

Abstract #205



The road to elimination of Hepatitis C: Analysis of SVR versus new HCV infections in 91 countries

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WHO targets for elimination of Hepatitis C by 2030:

90% of people infected with HCV are diagnosed

80% of infected people are treated

Database: country-level rates of diagnosis, treatment in 2016

Research question: are we on the road to elimination of HCV

Polaris Observatory 2016: <http://polarisobservatory.org>

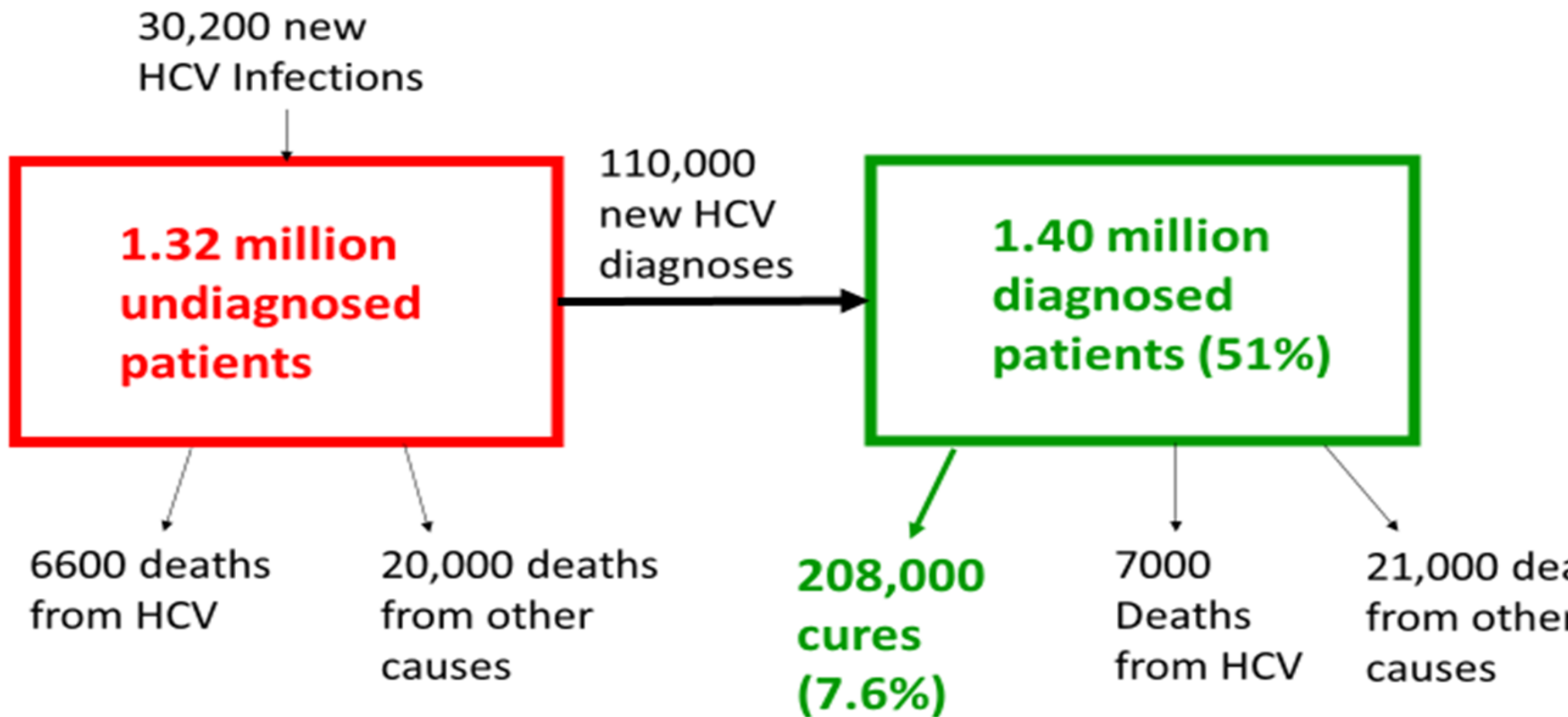
- Total viraemic infections
- New HCV infections
- Numbers treated (assumed 90% SVR rate)
- Percentage of patients diagnosed, new diagnoses
- HCV related deaths (0.5% per year)
- Non-HCV related deaths (1.5% per year)
- For countries with missing data, regional averages were used

change in prevalence, 2016-2017:

