



REPORT #1

key findings from a preliminary analysis of mapCrowd data

January 2016

Having access to high quality, up-to-date information is one of the biggest challenges to fighting hepatitis C virus (HCV). Worldwide, of the 185 million HCV antibody-positive people, an estimated 130-150 million of them are chronically infected. Most people with HCV have not been diagnosed, since few have access to testing.¹ Country-level information is inadequate, and often difficult to obtain or unavailable. However, accurate HCV surveillance data and epidemiological research is crucial for the development of national treatment plans.

mapCrowd, a new online crowdsourcing platform created by Médecins du Monde (Mdm) and Treatment Action Group (TAG), is designed to help collect and share up-to-date HCV information. It includes data uploaded by HCV advocates across the globe, as well as current scientific and institutional information. Initially covering 23 countries, mapCrowd presents national epidemiological, diagnostic, treatment and policy data, and contact information for local HCV organizations. mapCrowd data is available at mapCrowd.org for free; users can access interactive charts, graphs, and maps, and download the full mapCrowd dataset.

mapCrowd connects contributors and users from around the world, to share valuable information. HCV experts and advocates who join mapCrowd will enhance international HCV advocacy networks and, through sharing national data, will shed light on current conditions in their own countries. mapCrowd will continually incorporate data from new countries, and provide a regular stream of updates on developments in the global HCV epidemic.

A preliminary analysis of mapCrowd data has yielded six key findings:

Epidemiological Data: High Relative Burden of HCV Among People Who Inject Drugs Hepatitis C is most prevalent in middle-income countries, home to 73% of the world's HCV antibody-positive people. There is a high relative burden of HCV among people who inject drugs (PWID), who account for 7% of all HCV antibody-positive adults worldwide. The burden of disease is highest in middle- and high-income countries, where people who inject drugs make up 11.3% and 19%, respectively, of HCV antibody-positive people.

Limited Access to HCV Diagnostics: High Price Relative to Income

The basic HCV diagnostic package consists of laboratory HCV antibody testing, confirmatory viral load testing, genotyping, and liver fibrosis assessment by transient elastography (known as Fibroscan). The price of this package varies considerably across mapCrowd countries, ranging from US\$67 in Brazil to US\$627 in the United States. Access remains largely out of reach for those in low- and middle income countries,

where the diagnostic package is priced at up to five times the monthly gross national income (GNI) per capita.²

Limited Access to HCV Treatment: Exorbitant Prices

Access to both pegylated interferon (PEG-IFN)-based and interferon-free HCV treatment with direct-acting antivirals (DAAs) is severely limited due to excessively high prices. Only 8 of the 23 countries studied have access to interferon-free treatment, which is priced several times higher than the monthly per capita GNI. Prices for HCV treatment vary widely across countries, reflecting different pharmaceutical marketing strategies. In Myanmar, Kenya and Côte d'Ivoire, where interferon-free treatment combinations are not available, a 48-week course of PEG-IFN is priced at 80 to 100 times the monthly GNI per capita.

Limited Access to HCV Treatment: The "Registration Gap"

Before they can be sold, medicines must be registered by national regulatory authorities. Pharmaceutical companies prioritize drug registration in high-income markets, and often delay it in less lucrative markets. Failure to register drugs creates an additional barrier to treatment access, especially in countries with smaller, less prosperous economies.

Lack of National HCV Policy Plans Worldwide

Worldwide, few countries have established national HCV policies, illustrating low levels of awareness or political will to tackle the epidemic. Of the 119 countries where information exists, only 44 (or 37%) have national HCV plans. Where these policies do exist, most fail to include strategies that create or increase access to HCV prevention, diagnostics, and treatment for people who inject drugs, despite their high burden of HCV.

Low Treatment Uptake

In 2014, the estimated average of worldwide HCV treatment uptake was 2.2%. In mapCrowd countries with available data, treatment uptake in 2014 was lower than the worldwide average in 12 of 15 countries, and it was 0.5% or less in just over half of them.³

1. WHO. Guidelines for the screening, care and treatment of persons with hepatitis C infection. 2014. Available at: <http://www.who.int/hiv/pub/hepatitis/hepatitis-c-guidelines/en/>. Accessed December 1, 2015.

2. The World Bank defines GNI per capita as: the gross national income, converted to U.S. dollars using the World Bank Atlas method, divided by the midyear population. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad.

3. Hirschall, G. (2014). Global Hepatitis C Guidelines 2014: recommendations for a public health approach. Presentation, 20th International AIDS conference, Melbourne, Australia. Available at: http://pag.aids2014.org/PAGMaterial/PPT/5322_10896/hepatitis%20-%20unitaid%20iasfinal.pptx

A brief note on our terms

For readers and mapCrowd users unfamiliar with the scientific and technical terms often found in hepatitis C literature, we provide here a brief list of definitions and clarifications.

HCV Antibody-Positive

People who have been infected with hepatitis C virus (HCV) in the past remain HCV antibody-positive for years, even after they have either naturally cleared the virus with a strong immune response or been cured by treatment.

During acute HCV (the first six months after someone becomes infected), antibodies take 6 to 12 weeks to develop, but the hepatitis C virus can be found in the bloodstream within 2 weeks.

People with Chronic Hepatitis C

People with chronic hepatitis C are HCV antibody-positive, and have had the actual hepatitis C virus in their bloodstream for at least six months. A large number of people living with chronic hepatitis C go on to develop liver cirrhosis or liver cancer.

HCV Prevalence

HCV Prevalence refers to the number or proportion of HCV antibody-positive people in a given population. For example, *HCV prevalence among people who inject drugs* (PWID) refers to the number or percentage of people in this specific group who are HCV antibody-positive.

$$\text{HCV Prevalence among PWID} = \frac{\text{number of PWID who are HCV antibody-positive}}{\text{total number of PWID}}$$

Relative Burden of Disease

In contrast to *prevalence*, the *relative burden of disease* provides a broader picture by examining HCV infection in one group and relating it to another, wider population. For example, the *relative burden of HCV among PWID* is the estimated number of HCV antibody-positive people who inject drugs divided by the estimated number of all HCV antibody-positive adults.

$$\text{Relative burden of HCV among PWID} = \frac{\text{number of PWID who are HCV antibody-positive}}{\text{number of HCV antibody-positive adults}}$$

People Who Inject Drugs (PWID)

People who inject drugs refers to people who inject non-medically sanctioned psychotropic (or psychoactive) substances. These drugs include, but are not limited to, opioids, amphetamine-type stimulants, cocaine, hypno-sedatives and hallucinogens. Injection may be through intravenous, intramuscular, subcutaneous or other injectable routes. Different criteria are used in the literature to define the timeframe. Most studies refer to people who have injected in the past 12 months, which is the preferred definition for mapCrowd. The rest of the studies used refer to people having injected within a shorter timeframe or lifetime injecting.

