are they? *Substance Use & Misuse* 2008; **43**(7): 839-49.

288. Armenta RF, Collins KM, Strathdee SA, et al. Mycobacterium tuberculosis infection among persons who inject drugs in San Diego, California. *International Journal of Tuberculosis and Lung Disease* 2017; **21**(4): 425-31.
289. Barocas JA, Baker L, Hull SJ, Stokes S, Westergaard RP. High uptake of naloxone-based overdose prevention training among previously incarcerated syringe-exchange program participants. *Drug and Alcohol Dependence* 2015; **154**: 283-6.
290. Bazazi AR, Yokell M, Fu JJ, Rich JD, Zaller ND. Illicit use of buprenorphine/naloxone among injecting and noninjecting opioid users. *Journal of Addiction Medicine* 2011; **5**(3): 175-80.
291. Behrends CN. Evaluating the Impact of Satellite Syringe Exchange on Reducing HIV Risk Behavior and Seroconversion among People who Inject Drugs. ProQuest LLC: University of California Davis; 2014.
292. Beletsky L, Cochrane J, Sawyer AL, et al. Police encounters among needle exchange clients in Baltimore: Drug law enforcement as a structural determinant of health. *American Journal of Public Health* 2015; **105**(9): 1872-9.
293. Bonar EE, Rosenberg H. Using the health belief model to predict injecting drug users' intentions to employ harm reduction strategies. *Addictive Behaviors* 2011; **36**(11): 1038-44.
294. Centers for Disease Control and Prevention. HIV Infection, Risk, Prevention, and Testing Behaviors among Persons Who Inject Drugs: National HIV Behavioral Surveillance Injection Drug Use 20 U.S. Cities, 2012. 2015.
295. Cisneros GO, Douaihy AB, Kirisci L. Access to healthcare among injection drug users at a needle exchange program in Pittsburgh, PA. *Journal of Addiction Medicine* 2009; **3**(2): 89-94.
296. Coffin PO, Coffin LS, Murphy S, Jenkins LM, Golden MR. Prevalence and characteristics of femoral injection among Seattle-area injection drug users. *Journal of Urban Health* 2012; **89**(2): 365-72.
297. Copersino ML, Meade CS, Bigelow GE, Brooner RK. Measurement of self-reported HIV risk behaviors in injection drug users: Comparison of standard versus timeline follow-back administration procedures. *Journal of Substance Abuse Treatment* 2010; **38**(1): 60-5.
298. Corsi KF, Kwiatkowski CF, Booth RE. Predictors of methamphetamine injection in out-of-treatment IDUs. *Substance Use & Misuse* 2009; **44**(3): 332-42.
299. Des Jarlais DC, Arasteh K, McKnight C, et al. Providing ART to HIV seropositive persons who use drugs: Progress in New York City, prospects for "ending the epidemic". *AIDS and Behavior* 2016; **20**(2): 353-62.
300. Friedman SR, Pouget ER, Sandoval M, Jones Y, Mateu-Gelabert P. Formal and informal organizational activities of people who inject drugs in New York City: description and correlates. *Journal of Addictive Diseases* 2015; **34**(1): 55-62.
301. Garfein RS, Rondinelli A, Barnes RFW, et al. HCV infection prevalence lower than expected among 18-40-year-old injection drug users in San Diego, CA. *Journal of Urban Health* 2013; **90**(3): 516-28.
302. Garfein RS, Swartzendruber A, Ouellet LJ, et al. Methods to recruit and retain a cohort of young-adult injection drug users for the Third Collaborative Injection Drug Users Study/Drug Users Intervention Trial (CIDUS III/DUIT). *Drug and Alcohol Dependence* 2007; **91S**: S4-S17.
303. Gindi RM, Rucker MG, Serio-Chapman CE, Sherman SG. Utilization patterns and correlates of retention among clients of the needle exchange program in Baltimore, Maryland. *Drug and Alcohol Dependence* 2009; **103**(3): 93-8.
304. Grau LE, Zhan W, Heimer R. Prevention knowledge, risk behaviours and seroprevalence among nonurban injectors of southwest Connecticut. *Drug and Alcohol Review* 2016; **35**(5): 628-36.

305. Havens JR, Lofwall MR, Frost SDW, Oser CB, Leukefeld CG, Crosby RA. Individual and network factors associated with prevalent hepatitis C infection among rural Appalachian injection drug users. *American Journal of Public Health* 2013; **103**(1): e44-52.
306. Heller DI, Paone D, Siegler A, Karpati A. The syringe gap: An assessment of sterile syringe need and acquisition among syringe exchange program participants in New York City. *Harm Reduction Journal* 2009; **6**: 1.
307. Huo D, Ouellet LJ. Needle exchange and sexual risk behaviors among a cohort of injection drug users in Chicago, Illinois. *Sexually Transmitted Diseases* 2009; **36**(1): 35-40.
308. Inglez-Dias A, Hahn JA, Lum PJ, Evans J, Davidson P, Page-Shafer K. Trends in methamphetamine use in young injection drug users in San Francisco from 1998 to 2004: The UFO Study. *Drug and Alcohol Review* 2008; **27**(3): 286-91.
309. Jenkins LM, Banta-Green CJ, Maynard C, et al. Risk factors for nonfatal overdose at Seattle-area syringe exchanges. *Journal of Urban Health* 2011; **88**(1): 118-28.
310. Jordan AE, Des Jarlais DC, Arasteh K, McKnight C, Nash D, Perlman DC. Incidence and prevalence of hepatitis c virus infection among persons who inject drugs in New York City: 2006-2013. *Drug & Alcohol Dependence* 2015; **152**: 194-200.
311. Mackesy-Amiti ME, Donenberg GR, Ouellet LJ. Prevalence of psychiatric disorders among young injection drug users. *Drug and Alcohol Dependence* 2012; **124**(1-2): 70-8.
312. Martinez AN, Bluthenthal RN, Neilands T, Kral AH. Assessing geographic and individual level factors associated with arrests among injection drug users in California. *Health and Place* 2011; **17**(6): 1258-65.
313. Mehta SH, Astemborski J, Kirk GD, et al. Changes in blood-borne infection risk among injection drug users. *Journal of Infectious Diseases* 2011; **203**(5): 587-94.
314. Neagis A, Zhao M, Gyarmathy VA, Cisek L, Friedman SR, Baxter RC. Greater drug injecting risk for HIV, HBV, and HCV infection in a city where syringe exchange and pharmacy syringe distribution are illegal. *Journal of Urban Health* 2008; **85**(3): 309-22.
315. Novak SP, Wenger L, Lorwick J, Kral A. The misuse, abuse and diversion of opioid replacement therapies among street abusers. *Drug and Alcohol Dependence* 2015; **146**: e54.
316. Oster AM, Sternberg M, Nebenzahl S, et al. Prevalence of HIV, sexually transmitted infections, and viral hepatitis by Urbanicity, among men who have sex with men, injection drug users, and heterosexuals in the United States. *Sexually Transmitted Diseases* 2014; **41**(4): 272-9.
317. Piper TM, Stancliff S, Rudenstine S, et al. Evaluation of a naloxone distribution and administration program in New York City. *Substance Use and Misuse* 2008; **43**(7): 858-70.
318. Quinn B, Chu D, Wenger L, Bluthenthal RN, Kral AH. Syringe disposal among people who inject drugs in Los Angeles: The role of sterile syringe source. *International Journal of Drug Policy* 2014; **25**(5): 905-10.
319. Rein DB, Liffmann D, Brunner J, et al. Factors Associated with Hepatitis C Virus Infection among Persons Ages 18 to 29 who Inject Drugs in Suburban and Rural Wisconsin. *Hepatology* 2015; **62**: 1105A.
320. Ruiz MS, O'Rourke A, Allen ST. Using Capture-Recapture Methods to Estimate the Population of People Who Inject Drugs in Washington, DC. *AIDS and behavior* 2016; **20**(2): 363-8.

