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Short report

Global estimates of prevalence of HCV infection among injecting drug users

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Abstract

Objective: In this paper, we review evidence of HCV prevalence among injecting drug users (IDUs) worldwide.
Methods: We undertook a desk-based review of both 'grey' and published literature released between 1998 and 2005.
Results: Data on HCV prevalence among IDUs was found in 57 countries and in 152 sub-national areas. We found reports of HCV prevalence of at least 50% among IDUs in 49 countries or territories. Available regional estimates varied widely, from 10 to 96% in Eastern Europe and Central Asia, from 10 to 100% in South and South–East Asia, from 34 to 93% in East-Asia and the Pacific, from 5 to 60% in North Africa and the Middle-East, from 2 to 100% in Latin America, from 8 to 90% in North America, from 25 to 88% in Australia and New Zealand, and from 2 to 93% in Western Europe. Only in Colombia and Lebanon were all HCV prevalence estimates below 20%. In addition, evidence of HIV/HCV co-infection among IDUs was found in 16 countries. In China, Poland, Puerto Rico, Russia, Spain, Switzerland, Thailand and Viet Nam, estimates of the prevalence of HIV/HCV co-infection among IDUs reached 90%.
Discussion: Taken together, data suggest high global prevalence of HCV and HIV/HCV co-infection among IDUs. We suggest exploring protective factors in sites of low HCV prevalence.

Keywords: HCV prevalence; HIV/HCV; Injecting drug use; Drug users; Worldwide

Introduction

Chronic HCV infection is a blood-borne viral infection and a major cause of liver cirrhosis and end-stage liver disease, second only to alcohol (EMCDDA, 2004). The World Health Organization (WHO) estimates that about 170 million people worldwide are infected with Hepatitis C (WHO, 2000). In 2004, we estimated that there were approximately 13.2 million injecting drug users (IDUs) worldwide (Aceijas, Stimson, Hickman, & Rhodes, 2004), and HCV has been identified as the most common viral infection affecting IDUs (Crofts, Dore, & Locarnini, 2001). Injecting drug use (IDU) is the main mode of transmission of HCV in developed countries; transmitted through blood-to-blood contact, either via direct or indirect sharing of injecting equipment (Crofts et al., 2001; Thorpe et al., 2002). HCV is estimated to be about 10 times more infectious than HIV, per unit of blood required, and therefore, requires less exposure than HIV to reach high prevalence (Crofts et al., 2001). In 2001, a review of 160 studies across 34 countries gave a weighted average HCV prevalence among 46,000 IDUs of 70% (Crofts et al., 2001), with North America and Asia having the highest prevalence (EMCDDA, 2004).

Recommendations to exclude IDUs from treatment for chronic HCV changed in light of research demonstrating treatment compliance among both active and former IDUs and those receiving methadone substitution treatment (Dalgard et al., 2002; EMCDDA, 2004), although access to treatment for this group remains limited (EMCDDA, 2004).

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A particular concern is rates of HCV/HIV co-infection as this complicates treatment outcome (Rhodes et al., 2006). The presence of HIV accelerates the natural course of chronic hepatitis C, including increasing the risk of liver cirrhosis, hepatocellular carcinoma, and decompensated liver disease (Rhodes et al., 2005). Below we report on the available evidence of the estimated anti-HCV prevalence and HIV/HCV co-infection among IDUs.

Methods

We undertook a review of 'grey' and published literature from 1998 to 2005 on the global prevalence of HCV antibody and HIV/HCV co-infection among IDUs, in countries/territories with previously reported evidence of IDU (Aceijas et al., 2004, 2006). Countries were deemed 'developing' or 'transitional' in keeping with the United Nations Human Development Report (UNDP, 2003) and were categorised regionally using classifications adopted by UNAIDS (UNAIDS, 2002). Data sources included electronic databases, website, international conference abstracts, and published books, research papers and reports, including 'grey' literature.

In addition to data on HCV and HIV/HCV co-infection, we collated information regarding study methodology (sample size and type, year of study etc.). We present the reported number tested as the sample size (whether or not the test was of individuals or residual blood in syringes). HIV/HCV co-infection was found to have been reported in a variety of ways and these can be grouped into "HIV/HCV co-infection among samples of known HIV positive IDUs"; "HIV/HCV co-infection among the whole sample" (HIV and HCV status unknown *a priori* and reported for the total number of IDUs tested) and "HIV/HCV co-infection among IDUs found HIV positive during the study". Specific details of the type of sample are given in the results and as footnotes in Table 2.