Pricing

The prices of HCV diagnostics and treatment quoted in mapCrowd are the amounts that are paid by health systems, and not those paid by patients.

Worldwide, an estimated 130 to 150 million people are chronically infected with hepatitis C virus (HCV). Obtaining reliable, update-to-date information on HCV is a major challenge for health experts and HCV advocates.⁴ The quantity and quality of data on HCV prevalence, access to prevention tools, availability and pricing of diagnostics and drugs, treatment uptake, and national HCV policies varies considerably across countries. Often, this information can be difficult to obtain due to poor surveillance systems, limited diagnostic capacities, weak infrastructure, and lack of political commitment or awareness. Particularly at the national level, sources for recent, consistently updated data are often scarce. Until now, there has been no centralized system for collecting and sharing this vital information with the international health community.

To address this lack of data and enhance advocacy efforts, Médecins du Monde (Mdm) and Treatment Action Group (TAG) have launched mapCrowd, a new online crowdsourcing platform designed to gather and publicize the most up-to-date country-level information on HCV. Providing free access to national, regional, and international data, mapCrowd allows users to draw visual comparisons between countries, using interactive graphs, tables, and maps. Users can download the entire mapCrowd database in Excel format for their own analysis. mapCrowd covers several topics, including:

- General Country Information: Development and Health Indicators
- Information on HCV Epidemiology
- Availability and price of HCV diagnostics
- Registration status, patent barriers, availability and price of HCV treatments
- National HCV policies and treatment programs
- Local organizations working on treatment access

This report highlights some of the key findings from our preliminary analysis of information from mapCrowd. We believe that mapCrowd can be a powerful resource, informing advocacy to improve access to prevention, diagnostics, and treatment worldwide, and ultimately to eliminate HCV.

mapCrowd is dedicated to HCV patients, activists, physicians, researchers, and the wider international health community. We would like to thank the following individuals and their affiliated organizations for their invaluable contributions in launching this initial version of mapCrowd:

■ **Brazil** - Felipe de Carvalho / Campanha de Acesso / Médicos Sem Fronteiras Brasil & Eloan Pinheiro
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■ **Myanmar** - Than Min / Médecins du Monde-F, Rangoon ■ **Portugal** - Adriana Curado, Laetitia Bruno dos Santos, Luis Mendeo, Daniel Simões, & Ricardo Fuertes / GAT - Grupo de Ativistas em Tratamentos - Dr Rui Tato Marinho, MD, PhD Gastroenterology, Hepatology, Hospital S. Maria, Medical School, Lisbon ■ **Russia** - Sergey Golovin / International Treatment Preparedness Coalition in Eastern Europe and Central Asia (ITPCru) ■ **Tanzania** - Zin Mar Han / Médecins du Monde-F, Dar es salaam ■ **Ukraine** - Ludmilla Maistat & Elena Deinekena / Alliance for Public Health, Ukraine ■ **Thailand** - Chalernsak "Jockey" Kittittrakul/ AIDS Access foundation - Dr Anchalee Avihingsanon & Tawan Mengthaisong ■ **Tunisia** - Zied Mhirs, MD, MPH/ Consultant in Global Health ■ **United States** - Tracy Swan & Karyn Kaplan / Treatment Action Group (TAG) ■ **Vietnam** - Louise Alluin / Médecins du Monde-F, Hanoi ■

4. WHO. Guidelines for the screening, care and treatment of persons with hepatitis C infection. 2014. Available at: <http://www.who.int/hiv/pub/hepatitis/hepatitis-c-guidelines/en/>. Accessed December 1, 2015.

mapCrowd Data Sources

General Country Information

- The World Bank Open Data (<http://data.worldbank.org>)

HCV Epidemiological Data

- Lavanchy, D. (2009). The global burden of hepatitis C. *Liver International*, 29, 74-81. <http://dx.doi.org/10.1111/j.1478-3231.2008.01934.x>
- Gower, E., Estes, C., Blach, S., Razavi-Shearer, K., & Razavi, H. (2014). Global epidemiology and genotype distribution of the hepatitis C virus infection. *Journal Of Hepatology*, 61(1), S45-S57. <http://dx.doi.org/10.1016/j.jhep.2014.07.027>
- Messina, J., Humphreys, I., Flaxman, A., Brown, A., Cooke, G., Pybus, O., & Barnes, E. (2014). Global distribution and prevalence of hepatitis C virus genotypes. *Hepatology*, 61(1), 77-87. <http://dx.doi.org/10.1002/hep.27259>
- Riou, J., Ait Ahmed, M., Blake, A., Vozlinsky, S., Brichtler, S., & Eholié, S. et al. (2015). Hepatitis C virus seroprevalence in adults in Africa: a systematic review and meta-analysis. *Journal Of Viral Hepatitis*, n/a-n/a. <http://dx.doi.org/10.1111/jvh.12481>
- United Nations Office on Drugs and Crime,. (2015). World drug report 2015. Vienna: United Nations publication, Sales No. E.15.XI.6.
- mapCrowders

HCV Diagnostics

- mapCrowders

HCV Treatment

- mapCrowders

HCV Policy

- United Nations Office on Drugs and Crime,. (2014). World Drug Report 2014. Vienna: United Nations publication, Sales No. E.14.XI.7.
- World Health Organization, Geneva, 2013. *Global policy report on the prevention and control of viral hepatitis in WHO Member States*. apps.who.int/iris/bitstream/10665/85397/1/9789241564632_eng.pdf
- mapCrowders

Organizations

- mapCrowders

The data and key findings highlighted in this report and on the mapCrowd website originate from a combination of scientific publications and field-based sources. mapCrowd relies on a network of national HCV experts and advocates, or “mapCrowders,” who act as focal points for data collection. Most mapCrowders are affiliated with non-governmental organizations (NGOs). They are selected for their expertise in HCV advocacy and their capacity to obtain country-level information from a variety of sources. To supplement their contributions, mapCrowd also incorporates data gathered from a literature review of peer-reviewed medical journals, expert reports, and institutional research.