321. Scheidell JD, Khan MR, Clifford LM, Dunne EM, Keen LD, 2nd, Latimer WW. Gender differences in planning ability and hepatitis C virus among people who inject drugs. *Addictive Behaviors* 2015; **47**: 33-7.
322. Schmitz J, Kral AH, Chu D, Wenger L, Bluthenthal R. Food insecurity among people who inject drugs in Los Angeles and San Francisco. *Public Health Nutrition* 2016; 1-9.
323. Sirikantraporn S, Mateu-Gelabert P, Friedman SR, Sandoval M, Torruella RA. Resilience among IDUs: Planning strategies to help injection drug users to protect themselves and others from HIV/HCV infections. *Substance Use & Misuse* 2012; **47**(10): 1125-33.
324. Stein M, Thurmond P, Bailey G. Willingness to use HIV pre-exposure prophylaxis among opiate users. *AIDS & Behavior* 2014; **18**(9): 1694-700.
325. Stopka TJ, Lutnick A, Wenger LD, DeRiemer K, Geraghty EM, Kral AH. Demographic, risk, and spatial factors associated with over-the-counter syringe purchase among injection drug users. *American Journal of Epidemiology* 2012; **176**(1): 14-23.
326. Summers PJ, Struve IA, Wilkes MS, Rees VW. Injection-site vein loss and soft tissue abscesses associated with black tar heroin injection: A cross-sectional study of two distinct populations in USA. *International Journal of Drug Policy* 2017; **39**: 21-7.
327. Tookes HE, Kral AH, Wenger LD, et al. A comparison of syringe disposal practices among injection drug users in a city with versus a city without needle and syringe programs. *Drug and Alcohol Dependence* 2012; **123**(1-3): 255-9.
328. Vlahov D, Ompad DC, Fuller CM, Nandi V. Comparison of HIV risk by duration of injection drug use. *Substance Use & Misuse* 2011; **46**(2-3): 181-91.
329. Zaller ND, Yokell MA, Nayak SM, Fu JJ, Bazazi AR, Rich JD. Syringe acquisition experiences and attitudes among injection drug users undergoing short-term opioid detoxification in Massachusetts and Rhode Island. *Journal of Urban Health* 2012; **89**(4): 659-70.
330. Zibbell JE, Hart-Malloy R, Barry J, Fan L, Flanigan C. Risk factors for HCV infection among young adults in rural New York who inject prescription opioid analgesics. *American Journal of Public Health* 2014; **104**(11): 2226-32.
331. Zulea WA, Bobashev G. High dead-space syringes and the risk of HIV and HCV infection among injecting drug users. *Drug and Alcohol Dependence* 2009; **100**(3): 204-13.
332. Aspinall E, Hutchinson S, Taylor A, et al. Uptake of paraphernalia from injecting equipment provision services and its association with sharing of paraphernalia among injecting drug users in Scotland. *Drug and Alcohol Dependence* 2012; **126**(3): 340-6.
333. Coull AF, Atherton I, Taylor A, Watterson AE. Prevalence of skin problems and leg ulceration in a sample of young injecting drug users. *Harm Reduction Journal* 2014; **11**: 22.
334. Craine N, Hickman M, Parry JV, Smith J, McDonald T, Lyons M. Characteristics of injecting drug users accessing different types of needle and syringe programme or using secondary distribution. *Journal of Public Health* 2010; **32**(3): 328-35.
335. Hickman M, Hope V, Coleman B, et al. Assessing IDU prevalence and health consequences (HCV, overdose and drug-related mortality) in a primary care trust: implications for public health action. *Journal of Public Health* 2009; **31**(3): 374-82.
336. Hope VD, Hickman M, Ngu SL, et al. Measuring the incidence, prevalence and genetic relatedness of hepatitis C infections among a community recruited sample of injecting drug users, using dried blood spots. *Journal of Viral Hepatitis* 2011; **18**(4): 262-70.
337. Matheson C, Anthony GB, Bond C, Rossi MK. Assessing and prioritizing the preferences of injecting drug users in needle and syringe exchange service development. *Journal of Public Health* 2008; **30**(2): 133-8.

338. Munro A, Taylor A, Knox T, et al. Needle Exchange Surveillance Initiative (NESI): Prevalence of HCV and injecting risk behaviours among people who inject drugs (PWID) attending injecting equipment provision services (IEPs) in Scotland, 2008/2009-2013/2014. Scotland: University of the West of Scotland, 2015.
339. O'Leary MC, Hutchinson SJ, Allen E, et al. The association between alcohol use and hepatitis C status among injecting drug users in Glasgow. *Drug & Alcohol Dependence* 2012; **123**(1-3): 180-9.
340. Hwang L, Grimes CZ. Human Immunodeficiency Virus, Hepatitis B and Hepatitis C Virus Infections Among Injecting and Non-Injecting Drug Users in Inner City Neighborhoods; 2012.
341. Centers for Disease Control and Prevention. Risk, Prevention, and Testing Behaviors Related to HIV and Hepatitis Infections: National HIV Behavioral Surveillance System Injecting Drug Users May 2005-February 2006. 2011.
342. Centers for Disease Control and Prevention. HIV Infection and Risk, Prevention, and Testing Behaviors Among Injecting Drug Users - National HIV Behavioral Surveillance System, 20 U.S. Cities, 2009. *Morbidity and Mortality Weekly Report* 2014; **63**(6).
343. Bautista CT, Todd CS, Abed AMS, et al. Effects of duration of injection drug use and age at first injection on HCV among IDU in Kabul, Afghanistan. *Journal of Public Health* 2010; **32**(3): 336-41.
344. National AIDS Control Program Afghanistan. Integrated Biological & Behavioral Surveillance (IBBS) in Selected Cities of Afghanistan. 2012.
345. Ruisenor-Escudero H, Vu A, Wirtz AL, et al. Cross-sectional assessments of participants' characteristics and loss to follow-up in the first Opioid Substitution Therapy Pilot Program in Kabul, Afghanistan. *Harm Reduction Journal* 2015; **12** (1) (no pagination)(28).
346. Ruisenor-Escudero H. Injecting drug use in Afghanistan: Risk factors for HIV, HCV, STIS, injecting drug practices, and outcomes of an opiate substitution therapy program. *Dissertation Abstracts International: Section B: The Sciences and Engineering* 2014; **75**(2-B(E)): No Pagination Specified.
347. Todd CS, Nasir A, Raza Stanekzai M, et al. Prevalence and correlates of syphilis and condom use among male injection drug users in four Afghan cities. *Sexually Transmitted Diseases* 2010; **37**(11): 719-25.
348. World Bank. Mapping and Situation Assessment of Key Populations at High Risk of HIV in Three Cities of Afghanistan. 2008.
349. Nasir A, Todd CS, Stanekzai MR, et al. Implications of hepatitis C viremia vs. antibody alone on transmission among male injecting drug users in three Afghan cities. *International Journal of Infectious Diseases* 2011; **15**(3): e201-5.
350. Azim T, Rahman M, Alam MS, et al. Bangladesh moves from being a low-prevalence nation for HIV to one with a concentrated epidemic in injecting drug users. *International Journal of STD & AIDS* 2008; **19**(5): 327-31.
351. National AIDS/STD Programme Bangladesh. Mapping Study and Size Estimation of Key Populations in Bangladesh. 2016.
352. National AIDS/STD Program Bangladesh. Behavioral Surveillance Survey 2006-07: Technical Report. 2008.
353. Azim T, Chowdhury EI, Reza M, et al. Prevalence of infections, HIV risk behaviors and factors associated with HIV infection among male injecting drug users attending a needle/syringe exchange program in Dhaka, Bangladesh. *Substance Use & Misuse* 2008; **43**(14): 2124-44.
354. Armstrong G, Kermode M, Sharma C, Langkham B, Crofts N. Opioid substitution therapy in manipur and nagaland, north-east india: Operational research in action. *Harm Reduction Journal* 2010; **7** (no pagination)(29).
355. Dhawan A, Pattanayak R, Chopra A, Tikoo V, Kumar R. Injection drug use among children and adolescents in India: Ringing the alarm bells. *Indian Journal of Psychiatry* 2016; **58**(4): 387-93.