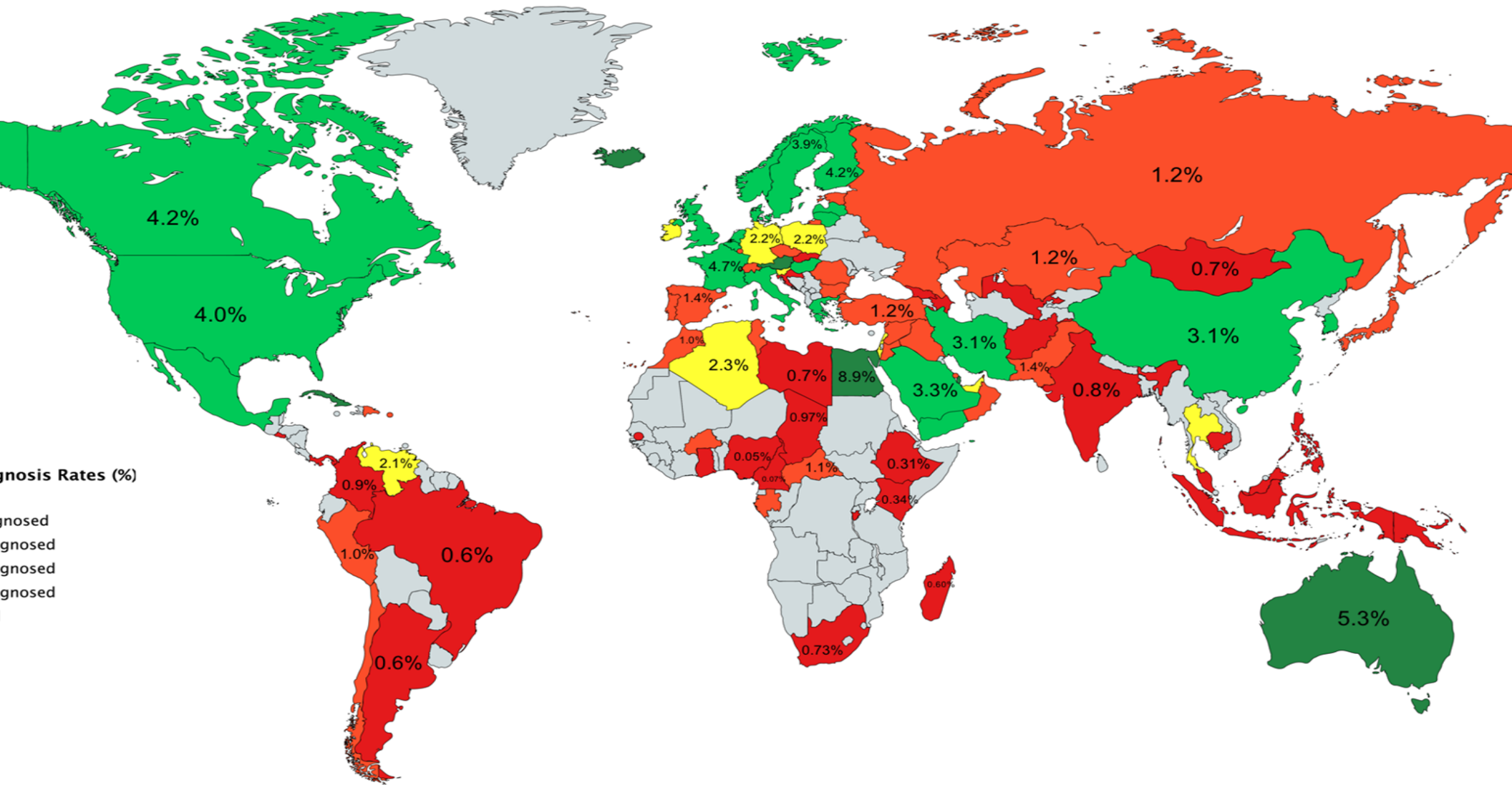
HCV infections in 2016

- + new HCV infections
- cures
- HCV-related deaths
- non-HCV related deaths

