Role of Public Health Care system in the Management of Hepatitis C

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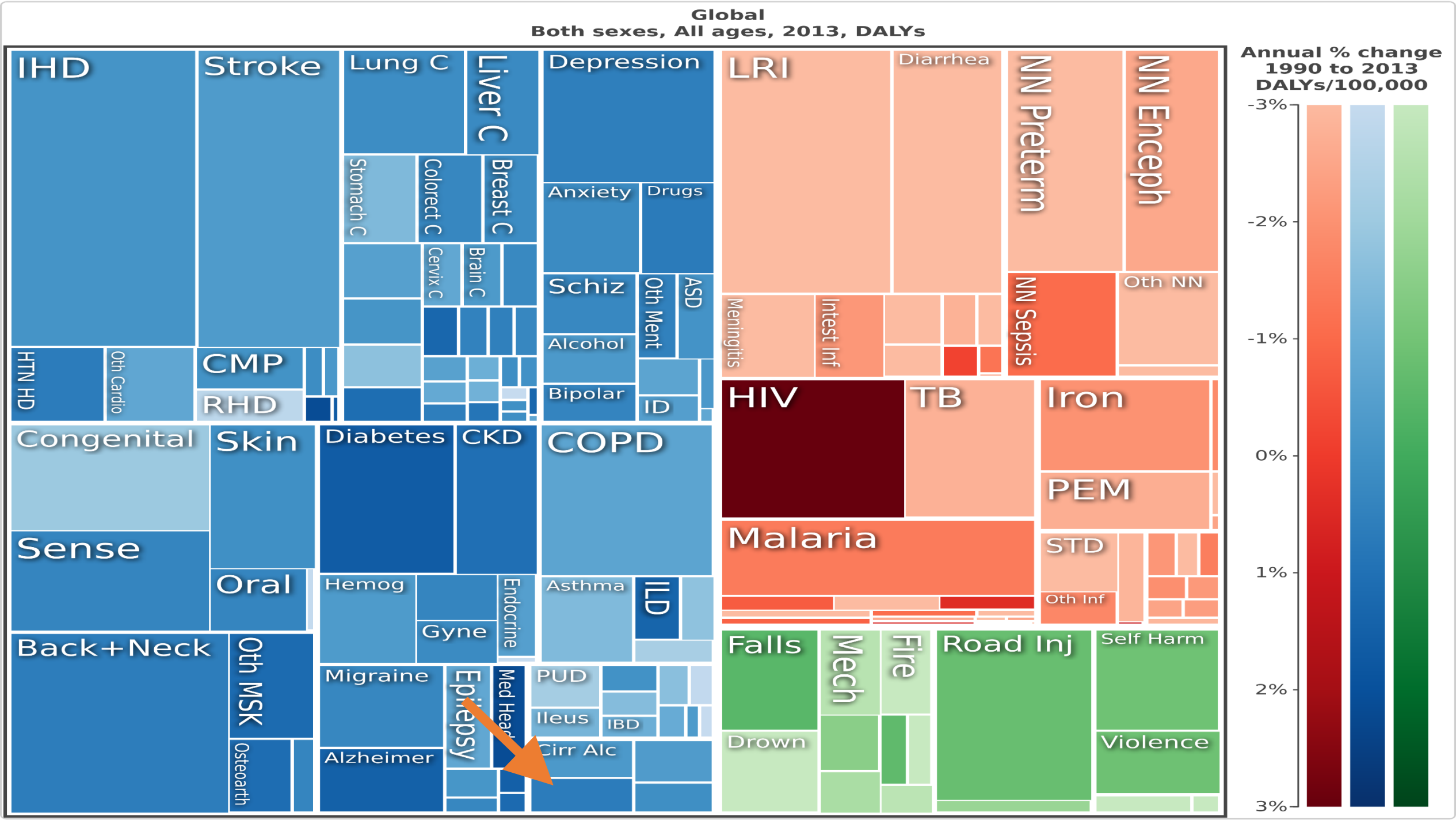
Eight official global public health campaigns by WHO