356. Jhanjee S, Sethi H. Differential characteristics of injectable drug users in community setting. *Indian Journal of Psychiatry* 2016; **1**: S38.
357. Jindal N, Arora U, Singh K. Prevalence of human immunodeficiency virus (HIV), hepatitis B virus, and hepatitis C virus in three groups of populations at high risk of HIV infection in Amritsar (Punjab), Northern India. *Japanese Journal of Infectious Diseases* 2008; **61**(1): 79-81.
358. Kumar S, Garg PD, Ambekar A, Bala N. Opioid substitution therapy under national AIDS control programme at GMC, Amritsar: Profile of patients recruited in first 1 year. *Indian Journal of Psychiatry* 2013; **55**: S127.
359. Lucas GM, Solomon SS, Srikrishnan AK, et al. High HIV burden among people who inject drugs in 15 Indian cities. *AIDS* 2015; **29**(5): 619-28.
360. Mahanta J, Borkakoty B, Das HK, Chelleng PK. The risk of HIV and HCV infections among injection drug users in northeast India. *AIDS Care* 2009; **21**(11): 1420-4.
361. Medhi GK, Mahanta J, Adhikary R, et al. Spatial distribution and characteristics of injecting drug users (IDU) in five Northeastern states of India. *BMC Public Health* 2011; **11**: 64.
362. Sabri B, McFall AM, Solomon SS, et al. Gender Differences in Factors Related to HIV Risk Behaviors among People Who Inject Drugs in North-East India. *PLoS ONE [Electronic Resource]* 2017; **12**(1).
363. Sarkar K, Das SSJ, Pal R, Bal B, Madhusudan P, Chakraborti S. HIV infection and host genetic mutation among injecting drug-users of northeastern states of India. *Journal of Health, Population & Nutrition* 2010; **28**(2): 130-6.
364. Solomon SS, Mehta SH, Srikrishnan AK, et al. Burden of hepatitis C virus disease and access to hepatitis C virus services in people who inject drugs in India: a cross-sectional study. *The Lancet Infectious Diseases* 2015; **15**(1): 36-45.
365. Solomon SS, Desai M, Srikrishnan AK, et al. The profile of injection drug users in Chennai, India: identification of risk behaviours and implications for interventions. *Substance Use & Misuse* 2010; **45**(3): 354-67.
366. Tun W, Sebastian MP, Sharma V, et al. Strategies for recruiting injection drug users for HIV prevention services in Delhi, India. *Harm Reduction Journal* 2013; **10**: 16.
367. Altaf A, Saleem N, Abbas S, Muzaffar R. High prevalence of HIV infection among injection drug users (IDUs) in Hyderabad and Sukkur, Pakistan. *JPMA - Journal of the Pakistan Medical Association* 2009; **59**(3): 136-40.
368. Ambekar A, Tripathi BM. Size Estimation of Injecting Drug Use in Punjab & Haryana, 2008.
369. Armstrong G, Humtsoe C, Kermode M. HIV risk behaviours among injecting drug users in Northeast India following scale-up of a targeted HIV prevention programme. *BMC Public Health* 2011; **11 Suppl 6**: S9.
370. Armstrong G, Nuken A, Samson L, Singh S, Jorm AF, Kermode M. Quality of life, depression, anxiety and suicidal ideation among men who inject drugs in Delhi, India. *BMC Psychiatry* 2013; **13**(151): 11.
371. Chalana H, Singh H, Sachdeva JK, Sharma S. Seroprevalence of human immunodeficiency virus, hepatitis B surface antigen, and hepatitis C in substance dependents admitted in a tertiary hospital at Amritsar, India. *Asian Journal of Psychiatry* 2013; **6**(6): 552-5.
372. FHI360. India: IBBA 2009-2010. 2011.
373. Ghosh I, Ghosh P, Bharti AC, Mandal R, Biswas J, Basu P. Prevalence of human papillomavirus and co-existent sexually transmitted infections among female sex workers, men having sex with men and injectable drug abusers from eastern India. *Asian Pacific Journal of Cancer Prevention: Apjcp* 2012; **13**(3): 799-802.

374. Goswami P, Medhi GK, Armstrong G, et al. An assessment of an HIV prevention intervention among people who inject drugs in the states of Manipur and Nagaland, India. *International Journal of Drug Policy* 2014; **25**(5): 853-64.
375. India: NACO. India: National Integrated Biological and Behavioural Surveillance (IBBS) 2014-15. 2015.
376. Kermode M, Armstrong G, Medhi GK, Humtsoe C, Langkham B, Mahanta J. Sexual behaviours of men who inject drugs in Northeast India. *Harm Reduction Journal* 2015; **12**: 4.
377. Mahanta J, Medhi GK, Paranjape RS, et al. Injecting and sexual risk behaviours, sexually transmitted infections and HIV prevalence in injecting drug users in three states in India. *Aids* 2008; **22**(SUPPL. 5): S59-S68.
378. Medhi GK, Mahanta J, Paranjape RS, et al. Factors associated with ever HIV testing among injecting drug users (IDUs) in two HIV high prevalent States of India. *Indian Journal of Medical Research, Supplement* 2012; **136**(SUPPL): 64-71.
379. Panda S, Roy T, Pahari S, et al. Alarming epidemics of human immunodeficiency virus and hepatitis C virus among injection drug users in the northwestern bordering state of Punjab, India: Prevalence and correlates. *International Journal of STD and AIDS* 2014; **25**(8): 596-606.
380. Sarin E, Kerrigan D. The impact of human rights violations and perceptions of discrimination on health service utilization among injection drug users in Delhi, India. *Substance Use & Misuse* 2012; **47**(3): 230-43.
381. Sarna A, Tun W, Bhattacharya A, Lewis D, Singh YS, Apicella L. Assessment of unsafe injection practices and sexual behaviors among male injecting drug users in two urban cities of India using respondent driven sampling. *Southeast Asian Journal of Tropical Medicine & Public Health* 2012; **43**(3): 652-67.
382. Shukla A, Sharma A. Seroprevalence of hepatitis B, hepatitis C and human immunodeficiency viruses amongst injecting drug users in Mumbai, India. *Journal of Clinical and Diagnostic Research* 2014; **8**(6).
383. Suohu K, Humtsoe C, Saggurti N, Sabarwal S, Mahapatra B, Kermode M. Understanding the association between injecting and sexual risk behaviors of injecting drug users in Manipur and Nagaland, India. *Harm Reduction Journal* 2012; **9**: 40.
384. Saraswati LR, Sarna A, Sebastian MP, et al. HIV, Hepatitis B and C among people who inject drugs: high prevalence of HIV and Hepatitis C RNA positive infections observed in Delhi, India. *BMC Public Health* 2015; **15**: 726.
385. Sarin E, Singh B, Samson L, Sweat M. Suicidal ideation and HIV risk behaviors among a cohort of injecting drug users in New Delhi, India. *Substance Abuse Treatment, Prevention, and Policy* 2013; **8**: 2.
386. Ambekar A, Rao R, Mishra AK, Agrawal A. Type of opioids injected: does it matter? A multicentric cross-sectional study of people who inject drugs. *Drug & Alcohol Review* 2015; **34**(1): 97-104.
387. Solomon SS, Srikrishnan AK, Mehta SH, et al. High prevalence of HIV, HIV/hepatitis C Virus coinfection, and risk behaviors among injection drug users in Chennai, India: A cause for concern. *Journal of Acquired Immune Deficiency Syndromes* 2008; **49**(3): 327-32.
388. Biswas K, Arumugam V, Sharma C, Rakesh S, Robertson J. Getting high, getting laid: Injecting practices and sexual behaviour of people who inject drugs (PWID) in three Indian states (findings from the Hridaya baseline study). *Journal of the International AIDS Society* 2012; **15**: 195-6.
389. Das Mohapatra A, Kaur M, Lakshmi PVM, Kumar R. High risk behaviors of injecting drug users (IDUs) in Chandigarh. *Indian Journal of Public Health Research and Development* 2015; **6**(3): 94-9.
390. Mishra RK. Sexual behaviours among injecting drug users (IDUs) in North-East India. *Sexually Transmitted Infections* 2011; **87**: A248-A9.

391. Basu D, Kumar V, Sharma AK, Barnwal PK, Mattoo SK. Seroprevalence of anti-hepatitis C virus (anti-HCV) antibody and HCV-related risk in injecting drug users in northern India: comparison with non-injecting drug users. *Asian Journal of Psychiatry* 2013; **6**(1): 52-5.
392. Alavian SM, Mirahmadizadeh A, Javanbakht M, et al. Effectiveness of methadone maintenance treatment in prevention of hepatitis C virus transmission among injecting drug users. *Hepatitis Monthly* 2013; **13**(8): 9.
393. Amin-Esmaeili M, Rahimi-Movaghar A, Razaghi EM, Baghestani AR, Jafari S. Factors correlated with hepatitis C and B virus infections among injecting drug users in Tehran, IR Iran. *Hepatitis Monthly* 2012; **12**(1): 23-31.
394. Asli M, Kandelouei T, Rahimyan K, Davoodbeglou F, Vaezjalali M. Characterization of occult hepatitis B infection among injecting drug users in Tehran, Iran. *Hepatitis Monthly* 2016; **16** (3) (no pagination)(e34763).
395. Assari S, Ahmadi K, Rezazade M. Socio-economic status determines risk of receptive syringe sharing behaviors among Iranian drug injectors; a national study. *Frontiers in Psychiatry* 2015; **6** (MAR) (no pagination)(194).
396. Assari S, Yarmohamadivasel M, Lankarani MM, et al. Having multiple sexual partners among Iranian intra-venous drug users. *Frontiers in Psychiatry* 2014; **5**: 125.
397. Hassannejad R, Kassaian N, Ataei B, Adibi P. High risky behaviors among intravenous drug users in Isfahan, Iran: A study for hepatitis c harm reduction programs. *International Journal of Preventive Medicine* 2012; **3**(4).
398. Honarvar B, Odomi N, Moghadami M, et al. Blood-borne hepatitis in opiate users in Iran: A poor outlook and urgent need to change nationwide screening policy. *PloS one* 2013; **8** (12) (no pagination)(e82230).
399. Jafari S, Rahimi-Movaghar A, Craib KJ, Baharlou S, Mathias R. A follow-up study of drug users in Southern Iran. *Addiction Research & Theory* 2010; **18**(1): 59-70.
400. Kakavand-Ghalehnoei R, Shoja Z, Najafi A, et al. Prevalence of human herpesvirus-8 among HIV-infected patients, intravenous drug users and the general population in Iran. *Sexual Health* 2016; **13**(3): 295-8.
401. Kandelouei T, Hosseini SM, Gachkar L, Keyvani H, Davoodbeglou F, Vaezjalali M. Reduction in prevalence of hepatitis B surface antigen among intravenous drug users in Tehran drop-in-centers. *Archives of Clinical Infectious Diseases* 2013; **8** (2) (no pagination)(e15531).
402. Karimi M, Ghaheri H, Assari S, et al. Drug injection to sites other than arm: A study of Iranian heroin injectors. *Frontiers in Psychiatry* 2014; **5** (APR) (no pagination)(Article 23).
403. Keshtkaran A, Mirahmadizadeh A, Heidari A, Javanbakht M. Cost-effectiveness of Methadone Maintenance Treatment in prevention of HIV among drug users in Shiraz, south of Iran. *Iranian Red Crescent Medical Journal* 2014; **16** (1) (no pagination)(e7801).
404. Khajehkazemi R, Haghdoost A, Navadeh S, et al. Risk and vulnerability of key populations to HIV infection in Iran; Knowledge, attitude and practises of female sex workers, prison inmates and people who inject drugs. *Sexual Health* 2014; **11**(6): 568-74.
405. Malekinejad M, Mohraz M, Razani N, et al. High HIV prevalence in a respondent-driven sampling survey of injection drug users in Tehran, Iran. *AIDS & Behavior* 2015; **19**(3): 440-9.
406. Mamani M, Majzoobi MM, Torabian S, Mihan R, Alizadeh K. Latent and active tuberculosis: Evaluation of injecting drug users. *Iranian Red Crescent Medical Journal* 2013; **15**(9): 775-9.