Our review resulted in 199 documents providing relevant data. We found indicators in all 10 regions targeted, although availability of information varied by region and by indicator (Table 1). We concentrate here on evidence appearing in peer-reviewed scientific journals ($N = 61$) and on citation to research mentioned in the body of the text.

Results

We found evidence of reports of anti-HCV prevalence among IDUs in 57 of the 131 countries/territories in which IDU populations have been reported (Aceijas et al., 2004, 2006). Rates of anti-HCV prevalence among IDUs varied by region, as did prevalence of HIV/HCV co-infection (Table 2). In all but two countries (Colombia and Lebanon), available estimates suggested prevalence of HCV of at least 20%. Table 2 summarises findings for both indicators (prevalence of HCV and HIV/HCV co-infection).

HCV prevalence estimates by region ranged as follows: 10–96% in Eastern Europe & Central Asia, 10–100% in South and South–East Asia, 34–93% in East-Asia and Pacific, 5–60% in North Africa and Middle-East, 2–100% in Latin America, 8–90% in North America, 25–88% in Australia and New Zealand, and 2–93% in Western Europe.

In 17 countries, prevalence estimates of anti-HCV among IDUs were at least 90% (Bulgaria, Canada China, Estonia, Germany, India, Indonesia, Lithuania, Malaysia, Mexico, Nepal, Pakistan, Poland, Portugal, Puerto Rico, Thailand and Switzerland) and between 50 and 90% in 31 countries/territories (Argentina, Australia, Austria, Bangladesh, Belarus, Belgium, Brazil, Croatia, Czech Republic, Denmark, France, Greece, Hong Kong, Iran, Ireland, Israel, Italy, Japan, Latvia, New Zealand, Norway, Romania, Russia, Slovenia, Spain, Syria, Taiwan, Turkmenistan, UK, Ukraine, USA and Viet Nam). In the remaining countries, anti-HCV prevalence was estimated at between 20 and 50% (Hungary, Kenya, Kazakhstan, Luxembourg, Slovakia and the Netherlands).

Evidence of HIV/HCV co-infection among IDUs was found in 16 countries. Estimates of the prevalence of co-infection was at least 90% in eight of these countries (China, Poland, Puerto Rico, Russia, Spain, Switzerland, Thailand and Viet Nam). USA was the only country with estimates of between 5 and 20%. We summarise our findings by region below.

Eastern Europe and Central Asia

Only in Hungary, Kazakhstan and Slovakia were available estimates of HCV antibody prevalence below 50%. In

Table 1
Prevalence of HCV and HIV/HCV co-infection among IDUs worldwide

Indicator	By...	Regions[a]									
		EE & CA	S & SEA	EA & P	NA & MD	SSA	LA	C	NA	WE	A & NZ
HCV prevalence among IDUs	Countries/territories	15	9	4	3	1	4	1	2	17	2
	Sub-national areas	39	24	4	2	1	11	1	15	58	13
Prevalence of HIV/HCV among IDUs	Countries/territories	3	6	2	0	0	2	1	2	3	0
	Sub-national areas	4	5	6	0	0	3	1	2	3	0

Availability of information by region and indicator.
[a] EE & CA: Eastern Europe and Central Asia; S & SEA: South and South-East Asia; EA & P: East Asia and Pacific; NA & MD: North; Africa and Middle-East; SSA: Sub-Saharan Africa; LA: Latin America; C: Caribbean; NA: North America; WE: Western Europe; A & NZ: Australia and New Zealand.

Table 2
HCV prevalence and prevalence of HIV/HCV co-infection among IDUs during 1998–2005