Diagnosis and treatment of HCV Data assumptions for USA, 2016



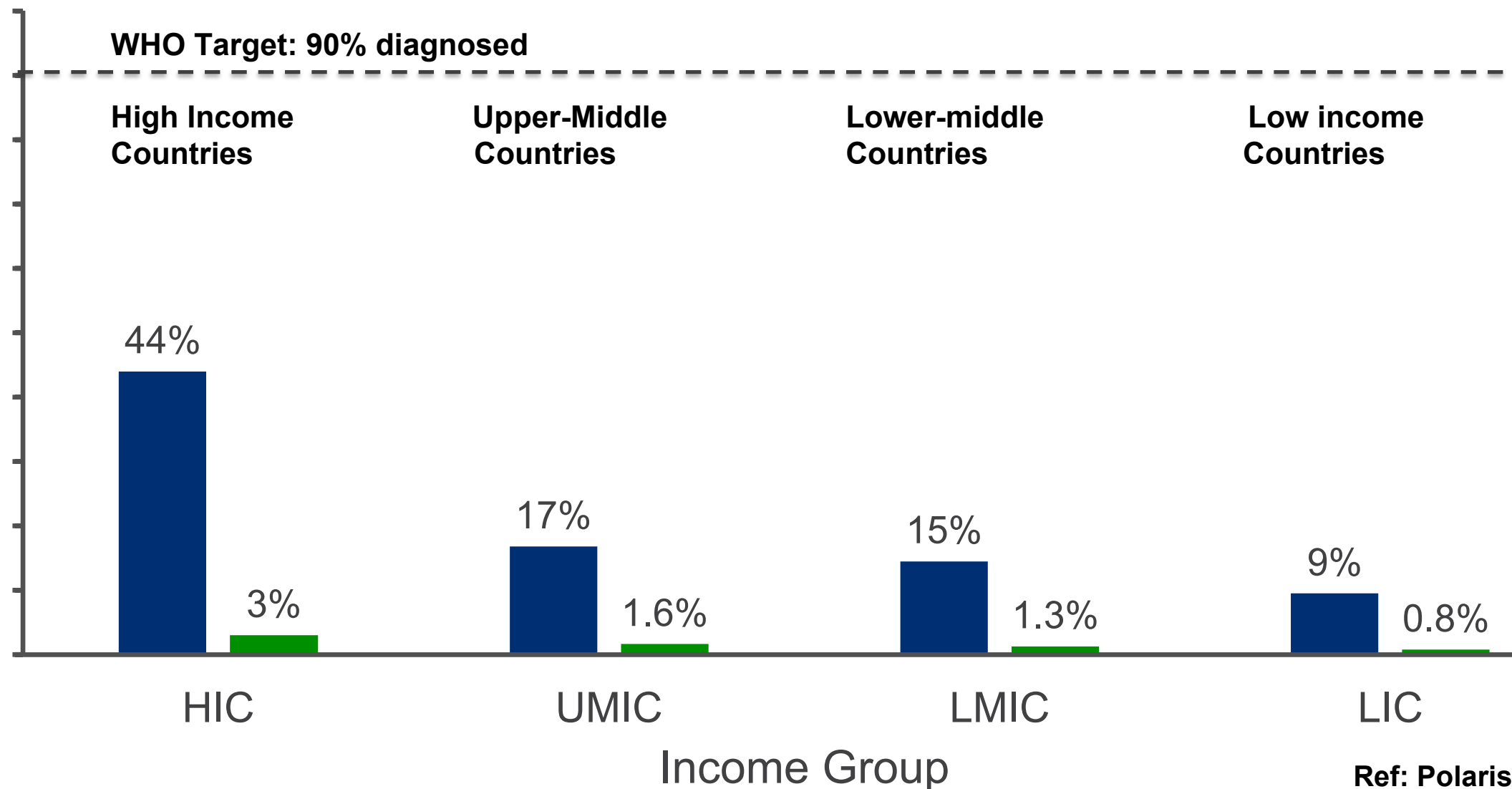
Percent new HCV diagnosis in 2016



Diagnosis Rates (%)