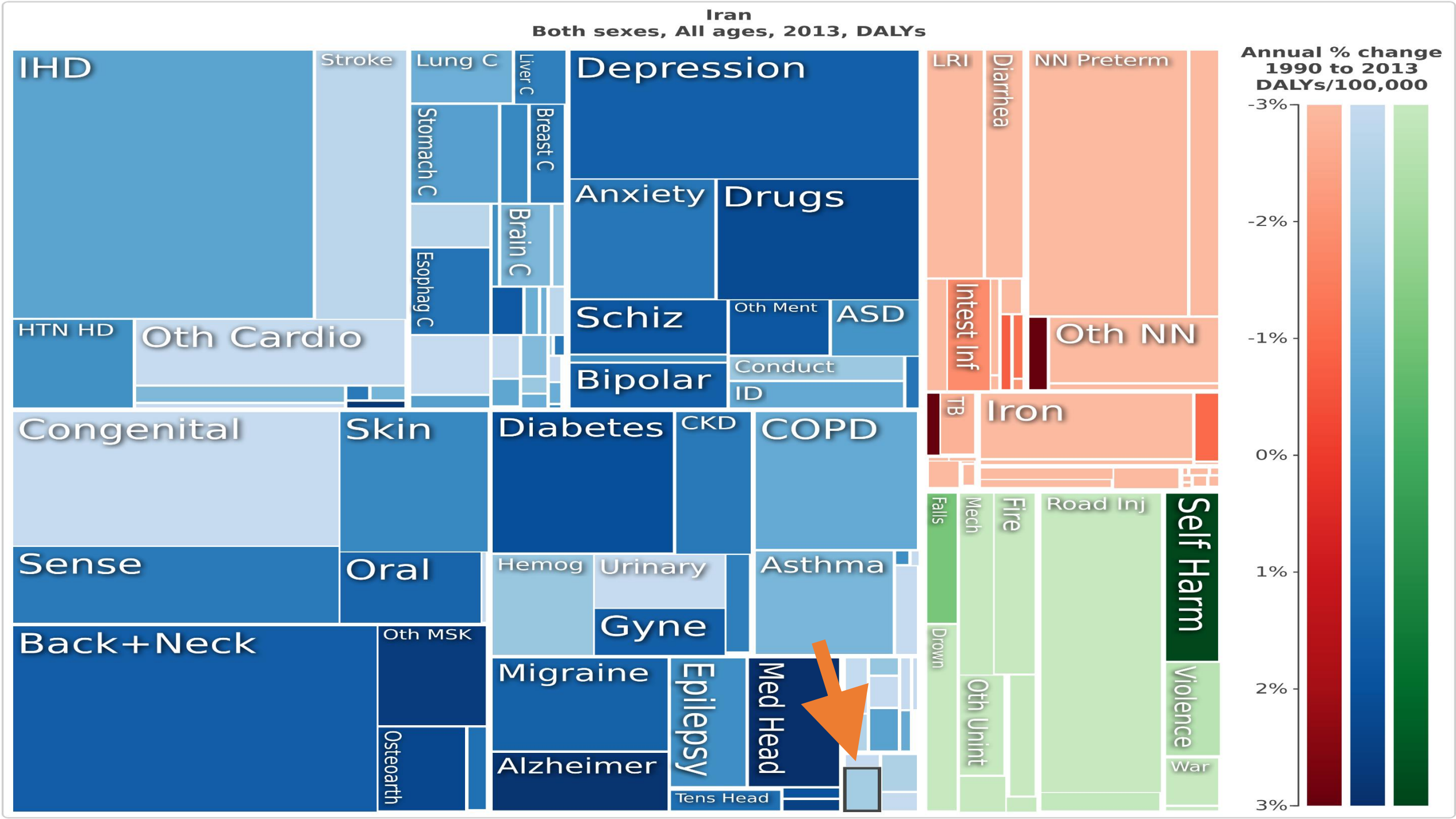
- World Health Day
- *World Hepatitis Day*
- World Blood Donor Day
- World Immunization Week
- World Tuberculosis Day
- World No Tobacco Day
- World Malaria Day
- World AIDS Day

World Hepatitis Day

- Since 2011
- 28th July (7th Mordad)
- In honor of Nobel Laureate Baruch Samuel Blumberg's birthday, discoverer of HBV

- World Hepatitis Day 2016 will be… elimination.


Global
Both sexes, All ages, 2013, DALYs
IHD
Stroke
Lung C
Liver C
Depression
HTN HD
Oth Cardio
CMP
RHD
Stomach C
Colorect C
Breast C
Cervix C
Brain C
Anxiety
Drugs
Schiz
Oth Ment
ASD
Alcohol
Bipolar
ID
LRI
Diarrhea
NN Preterm
NN Enceph
Meningitis
Intest Inf
NN Sepsis
Oth NN
HIV
TB
Iron
PEM
Malaria
STD
Oth Inf
Congenital
Skin
Diabetes
CKD
COPD
Sense
Oral
Hemog
Gyne
Endocrine
Asthma
ILD
Back+Neck
Oth MSK
Osteoarth
Migraine
Epilepsy
Med Head
PUD
Ileus
IBD
Alzheimer
Cirr Alc
Falls
Mech
Fire
Road Inj
Self Harm
Drown
Violence
Annual % change
1990 to 2013
DALYs/100,000
-3%
-2%
-1%
0%
1%
2%
3%