Country or territory	IDUs population (1000s)[a]			HCV prevalence among IDUs			Prevalence HIV/HCV co-infection
	Low	High	Mid	National	Capital city	Other sites	
Eastern Europe and Central Asia							
Belarus	41	51	46	–	–	51.0	–
Bulgaria	4	12	8	–	60.0–95.0	–	–
Croatia	19	23	21	58.3–68.6	–	–	58.3[b]
Czech Rep.	18	26	22	18.1–37.1	20.0	13.0–68.0	–
Estonia	10	30	20	–	90.5	–	–
Hungary	25	25	25	10.4–30.0	6.0–31.0	–	–
Kazakhstan	97	250	174	–	–	38.9	
Latvia	9	12	11	–	83.0	–	–
Lithuania	5	12	9	79.0–95.9	–	–	–
Poland	77	116	97	–	–	41.8–90.0	90.0[c]
Romania	90	112	101	40.0	27.27–70.0	–	–
Russia	1500	3000	2250	–	68.2	10.0–95.3	0.0[c]–93.0[d]
Slovakia	11	16	13	–	28.0–34.0	–	–
Turkmenistan	9	13	11	–	75.0	46.2–74.4	–
Ukraine	200	600	400	–	–	51.7–62.7	–
Western Europe							
Austria	20.29	20.29	20.29	26.3–33.1	31.0–79.0	18.0–69.0	–
Belgium	24.93	24.93	24.93	–	–	13.90–79.8	–
Denmark	12.59	12.59	12.59	–	–	87.1	–
Finland	12.31	12.31	12.31	38.4–52.0	11.4–72.7	10.5–50.0	–
France	80.00	120.00	100.00	–	–	43.0–72.0	–
Germany	200.95	200.95	200.95	–	82.5	65.7–96.8	–
Greece	59.79	88.92	74.36	11.40–67.9	–	7.4–84.4	–
Ireland	10.11	10.11	10.11	71.70–81.3	–	–	–
Italy	200.00	300.00	250.00	–	–	42.4–89.7	–
Luxembourg	1.11	1.70	1.40	37.0	–	–	–
Netherlands	3.00	5.00	4.00	–	–	47.2	–
Norway	10.77	12.00	11.39	–	68.0–79.0	–	–
Portugal	25.45	35.00	30.22	–	63.3	45.3–92.4	–
Slovenia	5.00	10.00	7.50	0.0–61.5	–	–	61.5[b]
Spain	233.27	346.91	290.09	–	–	59.5–85.0	11.0[c]–95.0[b]
Switzerland	9.48	14.22	11.85	91.0	–	–	91.0[c]
United kingdom	103.00	103.00	103.00	–	21.3–59.0	1.9–64.0	–
South & South-East Asia							
Bangladesh	20	170	95	25.0	66.8	17.4–66.5	–
India	300	2025	1163	92.0	33.0–44.2	26.0–92.6	–
Indonesia	124	1000	562	60.0–98.0	82.0–84.0	–	10.0[c]–40.0[c]
Iran	70	300	185	–	–	59.4–80.1	86.6[b]
Pakistan	54	870	462	89.0	78.0–94.0	75.0–93.0	0.0[c]
Thailand	20	76	48	90.0	98.8	4.76–96.7	4.8[c]–98.8[d]
Vietnam	70	156	113	–	–	10.0–80.8	98.5[d]
East Asia & Pacific							
China	356	3500	1928	–	47.6	33.53–99.3	0.0[c]–99.3[b]
Hong Kong	20	40	23	na	na	70.0	–
Japan	150	500	325	55.10–60.0	–	–	0.0[c]
Taiwan	60	60	60	67.2	–	–	–
North Africa & Middle-East							
Israel	6.22	12.43	9.33	54.0[&]	–	–	–
Lebanon	2.20	4.40	3.30		5.0		
Syria	4.00	8.00	6.00	60.5	–	–	–
Sub-Saharan Africa							
Kenya			0.3[e]	–	42.20	–	–
Latin America							
Argentina	55	75	65	–	35.1–79.0	–	77.0[b]–83.3[b]
Brazil	600	1000	800	39.5–69.6	14.10- 69.6	30.0–84.8	3.0[c]–84.8[b]
Colombia	2	8	5	–	1.70	–	–
Mexico	10	96	53	–	–	100.0–100.0	–

Table 2 (*Continued*)

Country or territory	IDUs population (1000s)[a]			HCV prevalence among IDUs			Prevalence HIV/HCV co-infection
	Low	High	Mid	National	Capital city	Other sites	
Caribbean							
Puerto Rico	12	15	17	–	95.2	–	95.2[d]
North America							
Canada	125	145	135	–	–	46.0–90.0	22.0[c]
USA	1300	1460	1380	–	–	8.0–88.3	3.0[c]–8.2[d]
Australia & New Zealand							
Australia	75	250	163	41.0–60.0	–	25.0–87.8	–
New Zealand	14	48	31	80.0–84.0	41.0–87.0		–

Notes. Prevalence have been rounded up to one decimal. (–): Not known, na: non applicable.