For the initial version of mapCrowd, we pre-selected 35 countries, based on the following factors: HCV burden of disease, geographic representation, and income level. Out of these 35, respondents from 23 countries were able and willing to participate as mapCrowders. Respondents were given an online questionnaire on the mapCrowd website and were asked to gather and upload data during the last three months of 2015. In some cases, respondents reported that data was hard to obtain or only partially available (such as data on yearly national treatment uptake). Where possible, mapCrowders worked with ministries of health to obtain the most up-to-date information and complete missing data.

The 23 mapCrowd countries in this study are: Brazil, Cameroon, Canada, China, Egypt, France, Georgia, India, Indonesia, Iran, Côte d’Ivoire, Kenya, Malaysia, Morocco, Myanmar, Portugal, Russia, Tanzania, Thailand, Tunisia, Ukraine, the United States, and Vietnam.

Why mapCrowd is Important: Key Findings

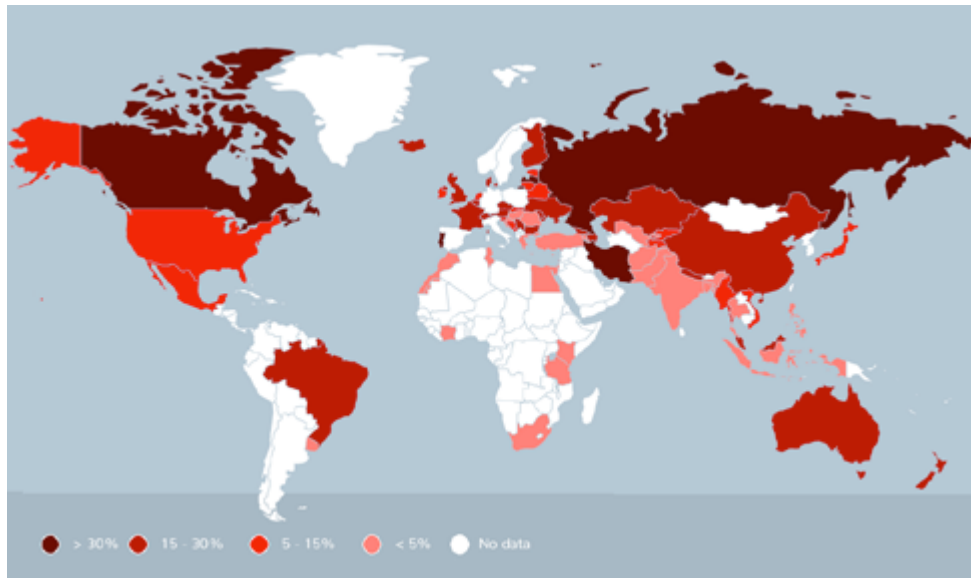
mapCrowd is a useful way to collect, analyze and share otherwise hard-to-access data. Visitors to mapCrowd.org can compare HCV information across countries using the website’s interactive maps, charts, and tables.

Several noteworthy findings emerged from our preliminary analysis of data from the 23 countries that were included in the initial version of mapCrowd.

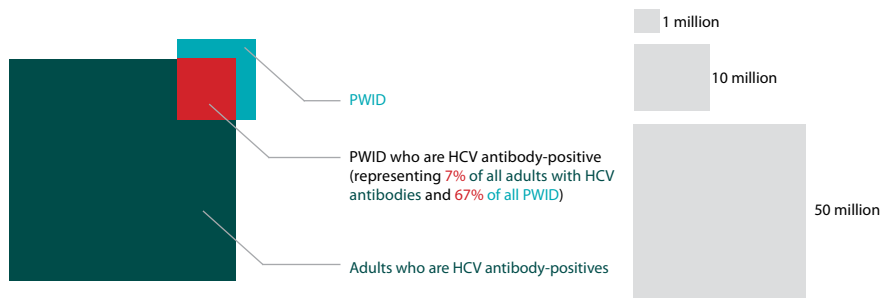
KEY FINDING #1

Epidemiological Data: High Relative Burden of HCV Among People Who Inject Drugs

Map 1: Worldwide Relative Burden of HCV among People Who Inject Drugs



Worldwide, an estimated 2.8% of people are HCV antibody-positive. Among them, 73% are found in middle-income countries.⁵ People who inject drugs (PWID) are especially affected by the epidemic; an estimated 67% of PWID are HCV antibody-positive. As shown in Map 1, there is a high burden of HCV among PWID worldwide. Although PWID make up less than .05% of the population, they are 7% of all HCV antibody-positive adults. In middle- and high-income countries, PWID are 11.3% and 19%, respectively, of all HCV antibody-positive people.



HCV in People Who Inject Drugs Worldwide

On a regional basis, PWID are 22%, 17% and 6% respectively, of all HCV antibody-positive adults in Europe, North America, and Asia.⁶

Map 1 underscores the lack of specific data on HCV disease burden among people who inject drugs from most of Latin America and Africa, due to poor surveillance and lack of data collection.