407. Mehrjerdi ZA, Abarashi Z, Noroozi A, Arshad L, Zarghami M. Correlates of shared methamphetamine injection among methamphetamine-injecting treatment seekers: The first report from Iran. *International Journal of STD and AIDS* 2014; **25**(6): 420-7.
408. Mir-Nasseri M, Poustchi H, Nasseri-Moghadam S, Mohammadkhani A, Malekzadeh R. Hepatitis C seroprevalence among intravenous drug users in Tehran. *Journal of gastroenterology and hepatology* 2013; **28**: 412.
409. Mirahmadizadeh AR, Majdzadeh R, Mohammad K, Forouzanfar MH. Prevalence of HIV and hepatitis C virus infections and related behavioral determinants among injecting drug users of drop-in centers in Iran. *Iranian Red Crescent Medical Journal* 2009; **11**(3): 325-9.
410. Momen-Heravi M, Afzali H, Moosavipanah H. Prevalence of anti HIV, antiHCV and, HBSAG positive among injection drug users in Kashan-Iran. *Journal of Clinical Immunology* 2012; **32**: S391.
411. Nokhodian Z, Meshkati M, Adibi P, et al. Hepatitis C screening in isfahan drop in centers: An experience description. *International Journal of Preventive Medicine* 2012; **3**(Suppl1): S131-S8.
412. Rahimi-Movaghar A, Razaghi EM, Sahimi-Izadian E, Amin-Esmaeili M. HIV, hepatitis C virus, and hepatitis B virus co-infections among injecting drug users in Tehran, Iran. *International Journal of Infectious Diseases* 2010; **14**(1): e28-33.
413. Sharif M, Sherif A, Sayyah M. Frequency of HBV, HCV and HIV infections among hospitalized injecting drug users in Kashan. *Indian Journal of Sexually Transmitted Diseases* 2009; **30**(1): 28-30.
414. Zamani S, Radfar R, Nematollahi P, et al. Prevalence of HIV/HCV/HBV infections and drug-related risk behaviours amongst IDUs recruited through peer-driven sampling in Iran. *International Journal of Drug Policy* 2010; **21**(6): 493-500.
415. Hosseini M, SeyedAlinaghi SA, Kheirandish P, et al. Prevalence and correlates of co-infection with human immunodeficiency virus and hepatitis C virus in male injection drug users in Iran. *Archives of Iranian Medicine* 2010; **13**(4): 318-23.
416. Khajehkazemi R, Osooli M, Sajadi L, et al. HIV prevalence and risk behaviours among people who inject drugs in Iran: the 2010 National Surveillance Survey. *Sexually Transmitted Infections* 2013; **89 Suppl 3**: iii29-32.
417. Noroozi A, Mirzazadeh A, Hajebi A, et al. Comparing profile of people who inject drugs (PWID) accessing different types of needle and syringe programs or secondary distribution in Kermanshah, Iran. *Journal of Substance Use* 2016: 1-6.
418. Ramezani A, Amirmoezi R, Volk JE, et al. HCV, HBV, and HIV seroprevalence, coinfections, and related behaviors among male injection drug users in Arak, Iran. *AIDS Care* 2014; **26**(9): 1122-6.
419. Zamani S, Vazirian M, Nassirimanesh B, et al. Needle and syringe sharing practices among injecting drug users in Tehran: a comparison of two neighborhoods, one with and one without a needle and syringe program. *AIDS & Behavior* 2010; **14**(4): 885-90.
420. Azizi A, Amirian F, Amirian M. Prevalence and associated factors of hepatitis C in self-introduced substance abusers. 2011.
421. Shoghli AR, Mosavi Nasab SN, Fallahnezhad M, Momtazi S, Tavasoli SS, Haji KB. Behavioral surveillance survey (BSS) among injection drug users (IDUs) in Zanjan-Iran. [Persian]. *Journal of Zanjan University of Medical Sciences and Health Services* 2011; **19**(74): 11.
422. Republic of Maldives. Biological and Behavioral Survey (BBS) on HIV and AIDS 2008. 2008.
423. Bista B. Injecting drug users (IDUs) are prone to Hepatitis B because of the high risk behaviour. Hepatitis B can be prevented through vaccines but the IDUs and their sexual partners from Kathmandu, Nepal are not getting preventive hepatitis B vaccinations. *Journal of Viral Hepatitis* 2015; **22**: 40-1.

424. Kinkel HT, Karmacharya D, Shakya J, et al. Prevalence of HIV, hepatitis B and C infections and an assessment of HCV-genotypes and two IL28B SNPs among people who inject drugs in three regions of Nepal. *PLoS ONE [Electronic Resource]* 2015; **10** (8) (no pagination)(e0134455).
425. Nepal: National Centre for AIDS and STD Control. Mapping & Size Estimation of Most-At-Risk-Population in Nepal, 2011, Injecting Drug Users. 2011.
426. Ojha SP, Sigdel S, Verthien U, Khadga PK. HIV epidemiology in Nepal—"South Asian cocktail" a drug use pattern in Nepal and its correlation with spread of HIV. *Indian Journal of Psychiatry* 2014; **55**: S46-S7.
427. Sharma V, Chamroonswasdi K, Srisorrrachatr S. Rate of Adherence to and Factors Associated with Methadone Maintenance Treatment Program (Mmtp) Compliance among Injecting Drug Use Patients in Nepal. *The Southeast Asian journal of tropical medicine and public health* 2016; **47**(2): 287-98.
428. Yadav DK. Burden of hepatitis 'C' among high risk people of HIV/IV drug users: A community based study from Eastern Nepal. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).
429. Ministry of Health and Population Nepal. Integrated Biological and Behavioral Surveillance (IBBS) Survey among People who Inject Drugs (PWIDs) in Eastern Terai Highway Districts of Nepal. 2012.
430. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWID) in Kathmandu Valley. 2015.
431. Ministry of Health and Population Nepal. Integrated Biological and Behavioral Surveillance (IBBS) Survey among Injecting Drugs Users in Kathmandu Valley, Nepal. 2011.
432. Ministry of Health and Population Nepal. Integrated Biological and Behavioral Surveillance Survey (IBBS) among Injecting Drug Users in Pokhara Valley. 2009.
433. Ministry of Health and Population Nepal. Integrated Biological and Behavioral Surveillance Survey (IBBS) among Injecting Drug Users in Kathmandu Valley 2009.
434. Ministry of Health and Population Nepal. Integrated Biological and Behavioral Surveillance Survey (IBBS) among Male Injecting Drug Users (IDUs) in the Eastern Terai of Nepal Round IV. 2009.
435. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWIDs) in Pokhara Valley. 2015.
436. National Centre for AIDS and STD Control (NCASC). Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWID- Male) in the Eastern Terai Highway Districts (Jhapa, Morang and Sunsari) of Nepal. 2015.
437. Ministry of Health and Population Nepal. Integrated Biological and Behavioral Surveillance Survey (IBBS) among Male Injecting Drug Users (IDUs) in Western to Far-Western Terai of Nepal. 2009.
438. Loewinger G, Sharma B, Karki DK, Khatiwoda P, Kainee S, Poudel KC. Low knowledge and perceived Hepatitis C risk despite high risk behaviour among injection drug users in Kathmandu, Nepal. *International Journal of Drug Policy* 2016; **33**: 75-82.
439. Poudel KC, Poudel-Tandukar K, Yasuoka J, Joshi AB, Jimba M. Correlates of sharing injection equipment among male injecting drug users in Kathmandu, Nepal. *International Journal of Drug Policy* 2010; **21**(6): 507-10.
440. Akhtar AM, Jamil M, Rehman A, Majeed S. Hepatitis-C virus infection among injecting drug users in Lahore, Pakistan: A cross sectional study. *Pakistan Journal of Medical Sciences* 2016; **32**(2): 373-8.

