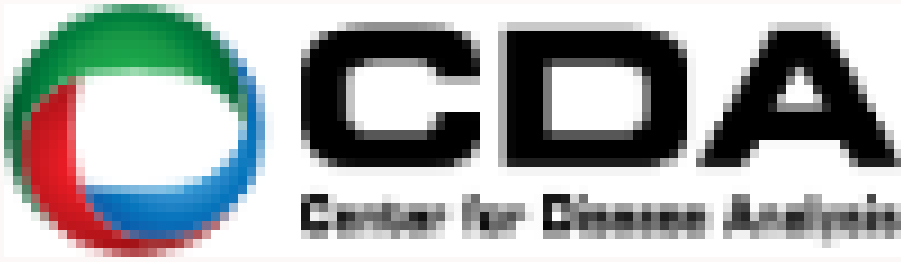




Global genotype distribution of hepatitis C viral infection among people who inject drugs.



KNOWLEDGE IN ACTION



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Background and aims

Hepatitis C viral infection (HCV) after injection drug use is very prevalent. The kind of genotype determines the response to treatment. However, no systematic review update on the global genotype distribution of HCV in people who inject drugs (PWID) is available at this moment.

Methods

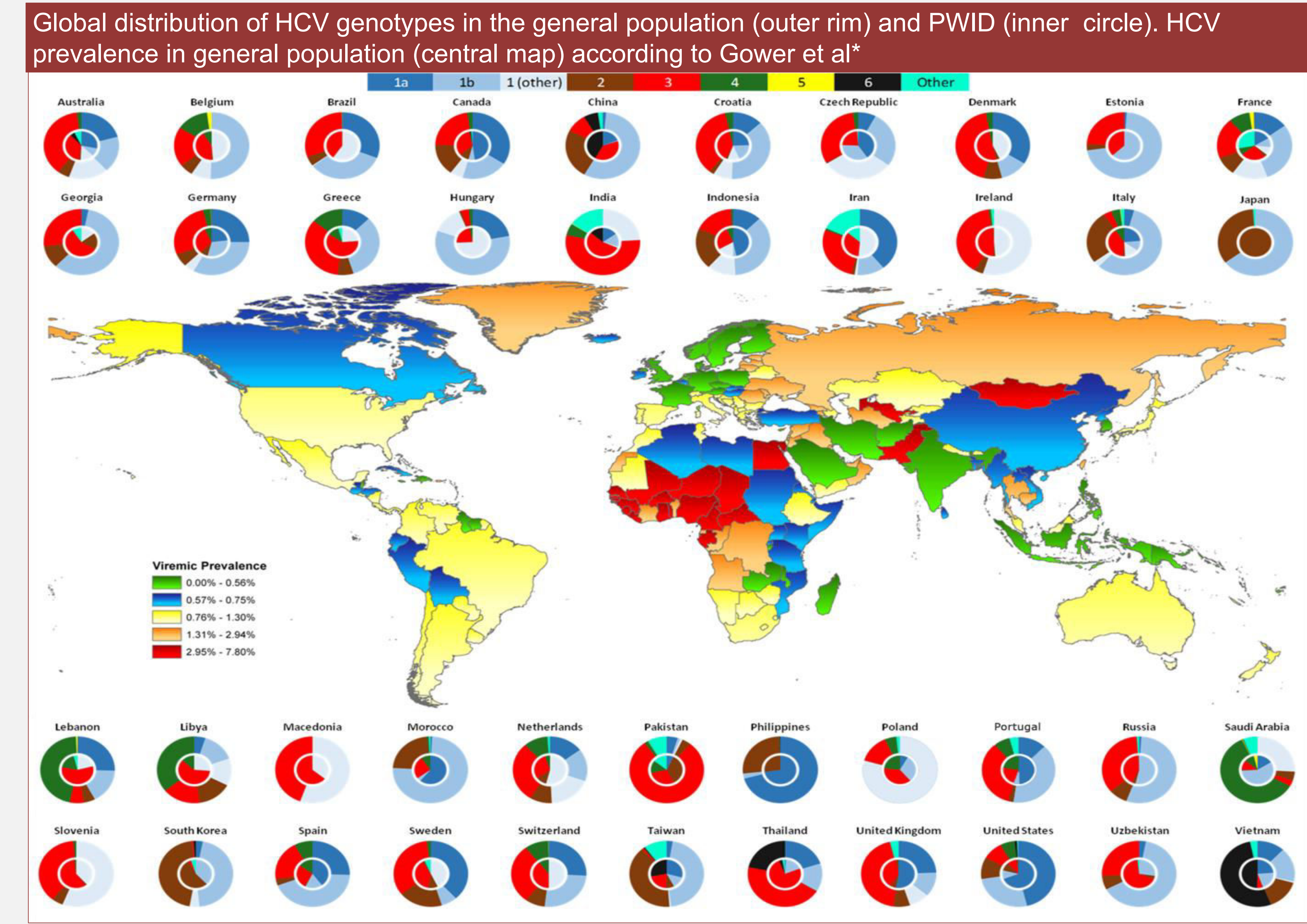
Selection, grading and clarification of hepatitis reports
<ul style="list-style-type: none">• Hepatitis reports were restricted to serological test results for anti-HCV, HCV RNA and HCV genotyping• If hepatitis reports were available from the same sample(s) and same site(s) in multiple years, only the most recent report was selected.• Hepatitis reports from one city were assumed to be from a single site unless otherwise stated.• Hepatitis reports were assumed to be single site and single sample type unless otherwise stated.• If calculation or typographical errors were detected in source documents, reports were recalculated and clarified with authors where possible.
Grade and date-based selection of reports
<ul style="list-style-type: none">• If recent (2000 onwards) grade A (multi-sample multi-site) reports were available, we selected the range of these and did not select lower graded reports.• If recent grade A reports were unavailable, we selected the range of recent reports of the next highest grade. Older reports were selected if no recent reports were available.• Recent grade B (B1/multi-site single sample, or B2/single sample multi-site) reports were selected in preference to older grade B reports. Recent grade C reports were selected in preference to older grade B reports. Older grade C reports were selected if no grade B reports were available. Grade D reports were only used if no higher grade was available.• Pre-2000 reports were selected only if later reports were unavailable.
Additional selection and exclusion criteria
<ul style="list-style-type: none">• Reports from self-report studies (grade E) or unspecified methodologies (ungraded) were excluded.• Reports of genetic or saliva testing, or residue from syringes were excluded.• Reports from studies restricted to ‘young’ PWIDs were excluded.• Reports from studies excluding PWIDs of either gender were excluded if mixed gender reports were available.