Iran
Both sexes, All ages, 2013, DALYs
IHD
Stroke
Lung C
Liver C
Stomach C
Breast C
Brain C
Esophag C
Depression
Anxiety
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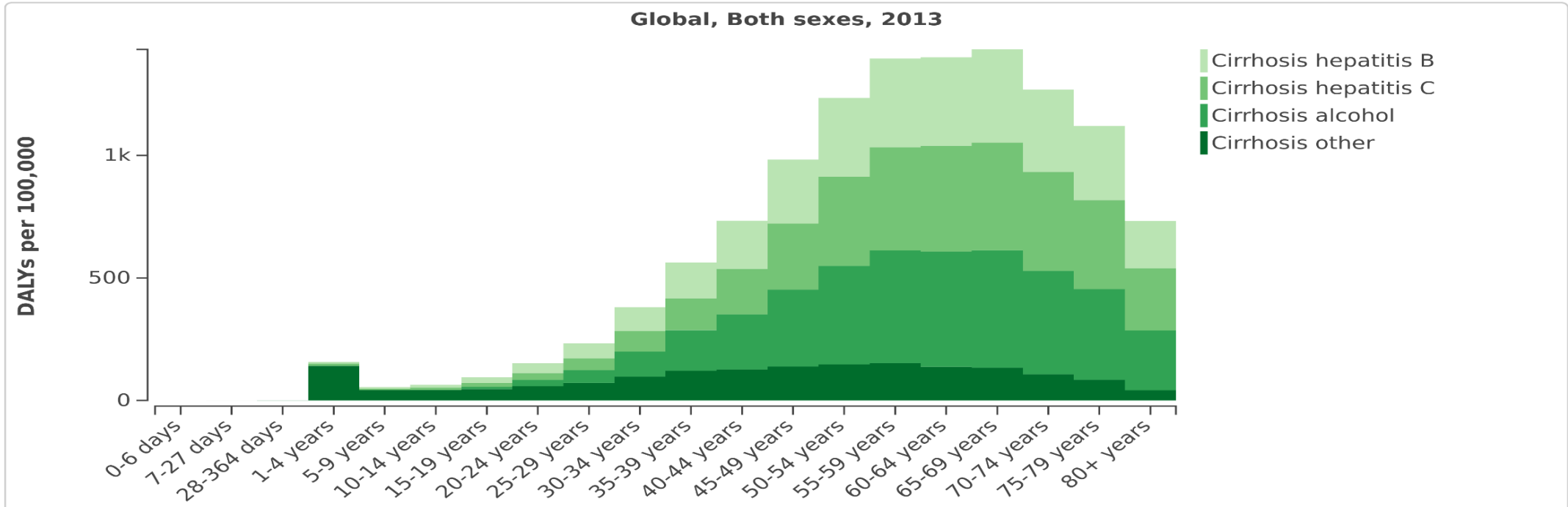
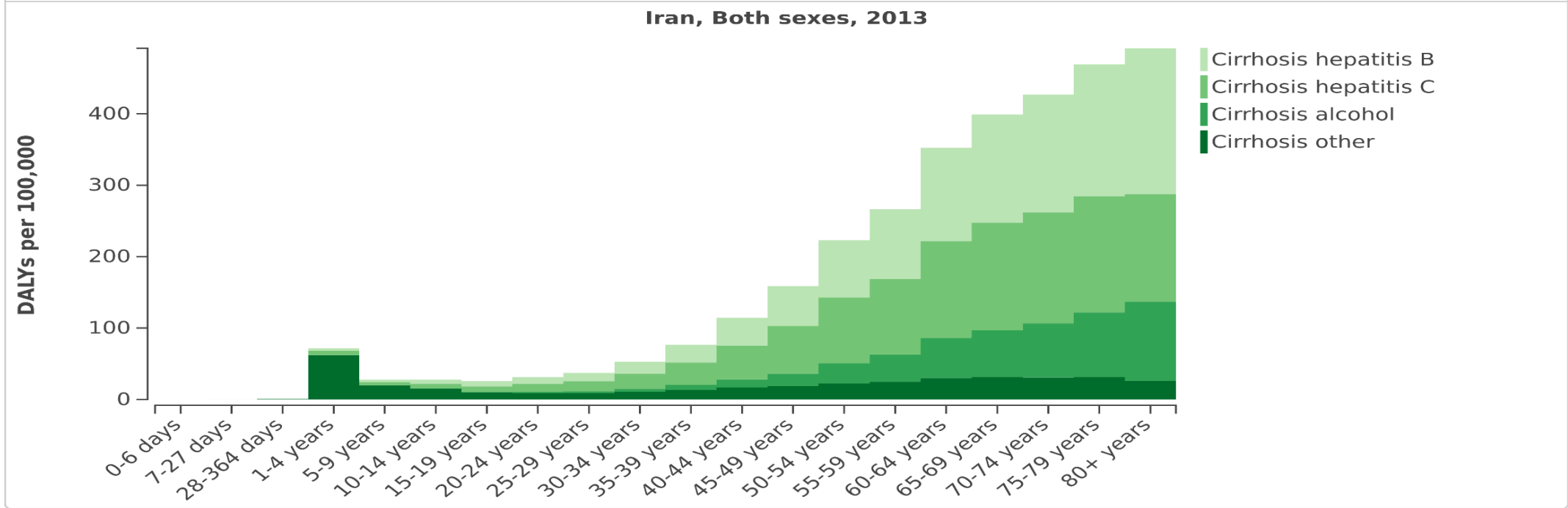
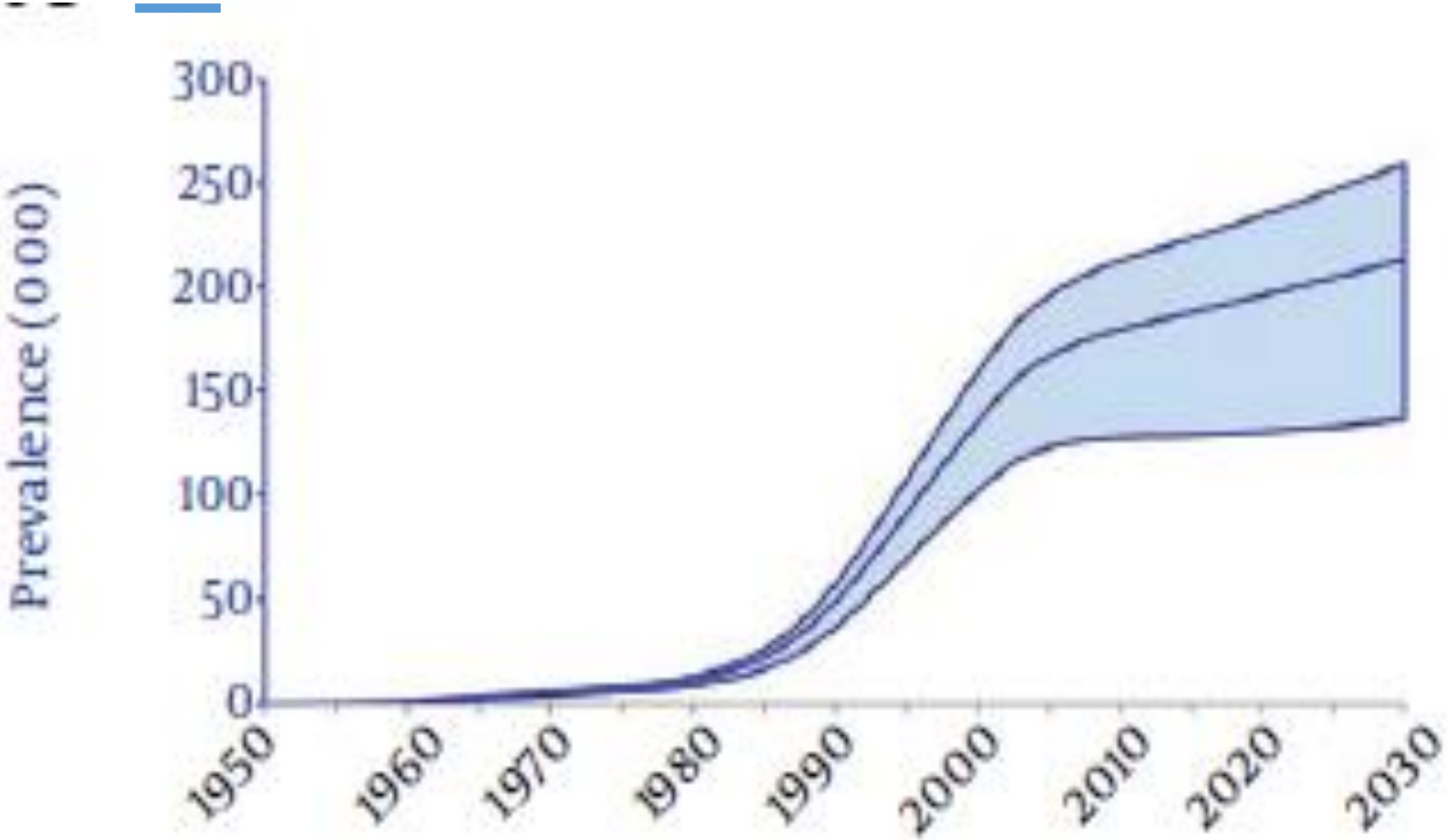
GBD of HCV