441. AP Consultancies. Integrated Behavioural and Biological Surveillance, among Most at Risk Population IBBS Study – Punjab 2014 2014.
442. National AIDS Control Program. HIV Second Generation Surveillance in Pakistan - National Report Round III. 2008.
443. Emmanuel F. HIV Second Generation Surveillance in Pakistan - National Report Round IV. 2012.
444. Archibald CP, Shaw SY, Emmanuel F, et al. Geographical and temporal variation of injection drug users in Pakistan. *Sexually Transmitted Infections* 2013; **89 Suppl 2**: ii18-28.
445. Emmanuel F, Archibald C, Razaque A, Sandstrom P. Factors associated with an explosive HIV epidemic among injecting drug users in Sargodha, Pakistan. *Journal of Acquired Immune Deficiency Syndromes: JAIDS* 2009; **51**(1): 85-90.
446. Raza MA, Sherwani RAK, Kamal S, Aftab M, Irfan M. Correlates of injection initiation among drug users in Punjab, Pakistan. *Pakistan Journal of Medical and Health Sciences* 2016; **10**(4): 1135-9.
447. Nai Zindagi Trust Pakistan. Pakistan PWID Survey. 2009.
448. Platt L, Vickerman P, Collumbien M, et al. Prevalence of HIV, HCV and sexually transmitted infections among injecting drug users in Rawalpindi and Abbottabad, Pakistan: evidence for an emerging injection-related HIV epidemic. *Sexually Transmitted Infections* 2009; **85 Suppl 2**: ii17-22.
449. Saleem NH, Adrien A, Razaque A. Risky sexual behavior, knowledge of sexually transmitted infections and treatment utilization among a vulnerable population in Rawalpindi, Pakistan. *Southeast Asian Journal of Tropical Medicine & Public Health* 2008; **39**(4): 642-8.
450. Nai Zindagi Trust Pakistan. Technical Report. 2012.
451. Global Fund. IBBS Survey in Sri Lanka 2015.
452. Plan Bénin. Enquête de surveillance de deuxième génération du VIH et des IST auprès des utilisateurs de drogues injectables au Bénin. 2014.
453. Plan Benin. Benin Consommateurs de Drogues Injectables (CDI). 2015.
454. Conseil National de Lutte contre le Sida: Chad. Rapport de l'Etude Priorities for Local AIDS Control Efforts (PLACE) au Tchad, 2015.
455. Bouscaillou J, Evanno J, Prouté M, et al. Prevalence and factors associated with HIV and tuberculosis in people who use drugs in Abidjan, Ivory Coast. *International Journal of Drug Policy* 2016: 8.
456. University of Ghana School of Public Health, Adanu R, Quaye S, et al. Understanding the Social, Economic and Behavioral Vulnerability to HIV of People Who Inject Drugs (PWID) in Accra/Tema and Takoradi, Ghana: University of Ghana School of Public Health,, 2016.
457. Bhattacharjee P, McClarty LM, Musyoki H, et al. Monitoring HIV prevention programme outcomes among key populations in Kenya: Findings from a national survey. *PLoS one* 2015; **10** (8) (no pagination)(e0137007).
458. International AIDS Society. Hepatitis C virus (HCV) and Human immunodeficiency virus type 1 (HIV-1) co-infection among injecting drug users at the Kenyan coast. 2014.
459. Kurth AE, Cleland CM, Des Jarlais DC, et al. HIV Prevalence, Estimated Incidence, and Risk Behaviors Among People Who Inject Drugs in Kenya. *Journal of Acquired Immune Deficiency Syndromes: JAIDS* 2015; **70**(4): 420-7.
460. Mwatelah RS, Lwembe RM, Osman S, et al. Co-infection burden of hepatitis C virus and human immunodeficiency virus among injecting heroin users at the Kenyan coast. *PLoS ONE [Electronic Resource]* 2015; **10** (7) (no pagination)(e0132287).
461. Singh K, Brodish P, Mbai F, et al. A venue-based approach to reaching MSM, IDUs and the general population with VCT: A three study site in Kenya. *AIDS and Behavior* 2012; **16**(4): 818-28.

462. Syvertsen JL, Agot K, Ohaga S, et al. Evidence of injection drug use in Kisumu, Kenya: Implications for HIV prevention. *Drug and Alcohol Dependence* 2015; **151**: 262-6.
463. Syvertsen J. Social context and high risk injection drug practices in Nyanza, Kenya: Implications for further research & interventions. 2014.
464. Tun W, Sheehy M, Broz D, et al. HIV and STI prevalence and injection behaviors among people who inject drugs in Nairobi: results from a 2011 bio-behavioral study using respondent-driven sampling. *AIDS and Behavior* 2015; **19 Suppl 1**: S24-35.
465. Webale MK, Kilongosi MW, Budambula V, et al. Hepatitis B virus sero-profiles and genotypes in HIV-1 infected and uninfected injection and Non-injection drug users from coastal Kenya. *BMC Infectious Diseases* 2015; **15**: 299.
466. Brodish P, Singh K, Rinyuri A, et al. Evidence of high-risk sexual behaviors among injection drug users in the Kenya PLACE study. *Drug and Alcohol Dependence* 2011; **119**(1-2): 138-41.
467. Government of Liberia. Integrated Bio-Behavioural Surveillance Survey (IBBSS) among MARPs in Liberia. 2013.
468. African Development Bank Group. Etude comportementale et biologique chez les consommateurs de drogues injectables dans les zones urbaines à Madagascar-2012. 2012.
469. Système d'Information Multi-Sectorielle: Madagascar. Cartographie et estimation de la taille des personnes cibles les plus exposées aux risques du VIH/Sida. 2014.
470. Johnston L, Saumtally A, Corceal S, Mahadoo I, Oodally F. High HIV and hepatitis C prevalence amongst injecting drug users in Mauritius: findings from a population size estimation and respondent driven sampling survey. *International Journal of Drug Policy* 2011; **22**(4): 252-8.
471. Mauritius: Ministry of Health and Quality of Life. Integrated Biological Behavioral Survey Among People Who Inject Drugs in Mauritius. 2011.
472. Mauritius National Agency For The Treatment And Rehabilitation of Substance Abusers (NATRESA). Mauritius Patterns in Drug Use. 2008.
473. Teodoro E, Boothe M, Baltazar C, et al. Urgent Need for Harm-Reduction Interventions in Mozambique: Results from the Integrated Bio-Behavioral Survey among People Who Inject Drugs. 2015.
474. Federal Ministry of Health Nigeria. Nigeria IBBSS 2014.
475. Federal Ministry of Health (FMOH). Nigeria: HIV Integrated Biological and Behavioural Surveillance Survey (IBBSS). 2010.
476. Tun W, Vu L, Adebajo SB, et al. Population-based prevalence of hepatitis B and C virus, HIV, syphilis, gonorrhoea and chlamydia in male injection drug users in Lagos, Nigeria. *International Journal of STD & AIDS* 2013; **24**(8): 619-25.
477. Wu J, Huang J, Xu D, Lu C, Deng X, Zhou X. Infection status and risk factors of HIV, HBV, HCV, and syphilis among drug users in Guangdong, China--a cross-sectional study. *BMC Public Health* 2010; **10**: 657.
478. USAID. Rapport Annuel 2014, 2015.
479. Lepretre A, Ba I, Lacombe K, et al. Prevalence and behavioural risks for HIV and HCV infections in a population of drug users of Dakar, Senegal: The ANRS 12243 UDSEN study. *Journal of the International AIDS Society* 2015; **18 (1) (no pagination)**(19888).
480. Bibi J, Faure J, Johnston L, Simon F, Isnard R, Mangroo G. Injection Drug Use in the Republic of Seychelles, 2011. Integrated Biological and Behavioral Surveillance Survey - Round 1, 2011.
481. UNAIDS. Population Size Estimation of Key Populations. 2013.
482. National HIV and AIDS Secretariat Sierra Leone. Seroprevalence Study for Key Populations. 2015.