Figure 1: Relative Burden of HCV among PWID in mapCrowd countries

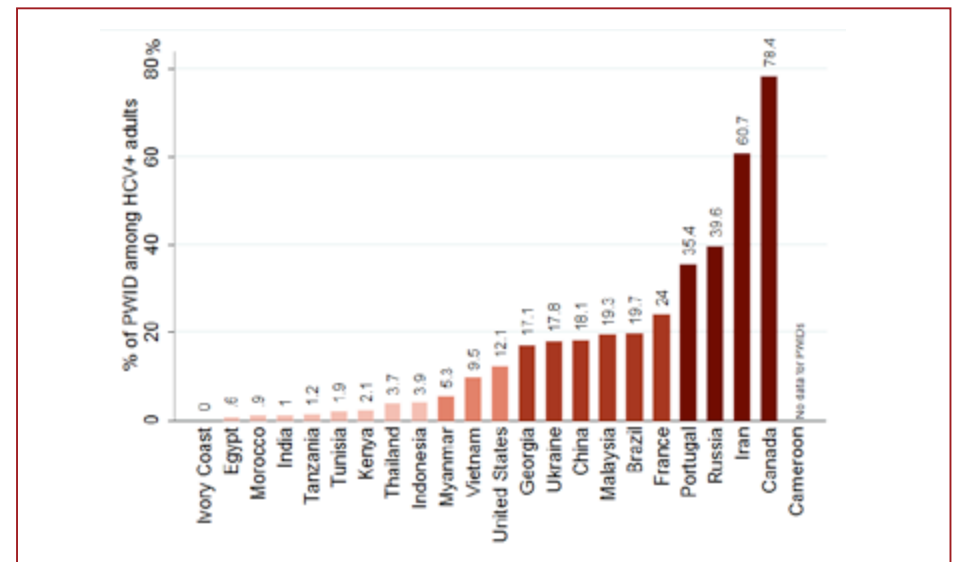


Figure 1, above, shows the relative burden of HCV among PWID (the percentage of HCV antibody-positive PWID divided by the entire HCV antibody-positive population) in the 23 mapCrowd countries. In twelve of these countries, the relative burden of HCV among PWID is higher than the worldwide average of 7%. In Portugal and Russia, the percentage of people who inject drugs and are HCV antibody-positive is over 35% (approximately 5 times higher than the worldwide average); in Iran and Canada it is over 60% (more than eight times higher than the worldwide average).

5. To supplement information provided by mapCrowders for this section, data was obtained from the World Bank (adult population), the Lavanchy 2009, Gower 2014 and Riou 2015 reviews (HCV prevalence in general population), the Nelson 2010 review (prevalence in PWID), and the UNODC-WHO-UNAIDS database (number of PWID in each country). Potential limitations to these sources include the age of the Lavanchy, Gower and Nelson reviews, and the absence of data regarding the number of PWID and their prevalence in many low-income countries.

6. The data for North America pertains only to the United States and Canada.

KEY FINDING #2 Limited Access to HCV Diagnostics: High Price Relative to Income

mapCrowders gathered information about the availability and pricing of the following diagnostics and methods of disease staging in their respective countries:⁷

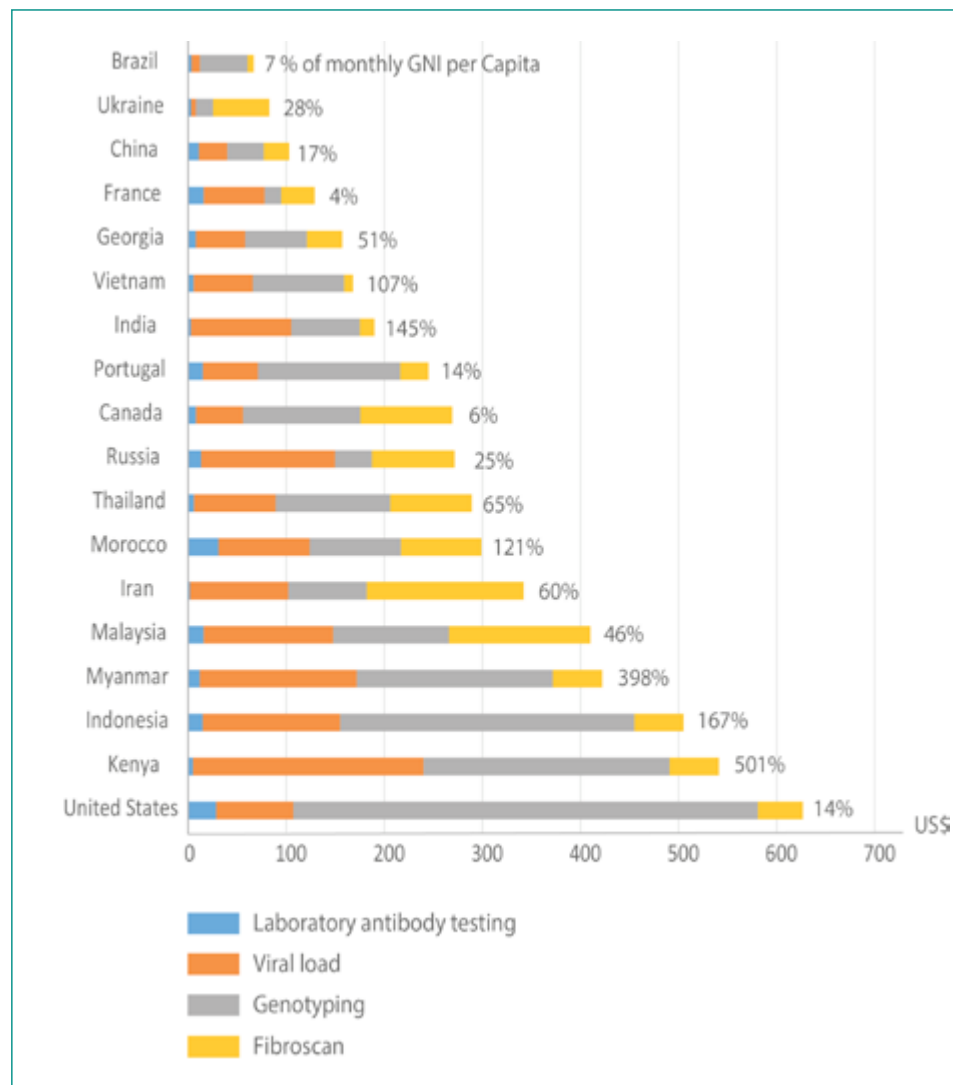
- Laboratory based antibody testing
- Rapid antibody testing
- Dried blood spot testing (DBS) for antibody, viral load, and HCV genotyping
- Qualitative PCR
- Viral load
- HCV core antigen testing
- Genotyping
- AFP (alpha-feto-protein)
- Fibroscan
- Abdominal ultrasound

The basic HCV diagnostic package consists of four essential components: laboratory HCV antibody testing, confirmatory viral load testing, genotyping, and liver fibrosis assessment by transient elastography (Fibroscan). Figure 2 shows the price of these diagnostics in absolute terms and relative to monthly GNI per capita. Of the 23 countries included in mapCrowd, 19 have access to the basic HCV assessment package, including Fibroscan. Among these, mapCrowders from all but one country were able to provide information on pricing. The remaining four countries, all in Africa, lack access to Fibroscan.