Diagnosed
Diagnosed
Diagnosed
Diagnosed

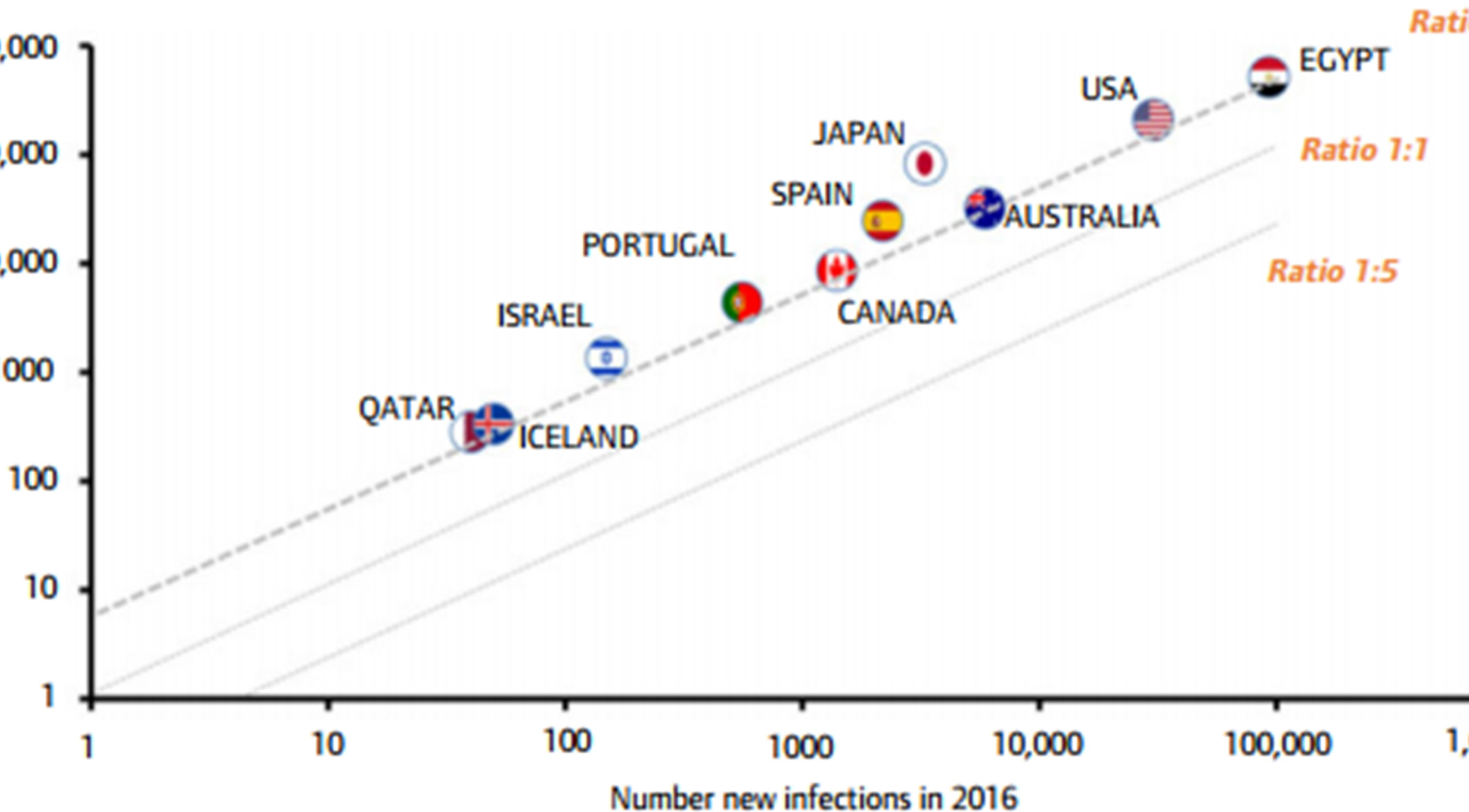
Diagnosis by Gross National Income