483. Scheibe A, Makapela D, Brown B, et al. HIV prevalence and risk among people who inject drugs in five South African cities. *International Journal of Drug Policy* 2016; **30**: 107-15.
484. Human Sciences Research Council (HSRC) South Africa. Programmatic Mapping and Size Estimation (PMSE) of Key Populations in South Africa. 2015.
485. UNAIDS. Cartographie des sites, estimation de la taille des usagers de drogues injectables (UDI) et evaluation de leurs besoins en matiere de services deprevention, de soins traitement en matiere de VIH et de sante de la reproduction au Togo. 2014.
486. Atkinson J, McCurdy S, Williams M, Mbwambo J, Kilonzo G. HIV risk behaviours, perceived severity of drug use problems, and prior treatment experience in a sample of young heroin injectors in Dar es Salaam, Tanzania. *African Journal of Drug and Alcohol Studies* 2011; **10**(1): 1-9.
487. Bowring AL, Luhmann N, Pont S, et al. An urgent need to scale-up injecting drug harm reduction services in Tanzania: prevalence of blood-borne viruses among drug users in Temeke District, Dar-es-Salaam, 2011. *International Journal of Drug Policy* 2013; **24**(1): 78-81.
488. Gupta A, Mbwambo J, Mteza I, et al. Active case finding for tuberculosis among people who inject drugs on methadone treatment in Dar es Salaam, Tanzania. *International Journal of Tuberculosis and Lung Disease* 2014; **18**(7): 793-8+i.
489. Lambdin BH, Bruce RD, Chang O, et al. Identifying Programmatic Gaps: Inequities in Harm Reduction Service Utilization among Male and Female Drug Users in Dar es Salaam, Tanzania. *PloS one* 2013; **8** (6) (no pagination)(e67062).
490. Lambdin BH, Masao F, Chang O, et al. Methadone treatment for HIV prevention- Feasibility, retention, and predictors of attrition in Dar es Salaam, Tanzania: A Retrospective cohort study. *Clinical Infectious Diseases* 2014; **59**(5): 735-42.
491. Matiko E, Khatib A, Khalid F, et al. HIV prevalence and risk behaviors among people who inject drugs in two serial cross-sectional respondent-driven sampling surveys, Zanzibar 2007 and 2012. *AIDS & Behavior* 2015; **19 Suppl 1**: S36-45.
492. Mlunde LB, Sunguya BF, Mbwambo JK, et al. A mismatch between high-risk behaviors and screening of infectious diseases among people who inject drugs in Dar es Salaam, Tanzania. *PloS one* 2016; **11** (2) (no pagination)(e0148598).
493. Ross MW, McCurdy SA, Kilonzo GP, Williams ML, Leshabari MT. Drug use careers and blood-borne pathogen risk behavior in male and female Tanzanian heroin injectors. *American Journal of Tropical Medicine and Hygiene* 2008; **79**(3): 338-43.
494. Tan AX, Kapiga S, Khoshnood K, Bruce R. Epidemiology of drug use and HIV-related risk behaviors among people who inject drugs in Mwanza, Tanzania. *PloS one* 2015; **10**(12).
495. Boci A, Hallkaj E, Bani R. HIV and HCV prevalence and risky behaviors among needle exchange program users in Albania. *Sexually Transmitted Infections Conference: STI and AIDS World Congress* 2013; **89**(no pagination).
496. Reitox National Focal Point, Weigl M, Busch M, Grabenhofer-Eggerth A, Turscherl E, Wirl C. 2011 National Report (2010 data) to the EMCDDA. Austria: New developments, trends and in-depth information on selected issues, 2012.
497. Reitox National Focal Point, Weigl M, Busch M, Grabenhofer-Eggerth A, Turscherl E, Wirl C. 2012 National Report (2011 data) to the EMCDDA. Austria: New Development, Trends and in-depth information on selected issues, 2013.
498. Reitox National Focal Point, Weigl M, Busch M, et al. 2013 National Report (2012 data) to the EMCDDA. Austria: New Development and Trends, 2014.
499. Reitox National Focal Point, Lamkaddem B, Roelands M. 2010 National Report (2009 data) to the EMCDDA. Belgium: New developments, trends and in-depth information on selected issues: Scientific Institute of Public Health, 2011.

500. Reitox National Focal Point, Deprez N, Antoine J, et al. 2011 National Report (2010 data) to the EMCDDA. Belgium: New developments, trends and in-depth information on selected issues. 2012.
501. Reitox National Focal Point, Plettingckx E, Antoine J, Bollaerts K, Blanckaert P, Van Bussel JCH. 2012 National Report (2011 data) to the EMCDDA. "Belgium" New Development, Trends and in-depth information on selected issues, 2013.
502. Reitox National Focal Point, Antoine J, Blanckaert P, et al. Belgian National Report on drugs 2014, 2015.
503. Reitox National Focal Point, Plettingckx E, Antoine J, Blanckaert P, van Bussel JCH. 2013 National Report (2012 data) to the EMCDDA "Belgium" New Development, Trends and in-depth information on selected issues: Belgian Monitoring Centre for Drugs and Drug Addiction
- Scientific Institute of Public Health OD Public health and Surveillance, 2014.
504. Lamkaddem B, Roelands M, Deprez N. Belgium: New developments, trends and in-depth information on selected issues. 2009 National Report to the EMCDDA, 2010.
505. Cavlek TV, Maric J, Katicic L, Kolaric B. Hepatitis C virus antibody status, sociodemographic characteristics, and risk behaviour among injecting drug users in Croatia. *Central European Journal of Public Health* 2011; **19**(1): 26-9.
506. Reitox National Focal Point, Vugrinec L, Jerkovic D, et al. 2011 National Report (2010 data) to the EMCDDA. Croatia: New developments, trends and in-depth information on selected issues, 2012.
507. Reitox National Focal Point, Vugrinec L, Jerkovic D, et al. 2012 National Report (2011 data) to the EMCDDA. Croatia: New Development, Trends and in-depth information on selected issues. Government of the Republic of Croatia Office for Combating Drugs Abuse, 2013.
508. Handanagic S, Bozicevic I, Civljak M, et al. HIV and hepatitis C prevalence, and related risk behaviours among people who inject drugs in three cities in Croatia: Findings from respondent-driven sampling surveys. *International Journal of Drug Policy* 2016; **32**: 57-63.
509. Kolaric B. Croatia: still a low-level HIV epidemic?--seroprevalence study. *Collegium Antropologicum* 2011; **35**(3): 861-5.
510. Kosanovic ML, Kolaric B. Risk behaviour and risk for HIV infection in population of injecting drug users. (Rizicno ponasanje intravenskih korisnika droge i rizik zarazavanja HIV-om). *Infektoloski Glasnik* 2009; **29**(1): 5-11.
511. Kolarić B, Štajduhar D, Gajnik D, Rukavina T, Wiessing L. Seroprevalence of Blood-Borne Infections and Population Size Estimates in a Population of Injecting Drug Users in Croatia. *Central European Journal of Public Health* 2010; **18**(2): 104-9.
512. Vugrinec L, Bosnjak A, Jerkovic D. Croatia: New Development, Trends and in-depth information on selected issues. 2009 National Report to the EMCDDA, 2010.
513. Axelsson A, Soholm H, Dalsgaard M, et al. Echocardiographic findings suggestive of infective endocarditis in asymptomatic danish injection drug users attending urban injection facilities. *American Journal of Cardiology* 2014; **114**(1): 100-4.
514. Kinnard EN, Howe CJ, Kerr T, Skjodt Hass V, Marshall BD. Self-reported changes in drug use behaviors and syringe disposal methods following the opening of a supervised injecting facility in Copenhagen, Denmark. *Harm Reduction Journal* 2014; **11**: 29.
515. Madsen LW, Fabricius T, Moessner BK, Birkemose I, Skamling M, Christensen PB. Depression is frequent among drug users but not related to hepatitis c infection. *Hepatology* 2011; **54**: 1187A.
516. Appleby VJ, Darnbrough E, Forrester K, Simpson R, Clarke C, Moreea S. An audit of the prevalence of chronic hepatitis c and treatment outcomes in drug users attending substance misuse centres in bradford-planning for future service provision. *Gut* 2015; **64**: A114.