- 0.41% of DALY Globally , 0.68% increase per yr
- 0.17% of DALY in Iran , Change -2.14% per yr



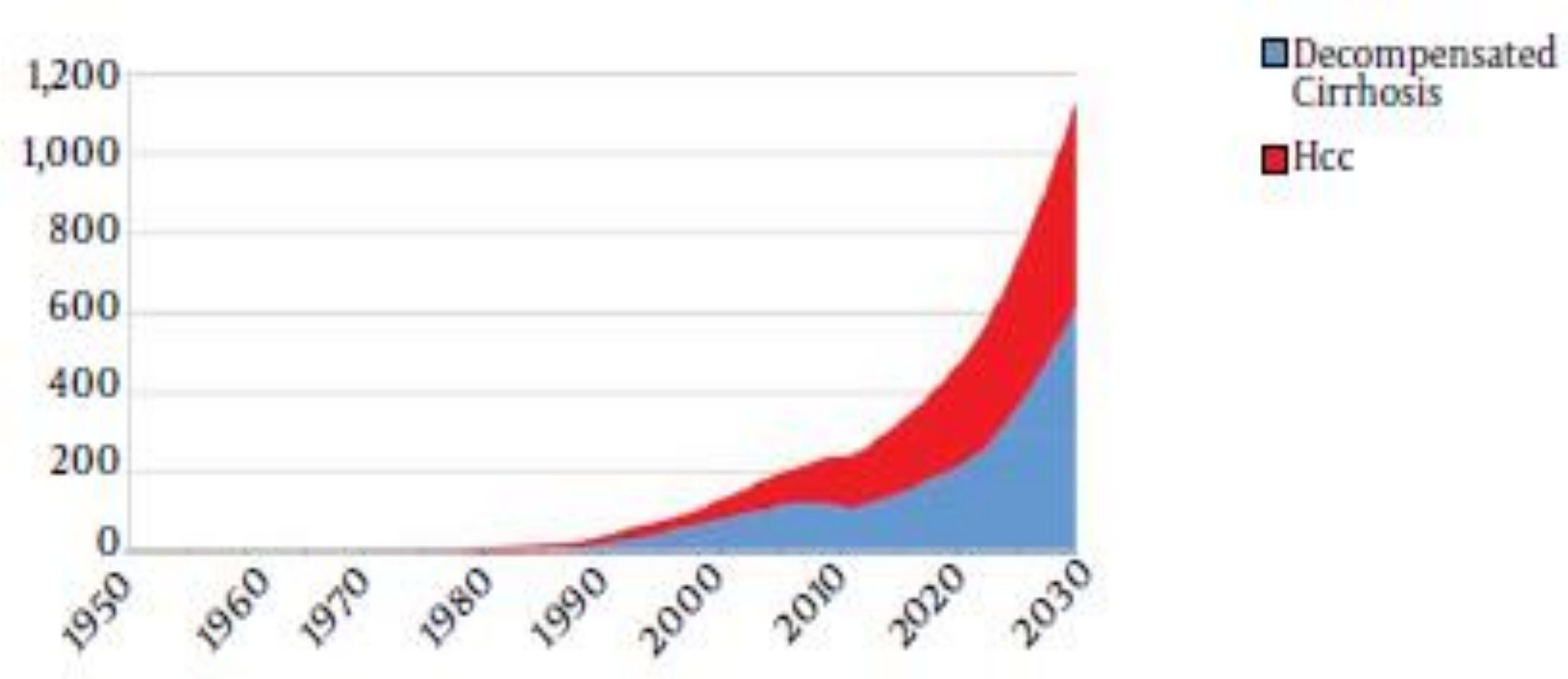


Total number of individuals living with HCV infection In IR-Iran



Hajarizade et al .Hepat Mon. In Press(In Press):e37234.

Number of individuals with HCV-related decompensated cirrhosis and HCC in IR -Iran



