Leveraging the AIDS response for Global HCV Elimination

Jürgen Rockstroh **Department of Medicine I** University Hospital Bonn, Bonn, Germany

90-90-90 **Targets Workshop**

July 21-22, 2018 • Amsterdam

IAYA

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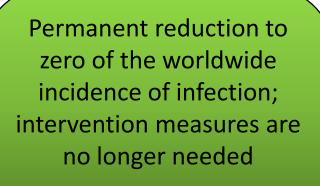


Conflict of Interest: JKR

- Honoraria for lectures and/or consultancies from Abbott, AbbVie, Gilead, Hexal, Janssen, Merck, and ViiV.
- Research grants from Dt. Leberstiftung, DZIF, NEAT ID.

Eradication and Elimination



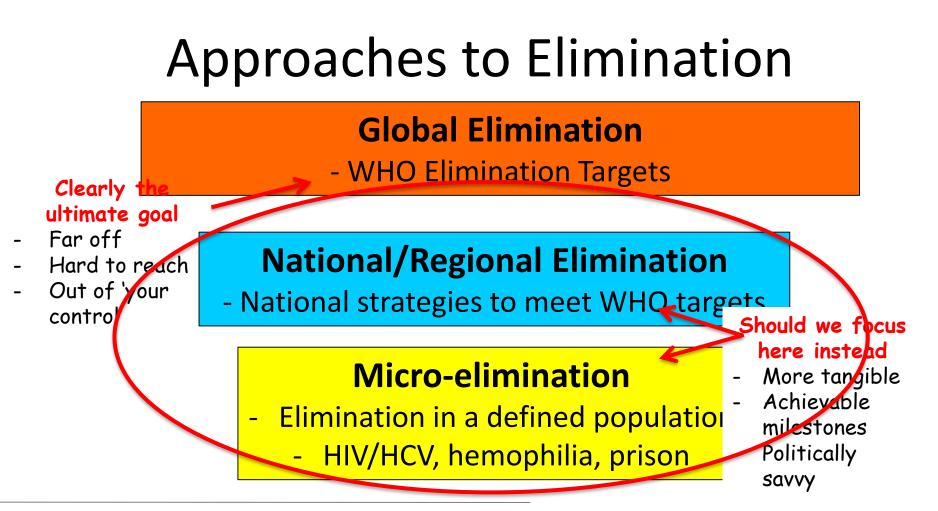


Example: Smallpox

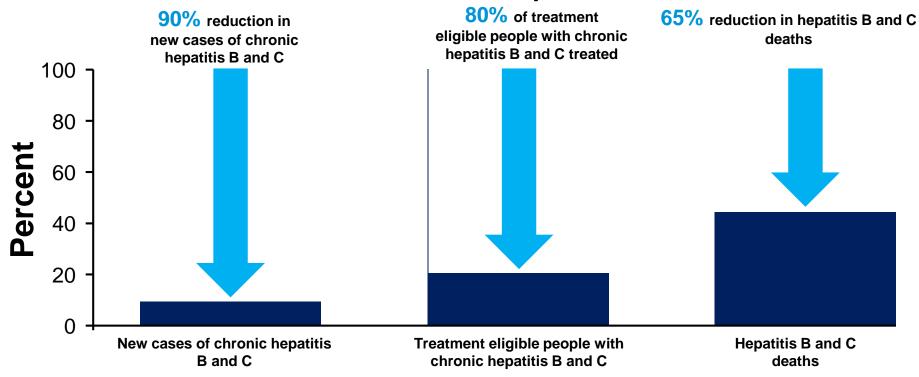


Reduction to zero of the incidence of infection in a defined geographical area; continued intervention measures are required