517. Bishton E, Oluboyede F, Grylls E, Woods L, Thomas S. Screening for Hepatitis C in injecting and ex-injecting drug users in North East Essex. *Public Health* 2014; **128**(11): 1036-8.
518. Cherry S, Williams H, Oyefeso A, Bennett J. Injecting other users: A pilot study in an area of high prevalence of drug-related deaths. *Journal of Substance Use* 2009; **14**(5): 289-94.
519. Marufu M, Williams H, Hill SL, Tibble J, Verma S. Gender differences in hepatitis C seroprevalence and suboptimal vaccination and hepatology services uptake amongst substance misusers. *Journal of Medical Virology* 2012; **84**(11): 1737-43.
520. Wang M, Shen J, Deng Y, et al. Association of higher-risk alcohol consumption with injecting paraphernalia sharing behaviours in intravenous drug users. *American Journal of Drug & Alcohol Abuse* 2014; **40**(2): 137-42.
521. Reitox National Focal Point, Davies C, English L, et al. 2012 National Report (2011 data) to the EMCDDA. United Kingdom: New developments, trends and in-depth information on selected issues, 2013.
522. Petrushevska T, Stefanovska VV. Patients on Opioid Substitution Treatment in the Republic of Macedonia: What do Treatment Demand Data Tell Us? *Macedonian Journal of Medical Sciences* 2014; **2**(2): 335-43.
523. Reitox National Focal Point, Pousset M, Gomez CD, et al. 2013 National Report (2012 data) to the EMCDDA. France: New Developments, Trends and in-depth information on selected issues, 2014.
524. Fatseas M, Denis C, Serre F, Dubernet J, Daulouede J, Auriacombe M. Change in HIV-HCV risk-taking behavior and seroprevalence among opiate users seeking treatment over an 11-year period and harm reduction policy. *AIDS & Behavior* 2012; **16**(7): 2082-90.
525. Reitox National Focal Point, Diaz-Gomez C, Le Nezet O, et al. 2010 National Report (2009 data) to the EMCDDA. France: New Development, Trends and in-depth information on selected issues, 2011.
526. Backmund M, Meyer K, Schutz C, Reimer J. Factors associated with suicide attempts among injection drug users. *Substance Use & Misuse* 2011; **46**(12): 1553-9.
527. Muller MC, Pichler M, Martin G, et al. Burden of disease and level of patient's medical care in substitution treatment for opiates. [German] Krankheitslast und Versorgungsniveau bei opioidsubstituierten Patienten. *Medizinische Klinik* 2009; **104**(12): 913-7.
528. Reimer J, Verthein U, Karow A, Schafer I, Naber D, Haasen C. Physical and mental health in severe opioid-dependent patients within a randomized controlled maintenance treatment trial. *Addiction* 2011; **106**(9): 1647-55.
529. Schulte B, Schmidt CS, Strada L, et al. Non-prescribed use of opioid substitution medication: Patterns and trends in sub-populations of opioid users in Germany. *International Journal of Drug Policy* 2016; **29**: 57-65.
530. Stover H, Schaffer D. Smoke It! Promoting a change of opiate consumption pattern-From injecting to inhaling. *Harm Reduction Journal* 2014; **11**: 18.
531. Wenz B, Nielsen S, Gassowski M, et al. High variability of HIV and HCV seroprevalence and risk behaviours among people who inject drugs: results from a cross-sectional study using respondent-driven sampling in eight German cities (2011-14). *BMC Public Health* 2016; **16**(927): 14.
532. Thane K, Wickert C, Verthein U. Consumption patterns, risk behaviour and service needs in Germany's open drug scenes. *Sucht: Zeitschrift fur Wissenschaft und Praxis* 2011; **57**(2): 141-9.
533. Antaraki A, Bafi I, Fotiou A, et al. Greece: New Development, Trends and in-depth information on selected issues. 2009 National Report to the EMCDDA, 2010.

534. Reitox National Focal Point, Terzidou M, Antarakis A, et al. 2011 National Report (2010 data) to the EMCDDA. Greece: New developments, trends and in-depth information on selected issues, 2012.
535. Reitox National Focal Point, Terzidou M, Antarakis A, et al. 2012 National Report (2011 data) to the EMCDDA. Greece: New Development, Trends and in-depth information on selected issues, 2013.
536. Reitox National Focal Point, Terzidou M, Antarakis A, et al. 2014 National Report (2013 data) to the EMCDDA. Greece: New Development, Trends, 2015.
537. Hatzakis A, Sypsa V, Paraskevis D, et al. Design and baseline findings of a large-scale rapid response to an HIV outbreak in people who inject drugs in Athens, Greece: the Aristotle programme. *Addiction* 2015; **110**(9): 1453-67.
538. Sheka M, Elefsiniotis IS, Patrinos S, Saroglou G. HCV infection in intravenous drug users in Greece during the period January 1997 through December 2007. *Archives of Hellenic Medicine* 2014; **31**(4): 461-7.
539. Tsang MA, Schneider JA, Sypsa V, et al. Network Characteristics of People Who Inject Drugs Within a New HIV Epidemic Following Austerity in Athens, Greece. *Journal of Acquired Immune Deficiency Syndromes: JAIDS* 2015; **69**(4): 499-508.
540. Tsirogianni E, Kokkonis G, Fotakidou CH, et al. HBV seroepidemiology and HBV vaccination immunogenicity among substance drug users in northern Greece. *Suchtmedizin in Forschung und Praxis* 2013; **15** (4): 257.
541. Zavitsanou A, Malliori M, Sypsa V, et al. Seroepidemiology of human herpesvirus 8 (HHV-8) infection in injecting drug users. *Epidemiology and Infection* 2010; **138**(3): 403-8.
542. Reitox National Focal Point. 2013 National Report (2012 data) to the EMCDDA. Greece: New Development and Trends. European Monitoring Centre for Drugs and Drug Addiction: University Mental Health Research Institute, 2014.
543. Bjarnadottir GD, Haraldsson HM, Rafnar BO, et al. Prevalent intravenous abuse of methylphenidate among treatment-seeking patients with substance abuse disorders: A descriptive population-based study. *Journal of Addiction Medicine* 2015; **9**(3): 188-94.
544. Barry D, Syed H, Smyth BP. The journey into injecting heroin use. *Heroin Addiction and Related Clinical Problems* 2012; **14**(3): 89-100.
545. Jennings CJ. Re-establishing Contact: A profile of clients attending the Health Promotion Unit - Needle Exchange at Merchants Quay Ireland, 2013.
546. Maloney S, Keenan E, Geoghegan N. What are the risk factors for soft tissue abscess development among injecting drug users? *Nursing Times* 2010; **106**(23): 21-4.
547. Reitox National Focal Point, Connolly J, Keane M, Long J, Lyons S, Pike B. 2011 National Report (2010 data) to the EMCDDA. Ireland New Developments, Trends and in-depth information on selected issues, 2012.
548. Camoni L, Federico B, Capelli G, et al. Few Italian drug users undergo HIV testing. *AIDS & Behavior* 2011; **15**(4): 711-7.
549. Napoli C, Tafuri S, Pignataro N, Tedesco G, Santa Maria A, Quarto M. Risk factors for HBV/HIV/HCV in drug addicts: A survey of attendees of a Department of Pathological Dependence. *Journal of Preventive Medicine and Hygiene* 2010; **51**(3): 101-4.
550. Pavarini RM. Mortality risk in intravenous drug users in Bologna and its determining factors. Results of a longitudinal study. *Epidemiologia e Prevenzione* 2008; **32**(2): 99-107.
551. Reitox National Focal Point, Balestra N, Carpignano IA, et al. 2012 National Report (2011 data) to EMCDDA. Italy: New developments, trends and in-depth information on selected issues, 2013.

552. Bacak V, Lausevic D, Mugosa B, Vratnica Z, Terzic N. Hepatitis C virus infection and related risk factors among injection drug users in Montenegro. *European Addiction Research* 2013; **19**(2): 68-73.
553. Judd A, Rhodes T, Johnston LG, et al. Improving survey methods in sero-epidemiological studies of injecting drug users: a case example of two cross sectional surveys in Serbia and Montenegro. *BMC Infectious Diseases* 2009; **9**: 14.
554. Laar M, Cruts G, Ooyen-Houben M, et al. The Netherlands Drug Situation 2014, 2015.
555. Bretteville-Jensen AL, Lillehagen M, Gjersing L, Andreas JB. Illicit use of opioid substitution drugs: Prevalence, user characteristics, and the association with non-fatal overdoses. *Drug and Alcohol Dependence* 2015; **147**: 89-96.
556. Dalgard O, Egeland A, Ervik R, Vilimas K, Skaug K, Steen TW. Risk factors for hepatitis C among injecting drug users in Oslo. *Tidsskrift for Den Norske Laegeforening* 2009; **129**(2): 101-4.
557. Reitox National Focal Point. 2009 National Report (2008 data) to the EMCDDA. "Norway" New Developments, Trends and in-depth information on selected issues: Norwegian Institute for Alcohol and Drug Research - SIRUS, 2010.
558. Reitox National Focal Point. 2014 National Report (mainly 2013 data) to the EMCDDA. Norway: New developments, trends, 2015.
559. Gjersing L, Bretteville-Jensen AL. Gender differences in mortality and risk factors in a 13-year cohort study of street-recruited injecting drug users. *BMC Public Health* 2014; **14**: 440.
560. Gjersing L, Bretteville-Jensen AL. Is opioid substitution treatment beneficial if injecting behaviour continues? *Drug and Alcohol Dependence* 2013; **133**(1): 121-6.
561. Saeland M, Haugen M, Eriksen FL, et al. Living as a drug addict in Oslo, Norway--a study focusing on nutrition and health.[Erratum appears in Public Health Nutr. 2009 May;12(5):728]. *Public Health Nutrition* 2009; **12**(5): 630-6.
562. Calado RA, Rocha MR, Parreira R, Piedade J, Veneno T, Esteves A. Hepatitis C virus subtypes circulating among intravenous drug users in Lisbon, Portugal. *Journal of Medical Virology* 2011; **83**(4): 608-15.
563. Kimber J, Copeland L, Hickman M, et al. Survival and cessation in injecting drug users: prospective observational study of outcomes and effect of opiate substitution treatment. *BMJ* 2010: 8.
564. Kilibarda B, Simic D, Baros S, Ministry of Health, Brandic I. National Report on Drug Situation in Serbia, 2015.
565. Duraku A, Begolli I, Mecinaj S, et al. National Report (2012 data) to the EMCDDA. Kosovo: New developments, trends and in-depth information on selected issues, 2015.
566. National Institute of Public Health: Kosovo. HIV Integrated Behavioral and Biological Surveillance Surveys-Kosovo. 2014.
567. Reitox National Focal Point, Brvar M, Delfar N, et al. 2011 National Report (2010 data) to the EMCDDA. Slovenia: New Development, Trends and in-depth information on selected issues, 2012.
568. Reitox National Focal Point, Drev A, Stokelj R, et al. 2012 National Report (2011 data) to the EMCDDA. Slovenia: New developments, trends and in-depth information on selected issues. 2013.
569. Reitox National Focal Point. 2013 National Report (2012 data) to the EMCDDA. Slovenia: New Development and Trends. National Institute of Public Health, Trubarjeva, 2014.