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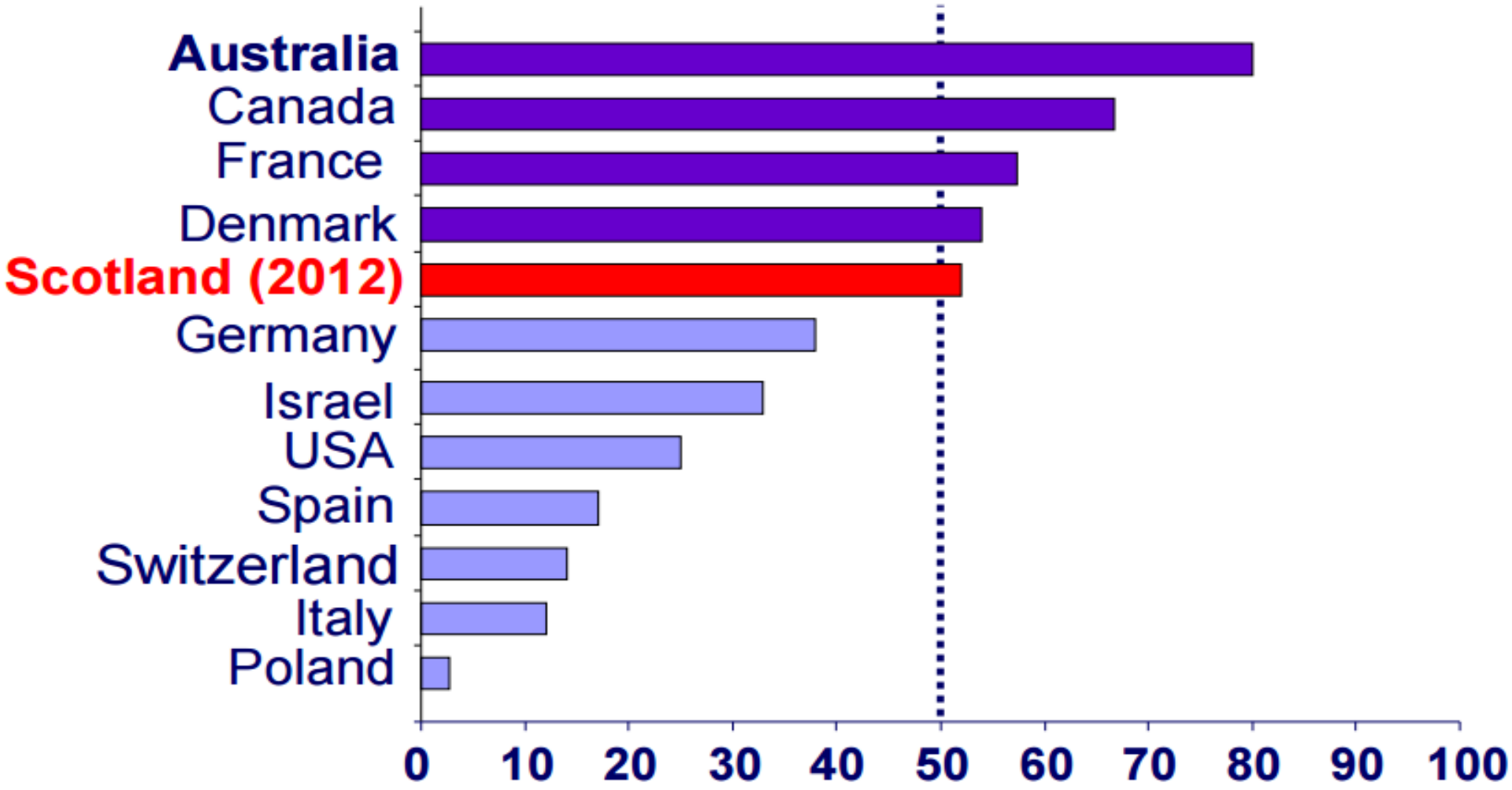
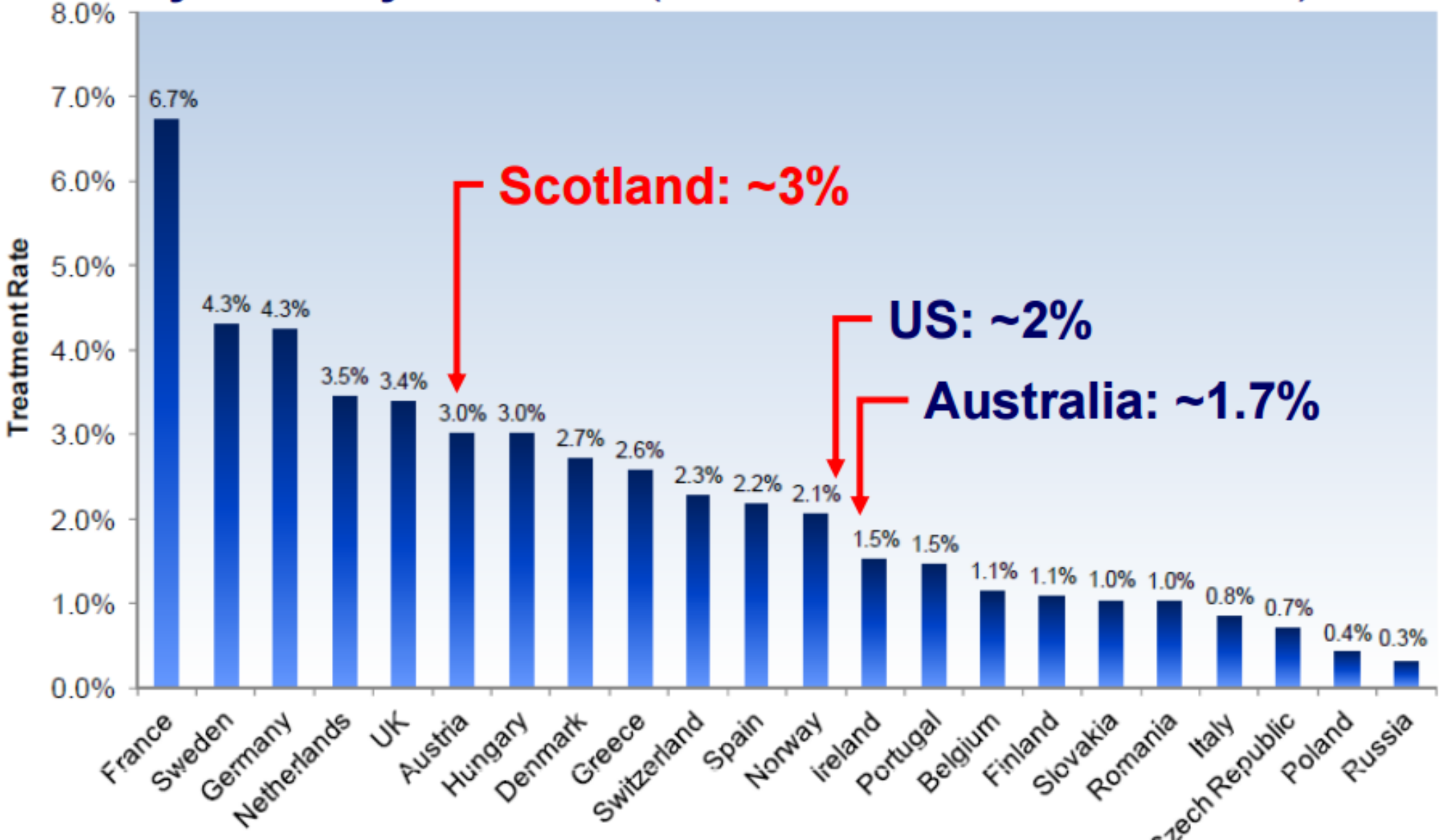