In the 18 countries where pricing information is available for the basic HCV diagnostic package, prices range from US\$67 in Brazil to US\$627 in the United States. Furthermore, prices do not correspond with a nation's capacity to pay for such services according to GNI. Indeed, **the highest prices are often found in the poorest nations**. The price for the basic HCV diagnostic package varies from 3.5% of monthly GNI in France to 500% of monthly GNI in Kenya. In other words, a Kenyan citizen must save approximately five times the monthly GNI per capita to pay for a basic HCV diagnostic package, whereas in France, the same package can be purchased without resulting in financial hardship.

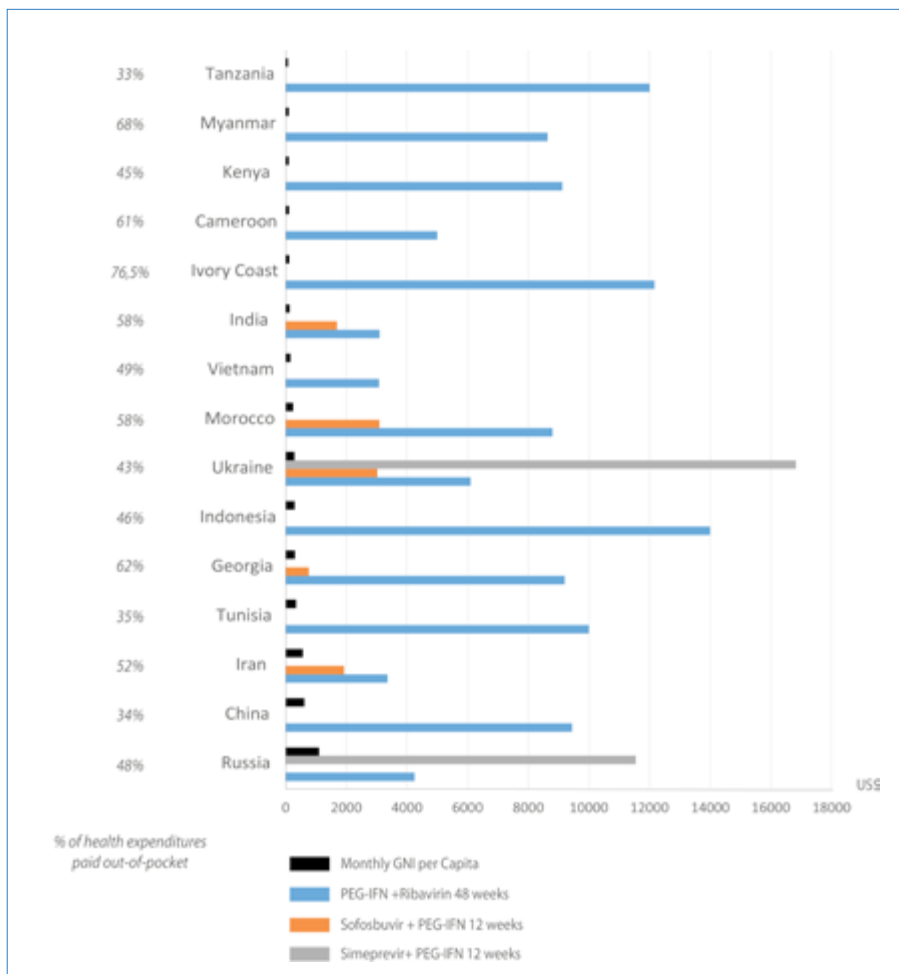
7. Data on the availability and pricing of diagnostic tools has been informed by mapCrowders. We choose to include only the lowest market prices in our figures. Potential limitations to consider include the fact that country-level HCV circumstances are evolving quickly and that data provided was collected during the 2nd half of 2015.

Figure 2: Absolute price for a basic HCV assessment package relative to monthly GNI per capita in 18 mapCrowd countries



KEY FINDING #3 Limited Access to HCV Treatment: Exorbitant Prices

Figure 3.1: Price of different treatment regimens in countries without access to interferon-free regimens¹⁰



Direct-acting antivirals (DAAs) have cured over 95% of people with HCV in clinical trials, and seem to be nearly as effective in real life settings.⁹ DAAs are essential for eliminating HCV. However, outrageous prices have limited access to DAAs, even in high-income countries. Pharmaceutical marketing strategies favoring the highest possible price in each country have forced most governments to ration treatment by limiting access to people with the most advanced liver damage.

Figure 3.1 shows the price of interferon-based treatment (where DAAs are not yet available). The price for 48 weeks of pegylated interferon (PEG-IFN) and ribavirin (RBV) is shown in blue bars. Where available, prices for 12 weeks of sofosbuvir, PEG-IFN and RBV are shown in orange. Prices for 12 weeks of simeprevir, PEG-IFN and RBV in Ukraine and Russia are shown in grey bars.

Although PEG-IFN is registered everywhere, it remains unaffordable in many countries. Again, the poorest countries are often forced to pay the highest price for PEG-IFN and RBV, relative to their GNI. For example, the low-income countries Myanmar, Kenya and Côte d'Ivoire must pay 80 to 100 times their monthly per capita GNI for a 48-week course of PEG-IFN, whereas in middle-income countries such as Iran or China, the price is approximately 15 times the monthly per capita income or less. In countries where sofosbuvir is available, either at no charge via compassionate access programs, or at reduced prices from generic manufacturers, PEG-IFN is 40% to 100% of the price for HCV treatment.

Even when drug prices are considered low by high-income country standards, they may be unaffordable in many low- and middle-income countries. According to the World Bank, 73% of the world's poor people live in middle-income countries.¹⁰ A generic HCV drug priced at US\$300 per month may seem affordable at first glance, but the low income and high out-of-pocket costs in many low- and middle-income countries make HCV treatment inaccessible for most people.

8. Data on the availability and pricing of treatment has been informed by mapCrowders. We choose to include only the lowest market prices in our figures. Potential limitations to consider include the fact that country-level HCV circumstances are evolving quickly and that data provided was collected during the 2nd half of 2015.

9. To learn more: TAG HCV Fact Sheets in English, December 14, 2015 – This set of fact sheets includes information on adherence to treatment, HCV diagnostics, and currently approved treatments (Sofaldi, Olysio, Viekira

Pak and Technivie, Harvoni, Daklinza, and ribavirin).