570. Bravo MJ, Royuela L, Barrio G, et al. Access to sterile syringes among young drug injectors in Madrid and Barcelona and its association with risk behaviour. *Gaceta Sanitaria* 2008; **22**(2): 128-32.
571. Diez M, Bleda MJ, Varela JR, et al. Trends in HIV testing, prevalence among first-time testers, and incidence in most-at-risk populations in Spain: the EPI-VIH Study, 2000 to 2009. *Euro Surveillance: Bulletin European sur les Maladies Transmissibles = European Communicable Disease Bulletin* 2014; **19**(47): 20971.
572. Reitox National Focal Point. 2011 National Report (2010 data) to the EMCDDA. Spain: New developments, trends and in-depth information on selected issues, 2012.
573. Reitox National Focal Point. 2010 National Report (2009 data) to the EMCDDA. Spain: New Development, Trends and in-depth information on selected issues, 2011.
574. Reitox National Focal Point. 2013 National Report (2012 data) for the EMCDDA. "Spain" New Development, Trends and In-depth Information on Selected Issues.: Ministerio de Sanidad, Servicios Sociales e Igualdad, 2014.
575. Reitox National Focal Point, Ministerio de Sanidad de Espania. 2012 National Report (2011 data) to the EMCDDA. Spain: New Development, Trends and in-depth information on selected issues, 2013.
576. Folch C, Casabona J, Espelt A, et al. Gender differences in HIV risk behaviours among intravenous drug users in Catalonia, Spain. *Gaceta Sanitaria* 2013; **27**(4): 338-43.
577. Huntington S, Folch C, Gonzalez V, Merono M, Ncube F, Casabona J. Prevalence of human immunodeficiency virus and hepatitis C virus, and associated factors among injecting drug users in Catalonia. [Spanish] Prevalencia del VIH, hepatitis C y factores asociados en usuarios de drogas por vía parenteral seleccionados en Cataluña. *Enfermedades Infectuosas y Microbiología Clínica* 2010; **28**(4): 236-8.
578. Hurtado Navarro I, Alatrue I, Del Amo J, et al. Differences between women and men in serial HIV prevalence and incidence trends. *European Journal of Epidemiology* 2008; **23**(6): 435-40.
579. Pares-Badell O, Espelt A, Folch C, et al. Undiagnosed HIV and Hepatitis C infection in people who inject drugs: From new evidence to better practice. *Journal of Substance Abuse Treatment* 2017; **77**: 13-20.
580. Rivas I, Martinez E, Sanvisens A, et al. Hepatitis B virus serum profiles in injection drug users and rates of immunization over time in Barcelona: 1987-2006. *Drug & Alcohol Dependence* 2010; **110**(3): 234-9.
581. Saigi N, Espelt A, Folch C, et al. Differences in illegal drug consumption between native and immigrants in a large sample of injected drug users in Catalonia (Spain). *Adicciones* 2014; **26**(1): 69-76.
582. Sanvisens A, Bolao F, Vallecillo G, et al. HIV Infection and Viral Hepatitis in Drug Abusers. In: Saxena SK, ed. Current Perspectives in HIV Infection: INTECH; 2013: 367-84.
583. Sarasa-Renedo A, Espelt A, Folch C, et al. Overdose prevention in injecting opioid users: the role of substance abuse treatment and training programs. *Gaceta Sanitaria* 2014; **28**(2): 146-54.
584. Vallejo F, Toro C, De La Fuente L, et al. Prevalence of and risk factors for hepatitis B virus infection among street-recruited young injection and non-injection heroin users in Barcelona, Madrid and Seville. *European Addiction Research* 2008; **14**(3): 116-24.

585. Dahlman D, Jalalvand F, Blome MA, et al. High Perineal and Overall Frequency of *Staphylococcus aureus* in People Who Inject Drugs, Compared to Non-Injectors. *Current Microbiology* 2017; **74**(2): 159-67.
586. Hillgren K, Sarkar K, Elofsson S, Britton S. Widespread risk behavior among injecting drug users. *Lakartidningen* 2012; **109**(25): 1221-5.
587. Dahlman D, Hakansson A, Bjorkman P, Blome MA, Kral AH. Correlates of skin and soft tissue infections in injection drug users in a syringe-exchange program in Malmo, Sweden. *Substance Use & Misuse* 2015; **50**(12): 1529-35.
588. Hakansson A, Isendahl P, Wallin C, Berglund M. Efficacy of mobile telephone contact for follow-up in injecting heroin users. *American Journal of Drug & Alcohol Abuse* 2011; **37**(2): 89-92.
589. Hakansson A, Isendahl P, Wallin C, Berglund M. Respondent-driven sampling in a syringe exchange setting. *Scandinavian Journal of Public Health* 2012; **40**(8): 725-9.
590. Blome MA, Bjorkman P, Flamholc L, Jacobsson H, Molnegren V, Widell A. Minimal transmission of HIV despite persistently high transmission of hepatitis C virus in a Swedish needle exchange program. *Journal of Viral Hepatitis* 2011; **18**(12): 831-9.
591. Jerkeman A, Westin J, Lagging M, et al. Chronic hepatitis C in Swedish subjects receiving opiate substitution therapy-Factors associated with advanced fibrosis. *Scandinavian Journal of Infectious Diseases* 2014; **46**(5): 340-7.
592. Dickson-Spillmann M, Haug S, Uchtenhagen A, Bruggmann P, Schaub MP. Rates of HIV and Hepatitis Infections in Clients Entering Heroin-Assisted Treatment between 2003 and 2013 and Risk Factors for Hepatitis C Infection. *European Addiction Research* 2016; **22**(4): 181-91.

Appendix 15: People who provided data or advice regarding the reviews

Many thanks to the following individuals who assisted with data, clarification or contacts for information:

Roberto Abadie, Laith Jamal Abu Raddad, Kamal Alami, Nesif Al-Hemairy, Atul Ambekar, Chris Archibald, Greg Armstrong, Taryn Barker, Julie Bruneau, Graça Cardoso, Gary Chan, Alison Coelho, Catherine Cook, Magdalena Dabkowska, Marcus Day, Giovanni de Girolamo, Jean-Michel Delile, Dires Desyibelew, Ksenia Ertsyan, Francina Fonseca, Richard Garfein, Gábor Gazdag, Katarína Gazdikova, Joumana Hermez, Sharon Hutchinson, Lu-Yu Hwang, Bulat Idrisov, Azumi Ishizaki, Eleni Kalamara, Tamar Kikvidze, Yun Jin Kim, Irma Kirtadze, Marina Klein, Jeffrey Lazarus, Kathryn Leafe, Linh-Vi Leafe, Niklas Luhmann, Clarice Madruga, Kasia Malinowska-Sempruch, Maria Elena Medina Mora, Zahra Alam Mehrjerdi, Margaret Millson, Roberto Muga, Stine Nielsen, Geoff Noller, Andre Noor, Jo Norman, Abiola Olaleye, David Otiashvili, Francisco Inacio P. M. Bastos, Kimberly Page, Alessandro Pirona, Jens Reimer, David Rein, Magdalena Rosińska, Signe Rotberga, Élise Roy, Keith Sabin, Tetiana Saliuk, Muktar Sano Kedir, Bahador Sarkari, Michael Schaub, Claude Scheidegger, Roman Scheurer, Usman Shamim, Melanie Simpson, Ameeta Singh, Ivar Skeie, Vo Hai Son, Katie Stone, Jennifer Syvertsen, Jessica Tebor, David Toro-Tobón, Abdalla Toufik, Jallal Toufiq, Janie Trépanier, Annette Verster, Yasir Waheed, Sarah Yeates, Naohiro Yonemoto, Tomas Zabransky, Ruth Zimmermann.