[a] Sources: Azim et al. (2002) and EMCDDA (2003).

[b] HIV/HCV co-infection among a sample selected because their positive seroestatus vs. HIV.

[c] HIV/HCV co-infection among the whole sample of IDUs (seroestatus versus HIV or HCV not known a priori).

[d] HIV/HCV co-infection among the sub-sample of IDUs found HIV positive during the study.

[e] It is not a national estimate but the number of cases found in Malindi (Kenya).

Belarus, Croatia, Czech Republic, Latvia, Poland, Romania, Turkmenistan and Ukraine we found estimates between 50 and 90% and in Bulgaria, Estonia, Lithuania and Russia, over 90%. At the sub-national level in Russia, there was variation with, for example, seven of eight estimates from St. Petersburg ranging between 78% (Karapetyan et al., 2002) and 95%, and 11 of 12 estimates from Moscow (all for 2003) ranging between 56 and 74% (Rhodes et al., 2006). Regarding the prevalence of HIV/HCV co-infection, the highest estimate (93%) was in Togliatty (Russia) among HIV positive IDUs (Rhodes et al., 2005) followed by Bialystok, Poland, at 90% again among a sample of HIV positive IDUs (Chlabicz, Grzeszczuk, Lapinski, Prokopowicz, & Panasiuk, 2003). In Croatia, we found one estimate of co-infection; 58% (7/12 HIV/HCV co-infected IDUs) (Seme et al., 2002).

South and South-East Asia

Estimates from Bangladesh, India, Indonesia, Iran, Malaysia, Nepal, Pakistan, Thailand and Viet Nam all show HCV antibody prevalence of at least 50% among IDUs. Of the 45 data reports within the region, only three gave estimates of less than 20%; estimates of between 76 and 80% were reported in Viet Nam and 97% in Northern Thailand (Thaikruea et al., 2004). In Indonesia, 82% anti-HCV prevalence was reported in two studies, one in Greater Jakarta ($n = 365$) in 2002/4, and one across seven districts ($n = 195$) in 2003. Estimates of HIV/HCV co-infection were found in Indonesia, Iran, Thailand and Viet Nam. Only a study in Northern Thailand found a low prevalence (of 5%). All other estimates suggested high levels of co-infection, for example, 99% in Chiang Mai among a sample of known HIV positive IDUs (Suganuma et al., 1998), 98% among 131 IDUs recruited through outreach in Bac Ninh, Viet Nam (Quan, Go, Bergenstrom, Giang, & Nam, 2003), and 100% co-infection among already known HIV positive IDUs in Kermanshah, Iran ($n = 117$).

East Asia and the Pacific

We found estimates in China (excluding Hong Kong and Macao) for nine sites. The only estimate for Beijing was 48% HCV prevalence among IDUs in 2001. A measure from Gejiu and Kaiyuan cities (Yunnan) in 2000, estimated HCV prevalence of 99% of 138 IDUs recruited through drug treatment facilities (Zhang et al., 2002). In the same year, 86% of 213 IDUs recruited in drug treatment in Honghe and Weshan prefectures (Yunnan) and 73% of 597 IDUs recruited through outreach, were found to be HCV positive (Zhang et al., 2002). The lowest identified estimate for China was 34%, among 167 IDUs recruited in Pingxiang and Binyang in 2001 (Zhang et al., 2003). While Japan has HIV prevalence estimates of under 5%, HCV estimates were 55% in 1999 (49 IDUs in drug treatment) (Crofts et al., 2001) and 60% in 2001 (Katayama et al., 2001). The highest prevalence of HIV/HCV co-infection in the region – 99.3% – was reported in China in the three-site study in which only HIV positive IDUs ($n = 138$) were tested for HCV (Zhang et al., 2002).

North Africa and the Middle-East and Sub-Saharan Africa

Evidence of HCV antibody prevalence was found in Israel, Lebanon and Syria among small samples of IDUs. For example, In Israel in 1994, an HCV prevalence rate of 54% among 50 IDUs was found (Crofts et al., 2001) and in Beirut, 5% of 40 IDUs were estimated to be HCV positive (Ramia, Klayme, & Naman, 2003). The most recent data – from Damascus (Syria) in 2003 – reported 60% HCV antibody prevalence among 38 IDUs (Othman and Monem, 2003). There was one report of anti-HCV prevalence among IDUs in Kenya – 42% of 146 IDUs – (Odek-Ogunde, Okoth, Lore, & Owiti, 2004).