Estimated % of infected population diagnosed

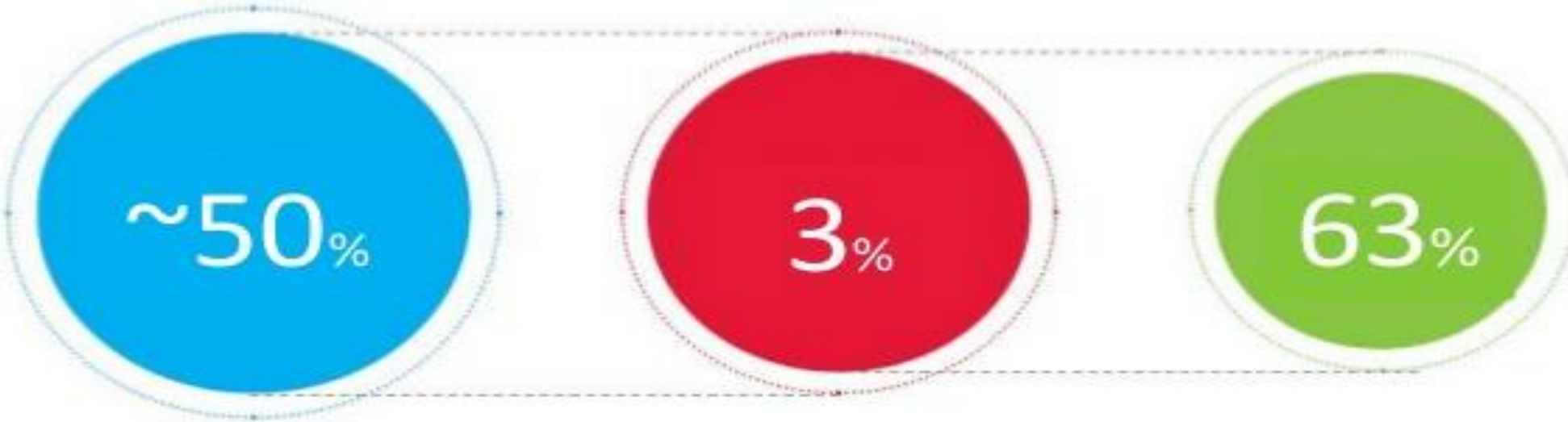
Cornberg et al. Liver International (2011).