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.

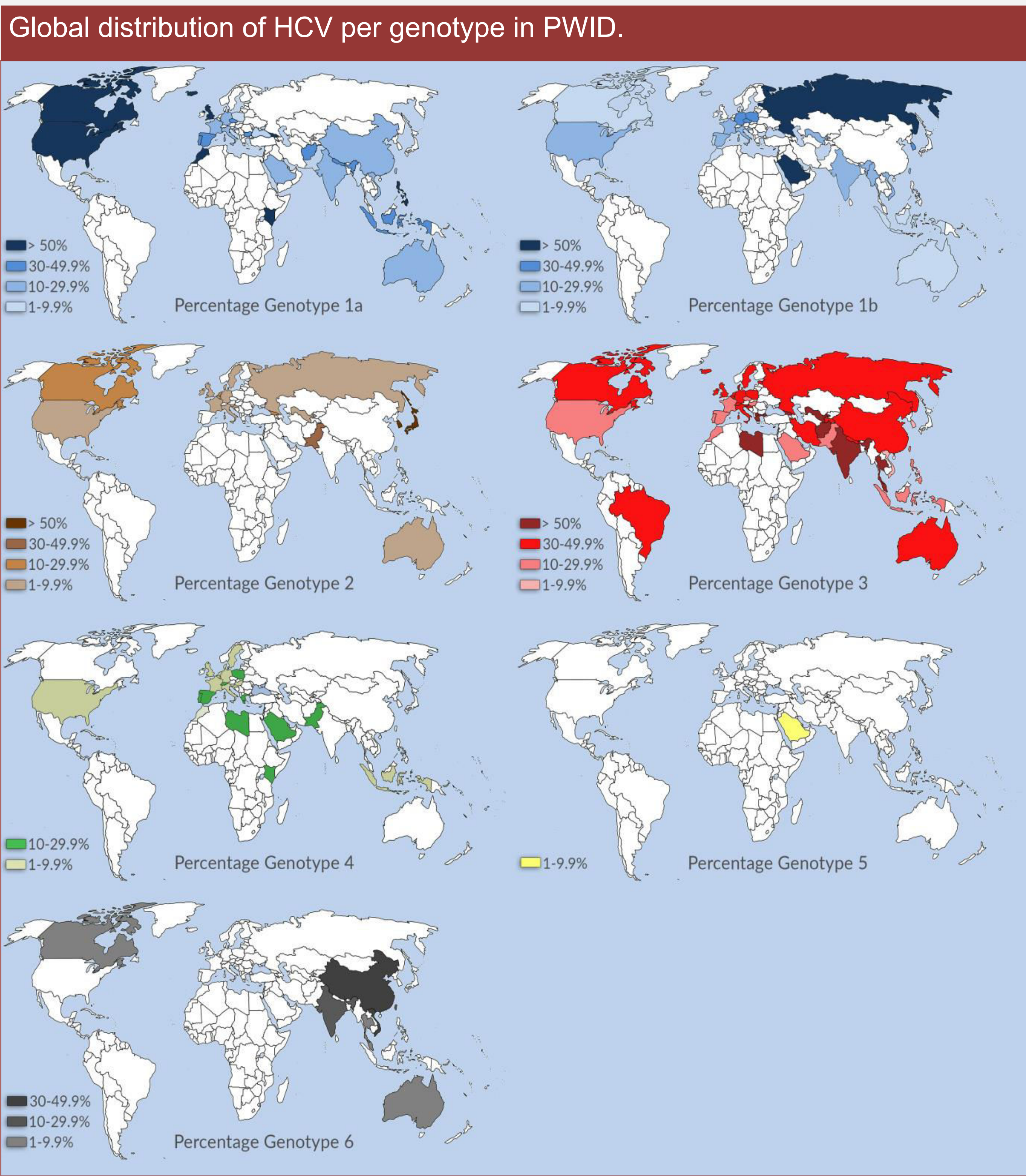
A systematic review was performed by using the keywords: Genotype, Hepatitis C, Injection drug user / Intravenous drug user / Substance user/ PWID, Name of countries in Pubmed, Embase and PsychInfo. The results were compared with the review of Gower et al. in 2014, concerning the distribution of HCV genotypes in the general HCV population.

403 articles
207 excluded based on title or abstract
196 full text recourses
64 articles excluded based on full text <ul style="list-style-type: none">- 24 No results of genotyping/no genotyping.- 25 No results of genotyping among PWID only.- 10 No specification between genotype subgroups.- 2 samples with age/gender restriction- 3 reports of regions, no data for countries only.
132 reports on genotyping of HCV among PWID*.
84 sources were graded lower or were within range but older, or with lower study population than sources used to generate estimates.
48 sources used to generate an estimation of the prevalence of the specific genotypes of Hepatitis C among PWID in 48 countries across 10 world regions.

Results



Gower E, Estes C, Blach S, Razavi-Shearer K, Razavi H. Global epidemiology and genotype distribution of the hepatitis C virus infection. *J Hepatol* 2014; 61(1 Suppl): S45-57.



Conclusions

The most important genotype causing HCV infection in PWID globally is genotype 1, as is the case in the general population, but also **genotype 3** is highly prevalent in PWID. Genotype 4 is most prevalent in Africa, spreading into Europe, whereas genotype 2 and 6 are more located in Asia. The most important difference comparing to the general population are generally lower prevalence of genotype 1b, and higher prevalence of genotype 3 in PWID. As the genotype nowadays still determines the treatment, and as there is a **different genotype distribution than in the general population**, it is important to **identify the genotype also in PWID**.

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