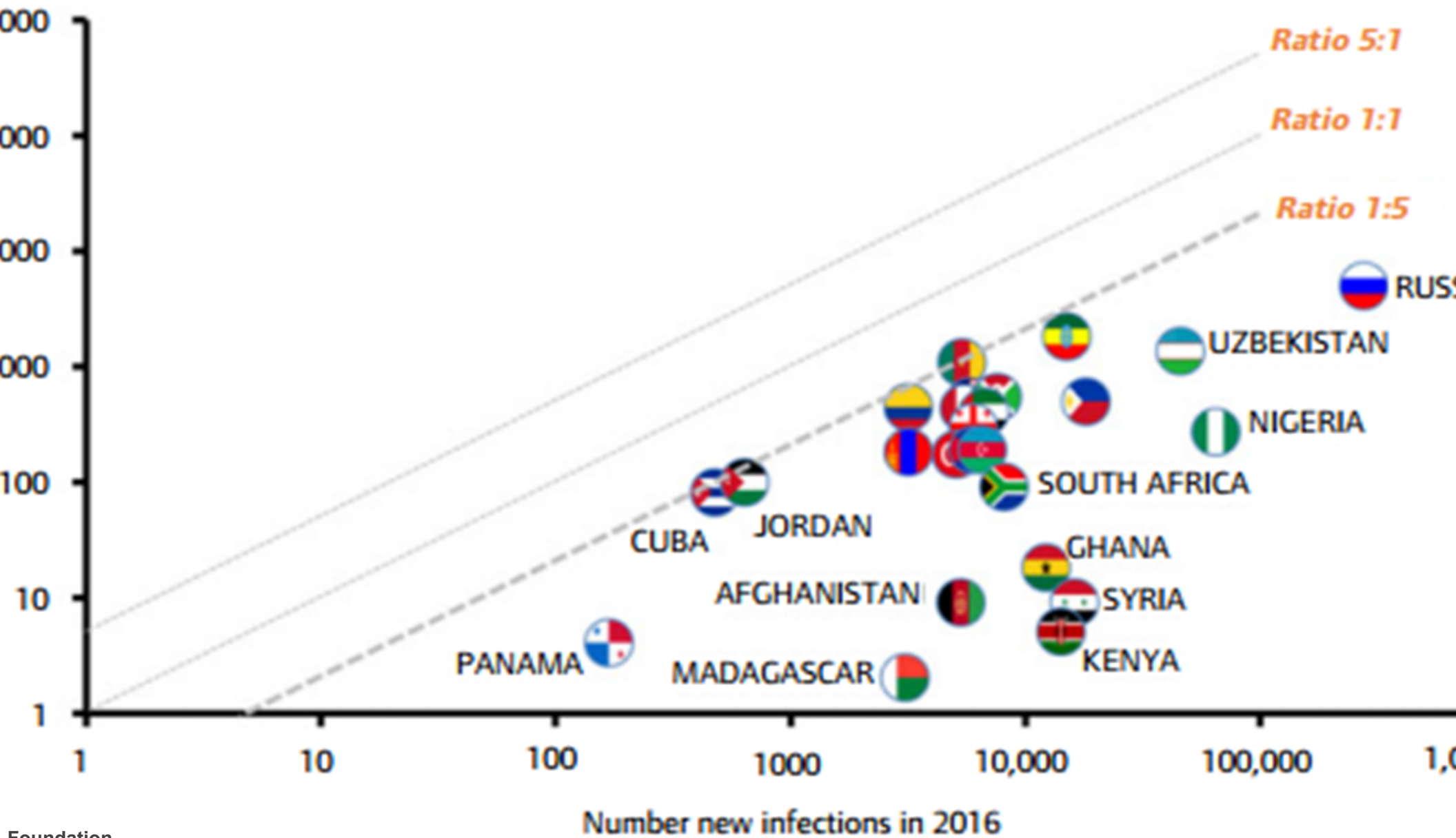
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■ Diagnosis Rate 2016 ■ New Diagnosis Rate 2016