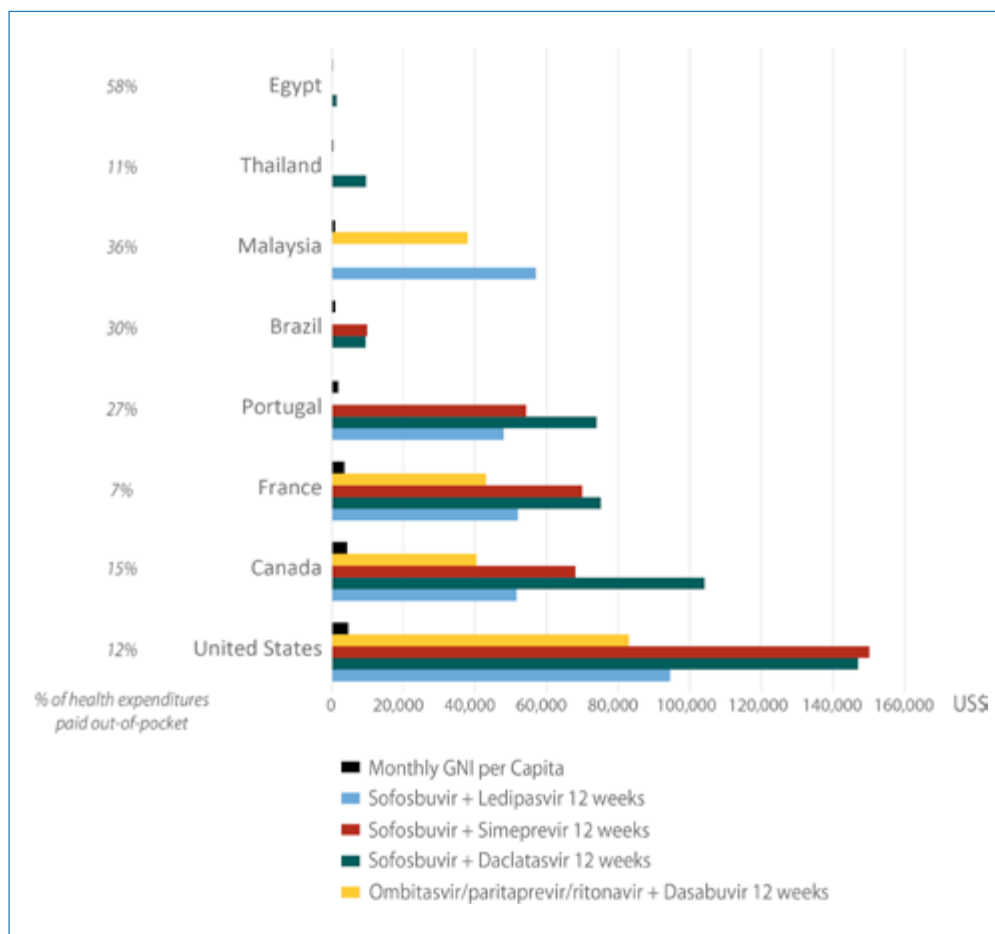
<http://www.treatmentactiongroup.org/sites/g/files/g450272f/201512/English%20group.pdf>

10. Worldbank.org., (2016). Middle Income Countries Overview. Retrieved from

<http://www.worldbank.org/en/country/mic/overview>

KEY FINDING #3 Limited Access to HCV Treatment: Exorbitant Prices

Figure 3.2: Price of different treatment regimens in countries with access to interferon-free regimens



New, safer, and shorter DAA regimens have fewer side effects and are far more effective than PEG-IFN and ribavirin. Yet DAAs remain inaccessible and unaffordable for most people with HCV. Among the mapCrowd countries studied, the high prices of DAAs often make it impossible for people to obtain HCV treatment.

As demonstrated in Figure 3.2, only 8 of the 23 mapCrowd countries have access to interferon-free DAA treatment of some kind. The price of each DAA regimen varies greatly from country to country, but is consistently high when compared to monthly GNI, even without the other out-of-pocket medical expenses people in these countries have.

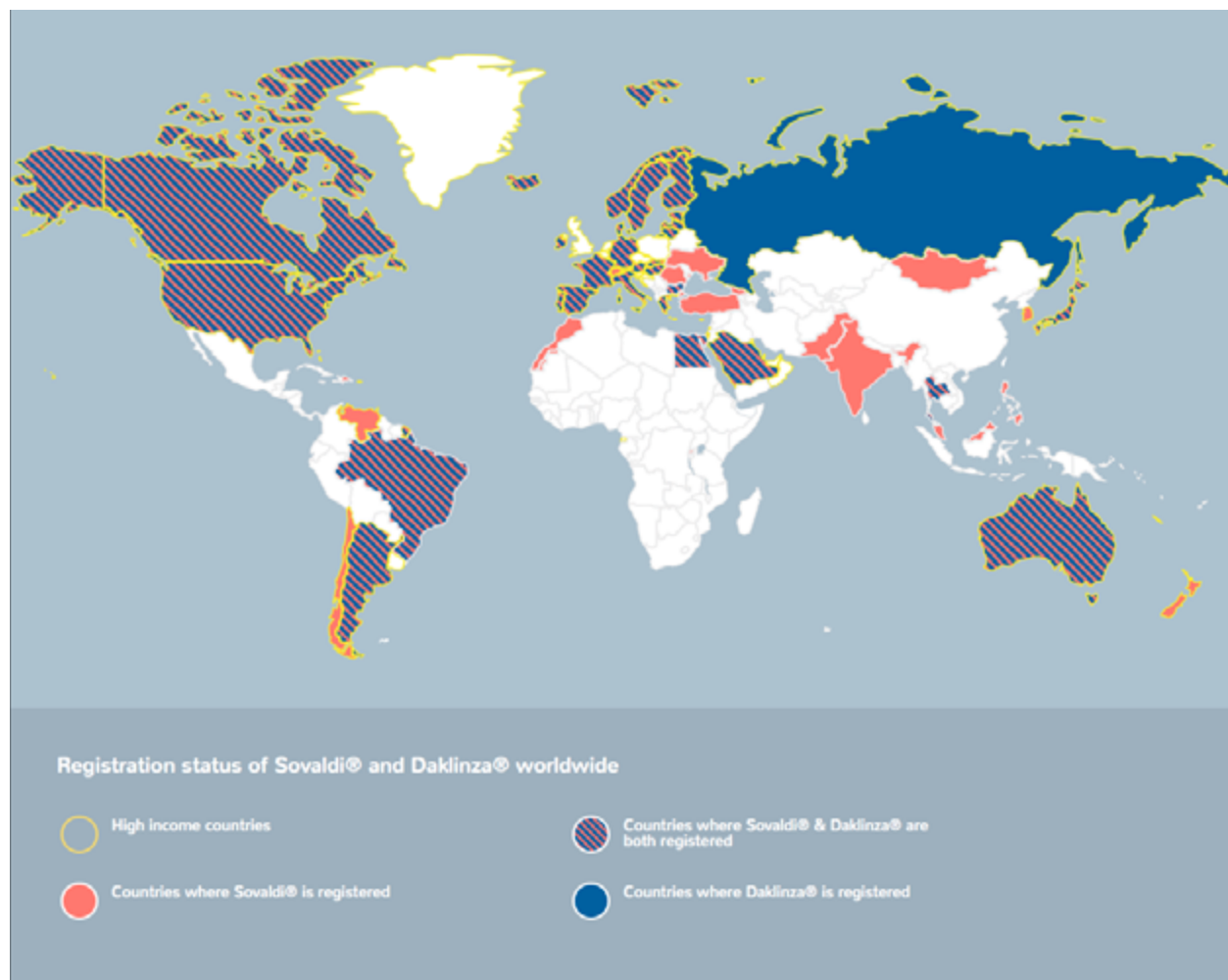
In Figure 3.2, information on the left side of the graph shows where and how much patients must pay for health services out-of-pocket. This indicator does not refer specifically to HCV treatment, but it does assist in giving an overall perspective of general health service access by illustrating where and to what extent patients must pay for these expenditures out-of-pocket.