Example: Poliomyelitis

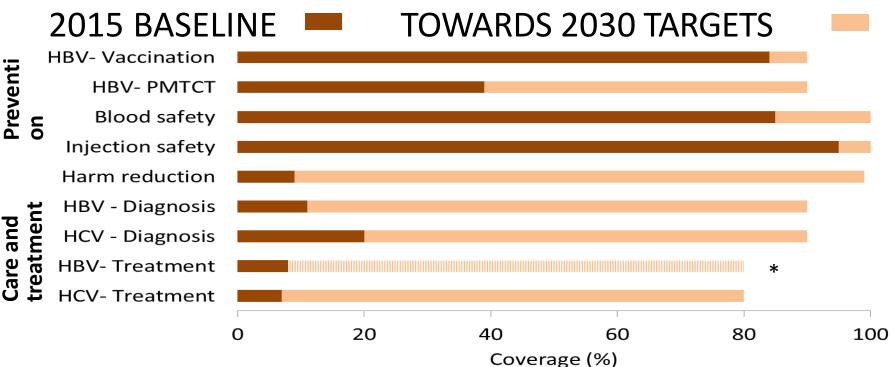


Global targets achieved if viral hepatitis is controlled by 2030



World Health Organization. Draft global health sector strategies. Viral Hepatitis, 2016–2021. Available at: http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_32-en.pdf?ua=1 (accessed September 2016)

GLOBAL ELIMINATION STRATEGY:



* Measurement of progress on HBV treatment target currently limited by the absence of data on the proportion of persons eligible and the absence of a functional cure

How close are we to reaching the 90-90-90 targets for HIV?

■ Full region ■ West ■ Centre ■ East 100% <u>90%</u> 90% 81% 86% 80% 73% 83% 80% 78% 70% 72% 60% 61% 50% 50% 40% 45% 43% 30% 34% 20% 10% 0%

PLHIVDiagnosedOn ARTSource: ECDC. Dublin Declaration monitoring 2018; validated unpublished data.

Virally Suppressed

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Blog

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Access to medicine: The test of our common humanity 4/17/2018 3:37:00 PM

By Jürgen Rockstroh, IAS Governing Council member and Head of the HIV Outpatient Clinic at the University of Bonn in Germany

Perhaps the greatest achievement of the HIV response has been its success in bringing antiretroviral therapy to 20.9 million people (as of June 2017). This historic accomplishment, which in 2016 alone averted 1.2 million deaths, was made possible by actions that led to a 99% decline in the cost of first-line regimens. As a result of these actions, the right to treatment access is broadly recognized.

Yet, there is a genuine risk that this momentous breakthrough could remain limited to HIV. To date, no similar set of actions has been undertaken to ensure access to medicines to treat cancer, heart disease, viral hepatitis or other leading killers.

Hepatitis C virus (HCV) offers a test case of whether the world will apply the lessons we have learned from HIV treatment access to other major causes of death.

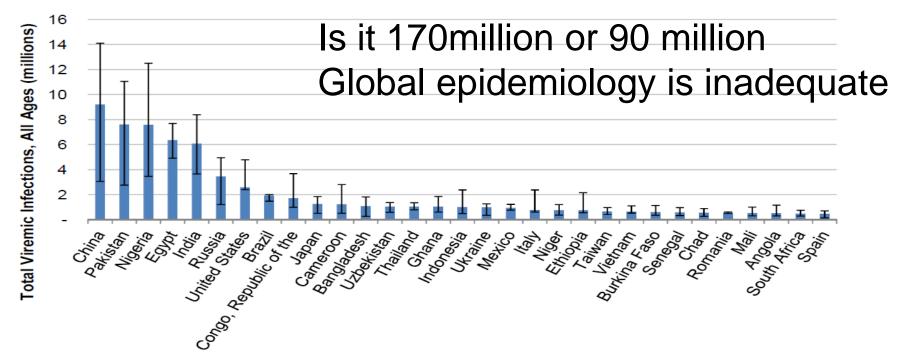
HCV is nothing short of a global crisis. Worldwide, nearly twice as many people are living with HCV than are living with

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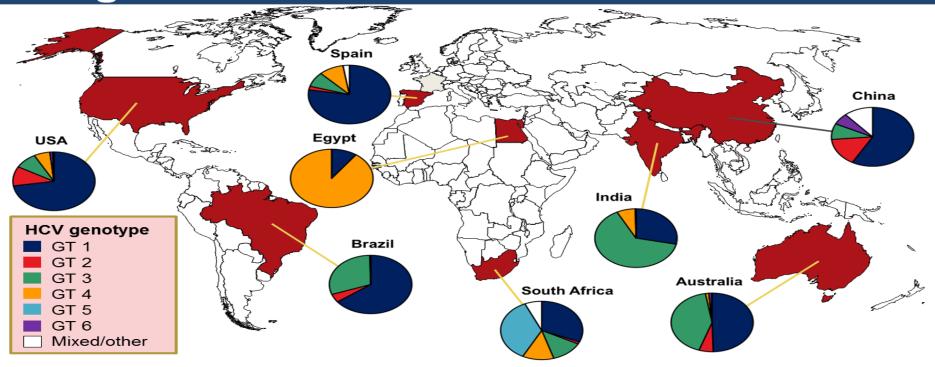
Total Viremic HCV Infections