Ref: Polaris
databa

Patients cured per new HCV infection: countries



New HCV infections per patient cured: countries

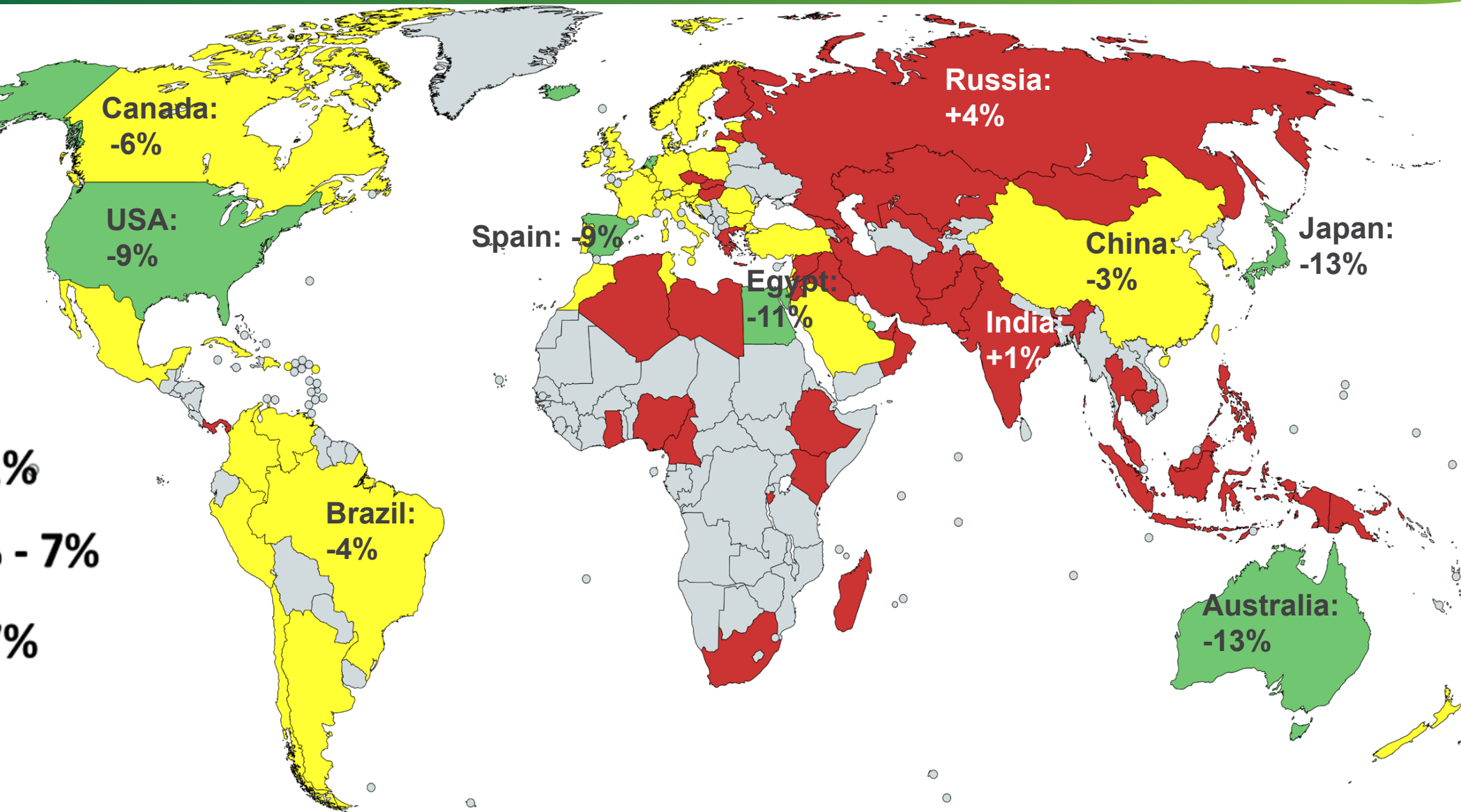


Changes in HCV prevalence: 2016-2017



	HCV Epidemic 2016	New HCV Infections	Cures	HCV Related Deaths	Non HCV Related Deaths	HCV Epidemic 2017	Net C
North America	29,564,900	574,330	456,552	147,825	443,474	29,091,380	- 473,524
Western Europe	6,507,700	322,800	26,110	32,539	97,616	6,674,236	+ 166,536
South America	3,513,000	27,807	48,140	17,565	52,695	3,422,407	- 90,593
Asia & Middle East	7,399,470	156,660	542,724	36,997	110,992	6,865,417	- 534,053
Australia	2,920,000	31,600	216,450	14,600	43,800	2,676,750	- 243,250
Africa	5,069,000	130,800	3,805	25,345	76,035	5,094,615	+ 25,615
Europe	2,364,430	35,440	105,821	11,822	35,466	2,246,670	- 117,760
Total	69,563,426	1,597,877	1,512,827	347,818	1,043,452	68,257,207	- 1,306,219

Changes in HCV prevalence: 2016-2017



%
- 7%
%

Results: “diagnostic burn-out”



Spain and Portugal could soon reach the stage where there are no more diagnosed patients available for treatment:

In this stage, cure of HCV is limited by rates of new HCV diagnosis, which are currently low.

“Diagnostic burn-out” – potential outcomes, based on 2016 data

Country	HCV Epidemic	Diagnosed before 2016	New HCV Diagnoses	Cures in 2016	Outcome
Spain	1.8 million	235,000 (13%)	10,000 (0.6%)	43,000 (2.4%)	Dx Burn-out in 2020
Portugal	328,000	140,000 (43%)	5,500 (1.7%)	25,000 (8%)	Dx Burn-out in 2020
Italy	96,000	37,000 (39%)	1,300 (1.3%)	4,400 (4.6%)	Dx Burn-out in 2020

Estimates of HCV prevalence and new infections are changing as new data become available – this analysis needs to be updated regularly.

We cannot assume that current rates of diagnosis and treatment will be maintained. “Warehousing” of patients may already have finished in some countries. Many patients could be diagnosed with HCV, but unable to access or afford HCV DAAs.

In 2016, there were 1.6 million people newly infected with HCV, versus 1.5 million people cured.