In many countries, pharmaceutical companies have secured a 20-year patent on their medicines. Patent protection allows originator companies to fix unreasonably high prices, without any competition. Patent protection for the DAA sofosbuvir is not set to expire until 2029. Similarly, the DAAs daclatasvir will remain patent protected until 2027, and simeprevir until 2026.¹¹

11. To learn more: TAG, 2015 Activist Strategies for Increasing Access to HCV Treatment in Low- and Middle-Income Countries By Karyn Kaplan <http://www.treatmentactiongroup.org/sites/g/files/g450272/f/201502/Activist%20Strategies%20for%20HCV%20Tx.pdf>

KEY FINDING #4 Limited Access to HCV Treatment: The Registration Gap

Map 2: The Registration Gap



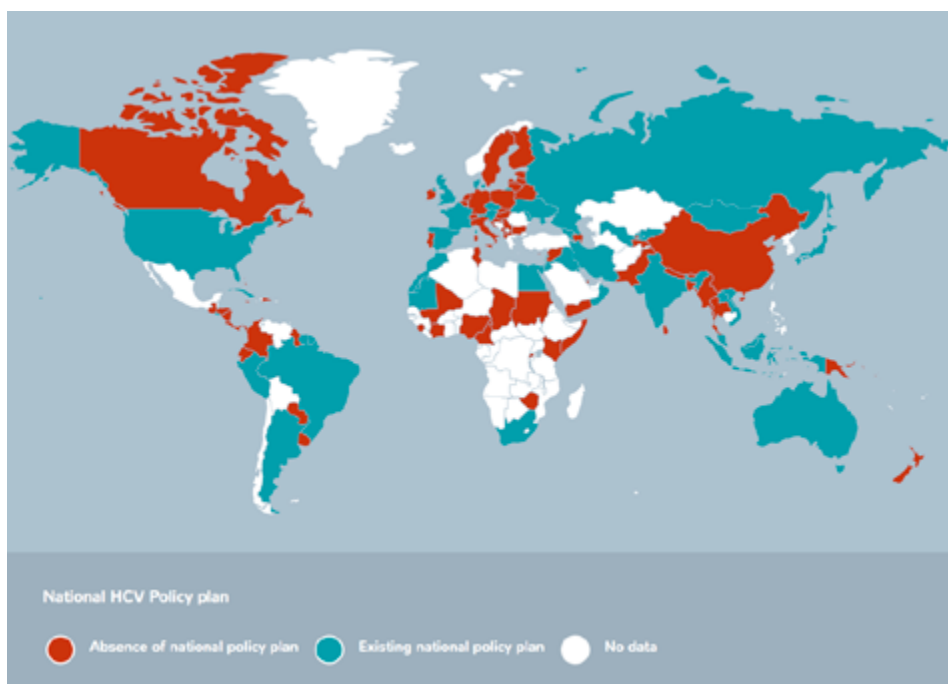
Before drugs can be sold in a country, they must be registered through the national drug regulatory authority. Map 2, to the left, shows the registration status of Gilead’s sofosbuvir (marketed with the brand name Sovaldi®) and Bristol-Myers Squibb’s (BMS) daclatasvir (marketed as Daklinza®). Both drugs are registered almost exclusively in high-income markets. This “registration gap” creates another barrier to treatment access. Although both companies have devised voluntary licensing agreements that cover more than 100 territories, they do not assume responsibility for registering their products so that generic producers can sell DAAs.¹² For example, more than a year after signing a VL, Gilead has registered sofosbuvir in only a handful of African countries (http://mapcrowd.org/en/gilead_s_voluntary_licence).

Of the 23 mapCrowd countries, only Canada, France, and the United States have access to all DAAs (see Figure 3.2). In contrast, many low- and middle-income countries do not have access to any DAAs, because pharmaceutical companies tend to register their drugs only in large markets where high prices can be charged, and generic competition is limited.

12. Gilead’s VL includes 101 countries (<http://www.gilead.com/~media/files/pdfs/other/hcv%20generic%20agreement%20fast%20facts%20101615.pdf>) and BMS’ VL includes 112 (<http://www.bms.com/responsibility/access-to-medicines/Pages/HCV-developing-world-strategy.aspx>).

KEY FINDING #5 Lack of National HCV Policy Plans Worldwide

Map 3: National HCV Policies Worldwide



Map 3 illustrates where there are national HCV policy plans.¹³ Using information from the United Nations Office on Drugs and Crime and the World Health Organization, mapCrowd found data from 119 countries; only 44 (or 37%) have developed national HCV policies. Where policies do exist, they often fail to include strategies for HCV prevention and treatment programs specifically for people who inject drugs. Similarly, harm reduction programs—an essential part of HCV prevention strategies—are rarely mentioned in national HCV policies. Many low- and middle-income countries lack a national HCV policy altogether, most notably in Africa.