Countries Responsible for 80% of Global Infections

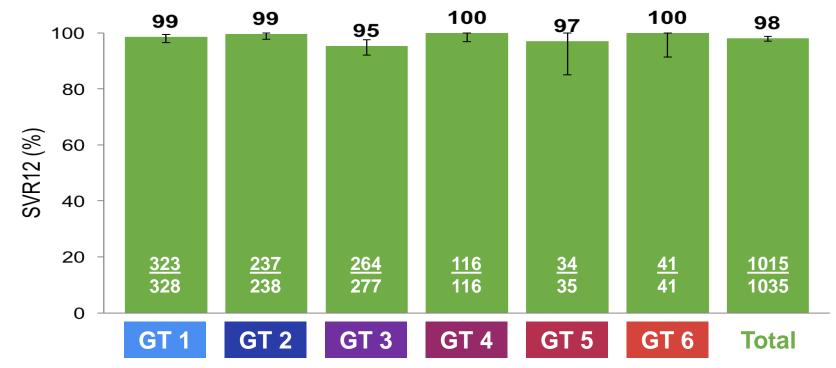


Gower, E., Estes C., Hindman, S., Razavi-Shearer, K., Razavi, H., Global epidemiology and genotype distrong to the second second

Different HCV genotypes are prevalent or predominate in different geographical regions

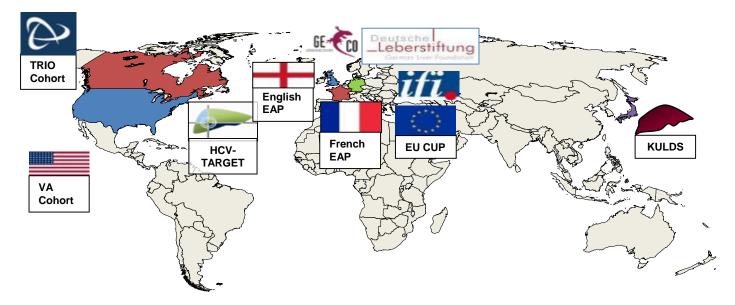


High SVR rates under pangenotypic all oral DAA therapy Pooled ASTRAL 1-3, SOF/VEL 12 Weeks



Feld JJ, et al.; ASTRAL-1 Investigators. Sofosbuvir and Velpatasvir for HCV Genotype 1, 2, 4, 5, and 6 Infection. N Engl J Med. 2015;373:2599-607 and Foster GR, et al; ASTRAL-2 Investigators; ASTRAL-3 Investigators. Sofosbuvir and Velpatasvir for HCV Genotype 2 and 3 Infection. N Engl J Med. 2015;373:2608-17.

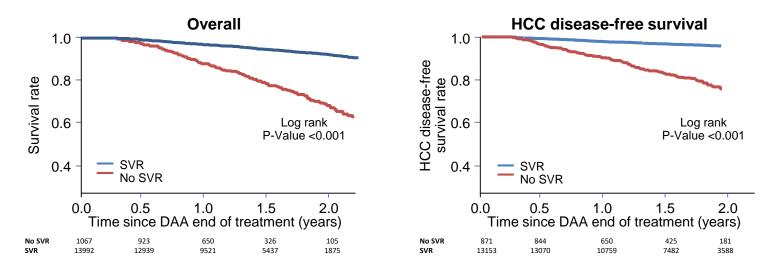
Real-world experience with DAA-based therapy - Multiple cohorts hit 95% SVR rate



EU CUP (Compassionate Use Programme) includes Austria, Germany, Norway, Sweden, The Netherlands and UK. EAP: Early Access Programme; KULDS: Kyushu University Liver Disease Study