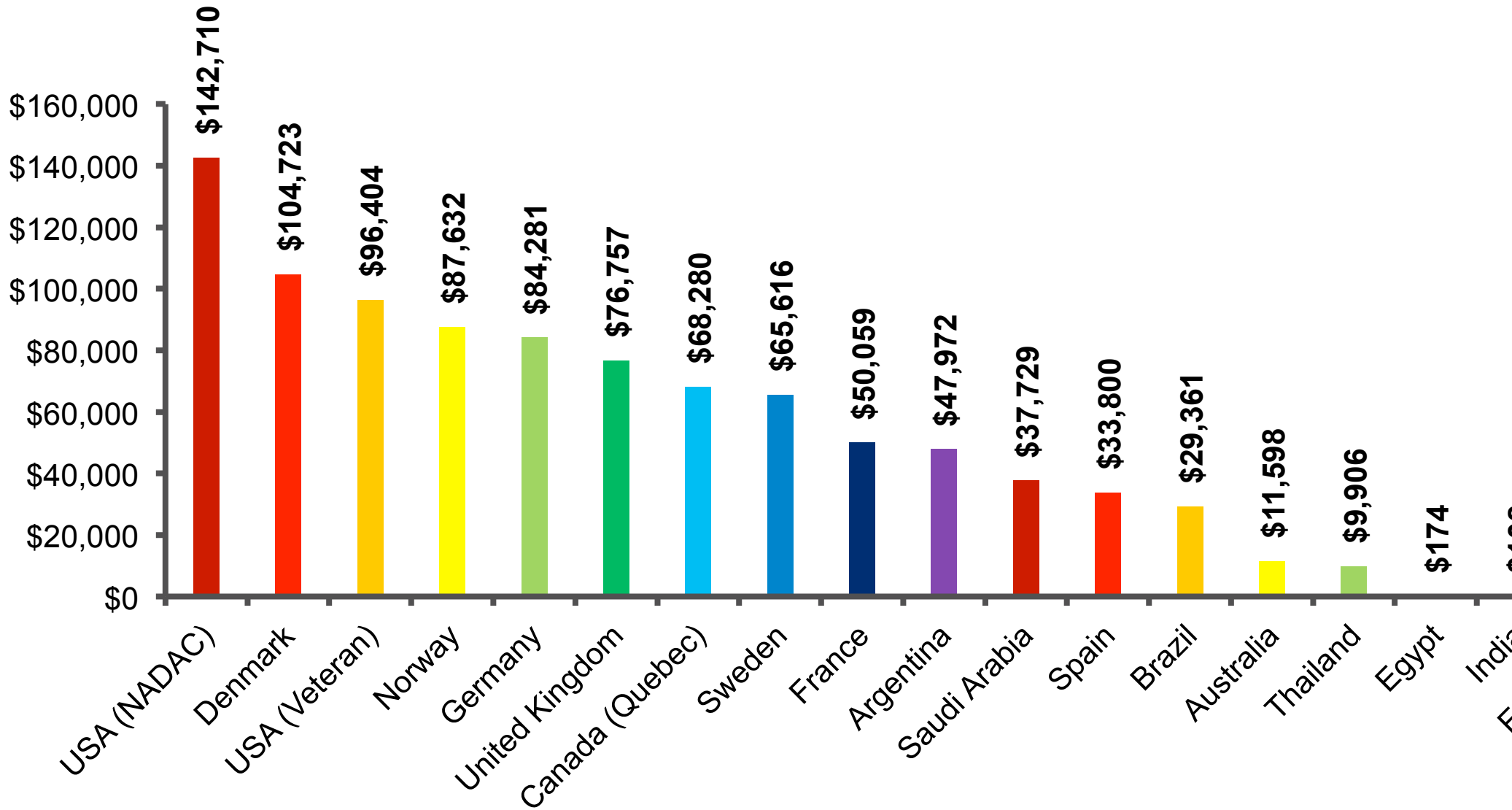
The worldwide HCV epidemic fell from 69.6 million in 2016 to 68.3 million in 2017 – a reduction of only 2%

This reduction is not large enough to achieve elimination of HCV by 2030

Between 6-7 million people need to be diagnosed and treated each year

Harm reduction needs to be intensified, to lower infection rates

Costs versus costs of HCV DAAs



The real cost of HCV elimination



DF/DCV can now be produced for <\$50 per 12-week treatment course

\$50 per course, it would cost \$3.5 billion to treat all 70 million people infected with HCV worldwide

Global sales of HCV DAAs from 1Q2014 to 2Q2017 average \$1.6 billion per month.

Therefore, all 70 million people with HCV worldwide could be treated for the equivalent of 10 weeks of commercial sales of the HCV DAA