These findings point to the overall lack of awareness and political commitment to tackle the HCV epidemic with programs and services for people who inject drugs. Since 2012, WHO has worked to improve national responses to viral hepatitis. In September 2015 it issued the first technical report on the development and assessment of national viral hepatitis plans.¹⁴ WHO announced that “fifty-eight per cent [of Member States] requested technical assistance with the development of a national viral hepatitis plan”.

Excerpts from the WHO Technical Report on the Development and Assessment of National Viral Hepatitis Plans

National health sector plans provide the overall strategic direction for the health sector: it is therefore important that specific planning for priority action areas, such as hepatitis, is aligned with national health sector planning.

It is important to conceptualize national hepatitis planning within the Universal Health coverage (UHC) framework.

CONTENTS OF A NATIONAL HEPATITIS PLAN

- Health information systems
- Providing essential services (Health promotion, Prevention, Testing, Clinical care and treatment)
- Covering populations and achieving equity
- Covering costs

In May 2014, the World Health Assembly adopted resolution WHA67.6, calling for the continued development of comprehensive national policies and programs to address viral hepatitis. The resolution urges Member States to:

- Develop and implement coordinated, multisectoral national strategies for the prevention, diagnosis and treatment of viral hepatitis, including
 - robust surveillance systems to support evidence-based policy-making,
 - Strengthened infection control measures in the areas of food, drinking water, personal hygiene and health-care provision,
 - Increased coverage and uptake of vaccination, harm reduction, screening and treatment programmes,
 - Increased access to antiviral treatment,
 - administrative and legal measures to address viral hepatitis-related stigma and discrimination;
- Promote the involvement of civil society in the development of a national response to viral hepatitis

13. National HCV policy data that supplements mapCrowder information comes from the UNODC World Drug Report 2014 and WHO's 2013 Global policy report on the prevention and control of viral hepatitis.

14. WHO, technical report manual for the development and assessment of national viral hepatitis plans a provisional document, september 2015 http://apps.who.int/iris/bitstream/10665/183726/1/9789241509350_eng.pdf

KEY FINDING #6 Low Treatment Uptake

Yearly treatment uptake is the estimated proportion of adults with chronic HCV treated in one year, over the total estimated number of adults with chronic HCV in a specific country. Worldwide, WHO estimates that only 2.2% of people with HCV receive treatment each year.¹⁵ In Table 1, treatment uptake rates across the 15 mapCrowd countries for which data were available are provided. In half of these countries, less than 0.5% of people with chronic HCV received treatment in 2014. The United States has the highest treatment percentage of treatment uptake in our study: 6.15%. On the low end, only 63 people obtained treatment in Malaysia, representing a treatment uptake rate of 0.02%. In Egypt, where nearly 15% of the general population is infected with HCV, the rate of treatment uptake stood at 1.13%.

With the exception of Portugal, France, and the United States, treatment uptake rates in the mapCrowd countries included here are well below the worldwide average of 2.2%, although many of these countries have national HCV policy plans.

Table 1: Yearly treatment uptake: proportion of adults with chronic HCV who were treated in 2014

Country	Prevalence in general population	Estimated number of viremic adults	Number of people treated in 2014	National HCV Plan	Uptake
Malaysia	2.5%	383,875	63	Yes	0.02%
Indonesia	0.8%	991,126	350	Yes	0.04%
Ukraine	3.0%	709,290	776	Yes	0.11%
Thailand	2.0%	717,800	1,258	No	0.18%
Morocco	1.6%	265,926	747	Yes	0.28%
Russia	4.1%	3,088,005	9,500*	Yes	0.31%
Myanmar	1.8%	502,031	2,000	No	0.40%
Georgia	7.1%	159,196	800	Yes	0.50%
Brazil	1.3%	13,335,24	15,000	Yes	1.12%
Egypt	14.7%	5,728,355	65,000	Yes	1.13%
Tunisia	1.8%	1,017,65	1,500	No	1.47%
China	0.7%	5,142,704	100,000	No	1.94%
Portugal	0.6%	30,592	994	No	3.25%
France	0.8%	248,995	15,000	Yes	6.02%
United States	1.3%	2,031,167	125,000	Yes	6.15%

*Data from 2013

15. Hirschall, G. (2014). Global Hepatitis C Guidelines 2014: recommendations for a public health approach. Presentation, 20th International AIDS conference, Melbourne, Australia. Available at: http://pag.aids2014.org/PAGMaterial/PPT/5322_10896/hepatitis%20-%20unitaid%20iasfinal.pptx

mapCrowd: How to Participate

mapCrowd aims to enhance HCV information and advocacy worldwide. Analyzing data from the 23 countries initially included in mapCrowd and producing key findings is simply the first step in achieving this objective. By adding more contributors and thus more country information, mapCrowd will be able to highlight recent HCV developments with comprehensive, up-to-date data. At the same time, this growing network of advocates will more easily be able to share knowledge and mobilize information to support their views. People with HCV, public health and development practitioners, as well as the larger international health community all stand to benefit from mapCrowd's continued growth.

To accomplish this, we are seeking to identify and enlist more qualified HCV experts to join the mapCrowd project on a voluntary basis. Ideal mapCrowder candidates will be strongly involved in HCV advocacy work in their respective countries, or have a medical or public health background. As data is often highly limited or difficult to obtain, we are looking for candidates who have a strong network of local contacts and a capacity to support national level data collection on a range of topic areas.

Why become a mapCrowder?

There are numerous benefits to participating in the mapCrowd project. As a mapCrowder, you will have the opportunity to:

- Contribute valuable information that will advance global understanding of the HCV epidemic, lead to an informed response and enhance advocacy efforts around the world,
- Connect with a growing, international network of HCV experts and activists,
- Develop and maintain national-level contacts that can support data collection and estimations,
- Raise the visibility of your organization and its mission and objectives.

How do I Join?

If you are interested in becoming a mapCrowder, please visit:

<http://mapcrowd.org/en/inscription>

As more mapCrowders join, the stronger mapCrowd will be at generating data that highlights and helps break down barriers to HCV testing and treatment around the world. Findings based on this data will be examined and publicized in future annual reports.

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