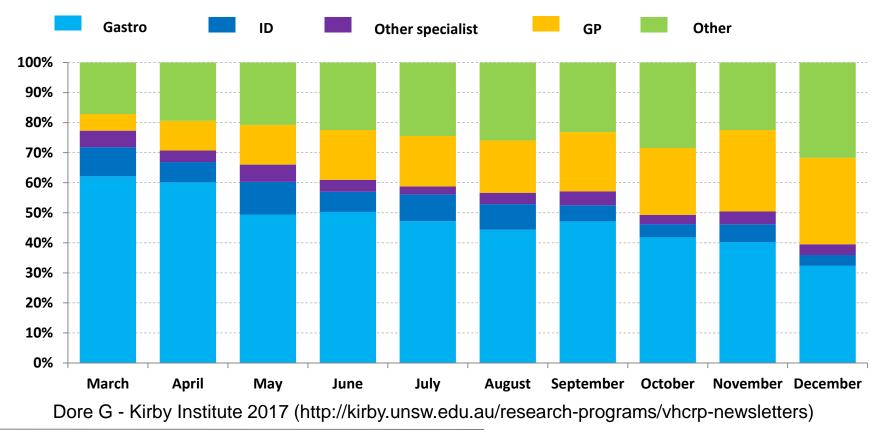
DAA therapy is effective: the benefits of cure have been proven

Overall survival and HCC disease-free survival curves for advanced chronic liver disease patients (ACLD) with and without SVR: Veterans Affairs HCV Clinical Case Registry

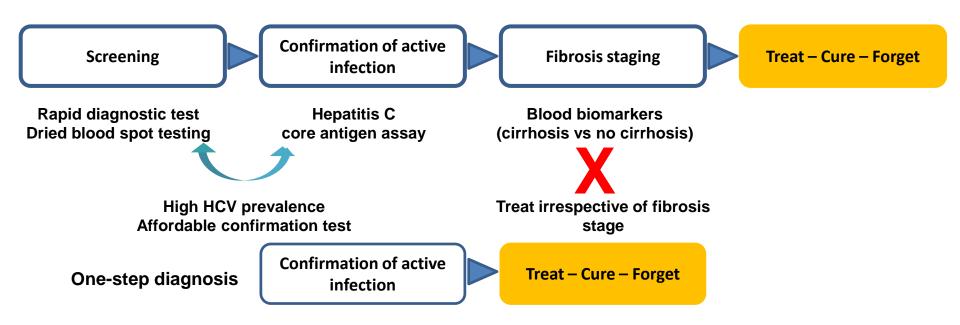


Backus L, et al. AASLD 2017. Oral 78

Australia leading the way

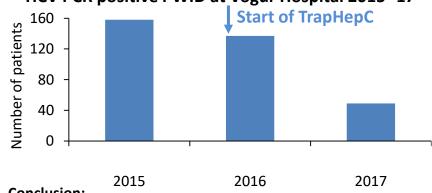


Diagnosis should be affordable and fit for purpose



Marked reduction in the prevalence of HCV among PWID during 2nd year of the Treatment as Prevention (TraP HepC) programme in Iceland

- Nationwide treatment programme initiated Jan 2016, aiming for elimination of CHC infection as a public health threat. Estimated 800–1000 HCV-infected individuals in Iceland
- Vogur Addiction Hospital, a key sentinel site where most PWID in Iceland seek treatment; provides an opportunity to monitor trends in HCV prevalence among PWID



HCV PCR positive PWID at Vogur Hospital 2015–17

- After 2 years of TrapHep C, 80–85% of all patients evaluated or initiated on DAA treatment
- HCV prevalence among PWID:
 - 2015: 42.6% among those admitted for addiction treatment prior to TraP HepC
 - 2017: 11.6% representing a 73% reduction (p<0.001)

- Conclusion:
 - A major scale-up in HCV treatment all patient groups has been successfully initiated in Iceland
 - This has already translated into a significant reduction in prevalence among PWID
 - Key population, should be the focus of treatment scale-up to curtail spread of HCV

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Runarsdottir V, et al. ILC 2018, #1705 (PS-095)

Hepatitis C care cascade in the country of Georgia after 2 years of starting national hepatitis C elimination programme