Latin America and the Caribbean

Estimates of anti-HCV prevalence among IDUs were available in Argentina, Brazil, Colombia and Mexico. The

lowest estimate – 2% – was among IDUs in Bogotá (Colombia) injecting for less than five years. In Buenos Aires, HCV prevalence among IDUs was estimated at 55% (Weissenbacher et al., 2003). In Brazil, the lowest estimate was 14%, found in Rio de Janeiro in 2001, and the highest was 84%, in Sao Paolo in 2003 and Santos in 1997(Cotrim Segurado, Braga, Etzel, & Alves Cardoso, 2004). In the two settings in Mexico for which data were available (Chihuahua and Tamaulipas), HCV prevalence was estimated at 100% (Magis Rodriguez et al., 2002). Estimates of HIV/HCV co-infection among HIV positive IDUs was 85% in Santos (Cotrim Segurado et al., 2004). Only one study was found for the Caribbean Region, in San Juan, Puerto Rico, where 95% of 68 IDUs attending syringe exchange in 2003 were found to be co-infected (Reyes et al., 2004).

North America

We identified HCV estimates in six locations in Canada, with the lowest and highest from Vancouver (46% in 2001 among 232 IDUs recruited in a community survey and 90% among 4500 IDUs in 2003) (Hay et al., 2004). In Montreal and Toronto, 55 and 54%, respectively of IDUs attending syringe exchange were found to be HCV positive. In Quebec an HCV prevalence of 60% was reported among 1380 IDUs in contact with health services. We identified 10 estimates of HCV antibody prevalence among IDUs in the USA, plus a national estimate of 3% in 2004. The lowest estimate was in Baltimore in 2002 (8% of 183 IDUs), while other estimates ranged from 28 to 88% (Samuel et al., 2001); the latter from Albuquerque (New Mexico) in a study of 516 IDUs recruited through treatment facilities and via a community survey in 1996. An estimate of 83% was reported among 229 IDUs, recruited in similar settings in Las Cruces (also New Mexico) (Samuel et al., 2001). Estimates from New York show 71% of 89 IDUs recruited in treatment services and tested in 2001 and 61% of 314 IDUs participating in a survey between 2001 and 2003, to be HCV positive. Estimates of HIV/HCV co-infection among IDUs were found in Montreal and San Francisco. In Montreal 22% prevalence of co-infection was identified among 968 IDUs in 2000. In San Francisco, a co-infection rate of 3% was reported among young syringe exchange attenders between 1997 and 1999, and 8% between 2000 and 2001 among those who were HIV positive (Shafer et al., 2002).

Western Europe

Extremely high prevalence has been found in virtually all sub-national areas of all countries of the region. The highest, Frankfurt, reported 97% in 1998 ($n=63$), 93% in 2000 ($n=72$), and 90% in 2001 (EMCDDA, 2003), while Santarem in Portugal reported a rate of 93% in 2000 ($n=66$) (EMCDDA, 2005) and 92% in Setubal in 1999 ($n=238$) (Marinho, Moura, Giria, & Ferrinho, 2001). Moderate to high anti-HCV prevalence has been reported in a number of countries, including Austria, Belgium, Finland and Greece (EMCDDA, 2005).

We found HIV/HCV co-infection estimates among IDUs in Slovenia, Spain and Switzerland. The Slovenian study found 100% co-infection in a study of HIV positive IDUs (Seme et al., 2002). In Spain, three estimates varied from 95% ($n=176$ in Madrid in 2003 among already known HIV positive cases) to 48% ($n=2759$ blood samples of IDUs in Valencia, Alicante and Castellon collected between 1990 and 1996) to 11% (based on hospital-based screening of 227 samples of serum of IDUs) (EMCDDA, 2003). The single estimate of co-infection in Switzerland was 91% of a sample of HIV positive IDUs recruited through health services in 2003.