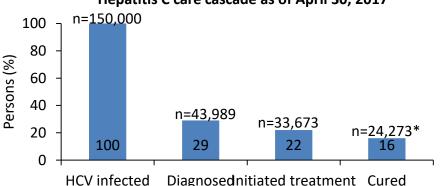
- Aim: to assess progress towards 90-95-95 targets after 2 years of a national elimination programme
- Methods:
 - The proportion engaged in stages of care was quantified from total estimated number of HCV-infected individuals
 - Data on diagnosis, treatment and cure were extracted from national hepatitis C elimination programme treatment databases (28 April 2015 through 30 April 2017)
 - SVR was calculated using both per-protocol and mITT analysis
- Results:
 - Efficacy analysis included 25,359 persons:
 - 24,758 persons with complete SVR data
 - 601 persons who discontinued treatment
 - Total SVR rate:
 - Per-protocol: 98.0% (24,273/24,758)
 - mITT: 95.7% (24,273/25,359) in mITT
 - SVR rate
 - 79.5% for SOF-based regimen
 - 98.5% for LDV/SOF
- Conclusions:
 - Georgian hepatitis C treatment model ensures high cure rates already exceeding 2020 target with LDV/SOF and without newer-generation DAAs
 - Scaling-up testing and diagnosis, along with effective linkage-to-care services are needed to achieve elimination

*At the time of analysis, 24,758 patients were assessed for SVR

Tsertsvadze T, et al. ILC 2018, #4804 (PS-096)

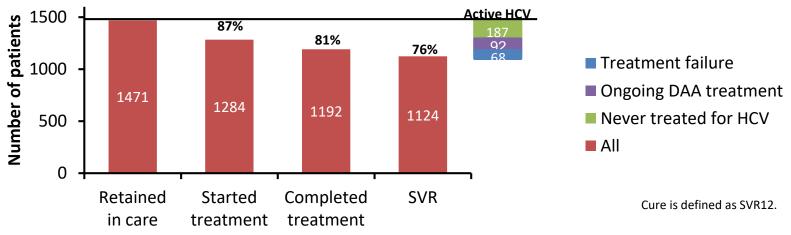
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Hepatitis C care cascade as of April 30, 2017



Successful treatment intervention among HIV/HCV coinfected MSM in The Netherlands

- 15 months after unrestricted access to DAAs: 76% of co-infected patients successfully treated
- Of MSM, 83% are cured (6% treatment result is pending)



Treatment cascade of the Dutch HIV/HCV-co-infected population up until February 2017

51% decrease in acute infections observed among HIV+ MSM in 2016 compared with 2014

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Boerekamps A, et al. Clin Infect Dis 2018;66:1352–9; Boerekamps A, et al. Clin Infect Dis 2018;66:1360–5

Successful treatment intervention among HIV/HCV co-infected MSM in Switzerland: HCVree study

- Systematic population-based screening identified 203 potential HCV spreaders
- 89% of identified HCV-infected MSM accepted DAA treatment
- SVR rate = 99.5% • 49% decrease 92.5% decrease in acute infections in chronic infections 200 **Total number of** 147 150 infections 100 31 50 16 12 0 Oct 2015–Jun Oct 2015–Jun Mar 2017–Nov Mar 2017–Nov 2016 2017 2016 2017 Phase A Phase C Phase A Phase C

All the parts matter

Have your ducks in order...before you start



- Treatment with no screening → Egypt
 - > 1M treated but without screening program...empty treatment centers!
- Screening with no treatment → Brazil
 - Screened >28M people in 1 year...but still low treatment rates
- Treatment and screening with no prevention → many countries
 - Limited or no harm reduction services...new infections and reinfection

Feld J CROI 2018

Summary

- Less than 2% of the global HCV population has been treated, reflecting major gaps in the HCV care cascade
- Patients and communities must be engaged and retained in the care cascade to maximise the benefits from advances in DAA therapy
- Many barriers to diagnosing and treating patients exist, especially in regions with a shortage of specialists and lack of medical infrastructure
- Learning from the HIV response and using the HIV treatment infrastructure could be the way forward to establish better HCV care
- Education and awareness campaigns, and new innovations for screening, diagnosis and linkage to care require urgent scale-up to engage and treat all patients – and to achieve HCV elimination by 2030

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