Australia and New Zealand

Estimates of anti-HCV prevalence among IDUs in Australia ranged from 25% (Treloar et al., 2004) to 88% (Kerger, Nguyen, & Higgs, 2004), and in New Zealand from 41 to 87% (Wu, Yap, Zhang, Rou, & Liu, 2002). Estimates based on HCV testing among samples of syringe exchange attenders show relatively stable HCV prevalence over time: 50% in 1999 ($n=2378$), 53% in 2000 ($n=2524$), 58% in 2001 ($n=2342$), 56% in 2002 ($n=2353$), and 58% in 2003 ($n=2418$) (National Centre in HIV Epidemiology and Clinical Research, 2004). In 2004, a follow-up found 60% HCV antibody prevalence ($n=1093$). States reporting the highest prevalence were Canberra and New South Wales (70 and 71%, respectively) (National Centre in HIV Epidemiology and Clinical Research, 2005). While other studies suggest a similar range (for example, 41% among 95 IDUs recruited through the legal system and in drug treatment facilities, and between 41% of 688 IDUs attending syringe exchange in 2001 and 50% of syringe exchange attenders in 2002) (Dolan et al., 2005), much higher estimates have been found in Melbourne (87% of 196 IDUs in 2001, and 80% of 127 ethnic Vietnamese IDUs in 2003), both recruited through a survey-driven study (Macdonald, Gilmour, & McDonald, 2004). In New Zealand, recent evidence estimates HCV antibody prevalence among IDUs at 80–84% (University of Otago, 2005), while five estimates in Wellington range from 41 to 87% (Kemp et al., 1998). We found no estimates of HIV/HCV co-infection in this low HIV prevalent region.

Discussion

We identified evidence of HCV infection among IDUs in 57 (43%) of the 131 countries or territories with previously reported evidence of IDU (Aceijas et al., 2004, 2006). In almost all ($n=55$) countries we found prevalence rates of at least 20%, and in 49 (86% of countries with HCV estimates) greater than 50%. We found considerable variation within geographic regions (accepting that in the

Sub-Saharan African and Caribbean regions we only identified a single estimate). In most regions, the upper estimates were over 90%. We identified evidence of HIV/HCV co-infection among IDUs in 16 of the 131 countries reporting IDU, with high levels of estimated co-infection in all countries but the USA, though it is important to note the lack of uniformity in the reported figures regarding pre-study conditions. Many studies of co-infection were among samples of HIV rather than HCV positive IDUs. In others the reported co-infection rates were for those found to be HIV positive during the study. For data on co-infection, techincal detail are presented regarding whether the co-infection was found among HIV positive IDUs, among the whole sample, or among those found HIV positive druing the study.

Data availability

We identified only a single estimate of HCV prevalence in 17 countries and were able to provide estimates at level of nation-state, capital city and other sites for only eight countries. There is an ongoing need for collating systematically global estimates of HCV (and other viral and bacterial infections) among IDUs, but we recognise that the availability of such data remains limited.

Data quality

There are methodological limits with a desk-based review, including the lack of prevalence estimates and difficulties in determining reliability of the estimates available. Few peer-reviewed published estimates were from developing and transitional countries, our main focus. We have therefore drawn on a range of data sources, including 'grey' literature and studies varying in sample size, methods of recruitment and measurement. It is difficult to judge the reliability and quality of estimates because many lacked technical detail of study design and method. This problem was compounded by our focus on English and Spanish language literature. We are aware that important aspects of the studies have been left out and that some might involve the identification of both risk and protective factors regarding HCV infection. Among them, for instance, we did not analyse the impact of questions such as the recruitment setting or the gender of individuals surveyed. The reported data on HIV/HCV co-infection was not always provided for whole sample of IDUs tested, we therefore emphasise that the data summarised here provide a provisional overview of international indicators of HCV prevalence among IDUs requiring further qualification and assessment, including with respect to reliability and representativeness. It is important to encourage basic minimum standards in the collection, presentation and interpretation of future national and global estimates in order that judgements become possible with respect to the likely reliability of estimates derived through different methods.

Conclusion

Evidence of high HCV among IDUs in Australia and the USA was reported as early as 1986, including among recent initiates to drug injection (Crofts et al., 2001). Our findings highlight an ongoing need to improve the availability and quality of global estimates, especially in developing and transitional countries. Taken together, available estimates emphasise that HCV remains, and may increasingly become, a major force of health harm among injectors and former injectors creating considerable health burden worldwide. Scaling-up harm reducing interventions for HIV and HCV prevention among IDUs remains a global priority, especially in settings where available estimates suggest high HCV. It is important to push for methodological improvements in the quality of global estimates produced, but this should not detract from acting upon the information currently available. In almost all regions of the world HCV affects large proportions of the drug injector population, and is thus a major priority in future national public health policy and planning.

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