Estimated uptake of treatment in chronic HCV population by country for 2010 (H. Razavi et al. EASL, 2013)



HCV care cascade in the UK

'The great unknown'



214,000 with HCV[1]
~100,000 diagnosed

6000 per year[2]

World Health Organization

1. Public Health England. Hepatitis C in the UK 2015 report. July 2015.
2. Harris RJ et al. J Hepatol 2014;61:530–7.

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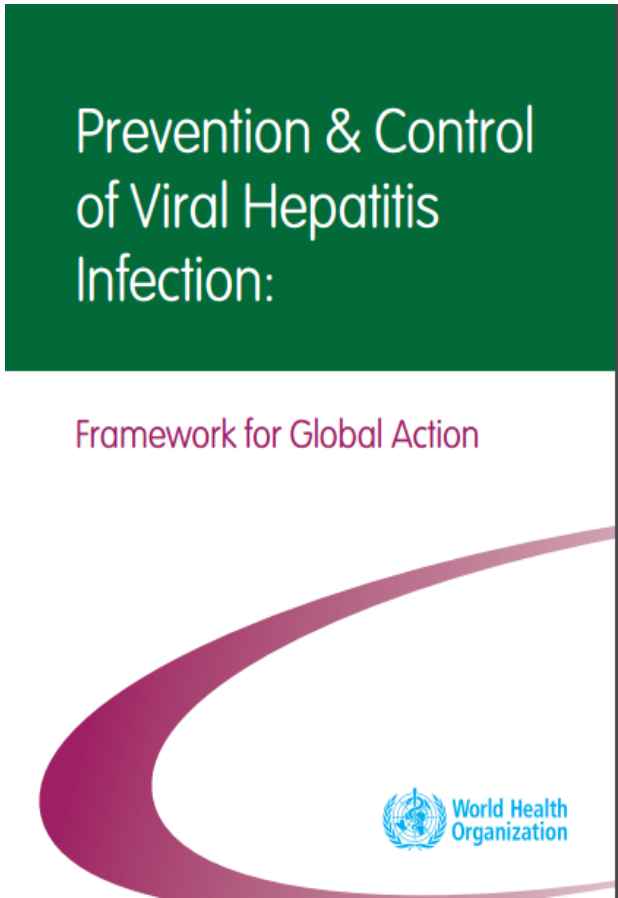
Prevention and Control of Viral Hepatitis Infection: Framework for Global Action

Axis 1: Raising awareness, promoting partnerships, and mobilizing resources

Axis 2: Evidence-based policy and data for action

Axis 3: Prevention of transmission

Axis 4: Screening, care and treatment



WHO 2012

IRAN HEPATITIS NETWORK

Official network of iranian research centers in the field of hepatology and viral hepatitis

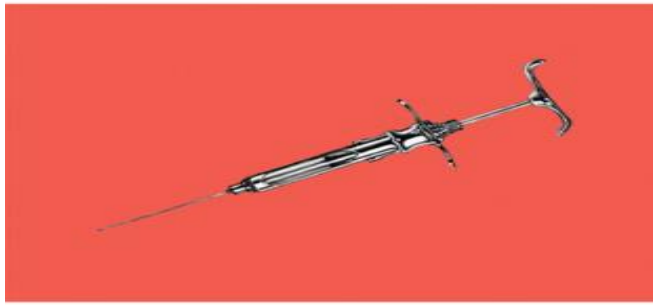
Surveillance System

- Is there any?
- Data in lab ,OPD , private clinics, in hospitals
- Research vs surveillance
- Epidemiologic data KEY factor, data linkage techniques developed
- Clinician and Public Health leadership
- Advocacy and support groups
- Strong governance
- Program managed
- Political partnership

Are we missing HCV cases?

Sero-prevalence surveys are helpful

What not to Share Postcards



WHATNOTTOSHARE.COM

The Hepatitis C Trust is the UK national hepatitis C charity. We provide patient based support, information, advocacy and representation for people with hepatitis C and are committed to raising awareness and lowering the stigma of this disease amongst the general population.

Our website provides reliable, comprehensive information on all aspects of hepatitis C and is updated regularly.

www.hepctrust.org.uk

0845 223 4424

Our Helpline is run by trained staff and volunteers, all of whom have, or have had and cleared, the virus. We provide information and support for those worried about, or affected by, hepatitis C.

It is open Monday to Friday from 10.30am to 4.30pm.
Calls are confidential and are charged at an average of 3.5p per minute although network charges may vary.

All calls are confidential

Copies of our full confidentiality procedure are available on request

We are a member of the Telephone Helplines Association

The Information Standard

Are you at risk of hepatitis C?

THE HEPATITIS C TRUST

Patient based information, support and advocacy
London Office: 27 Crosby Row, London SE1 3YD
Edinburgh Office: 5 Charlotte Square, Edinburgh EH2 4DR
Telephone: 020 7089 6220
Helpline: 0845 223 4424
Website: www.hepctrust.org.uk

Charity Registration Numbers
(England & Wales): 1104279 (Scotland): SC039914
June 2011

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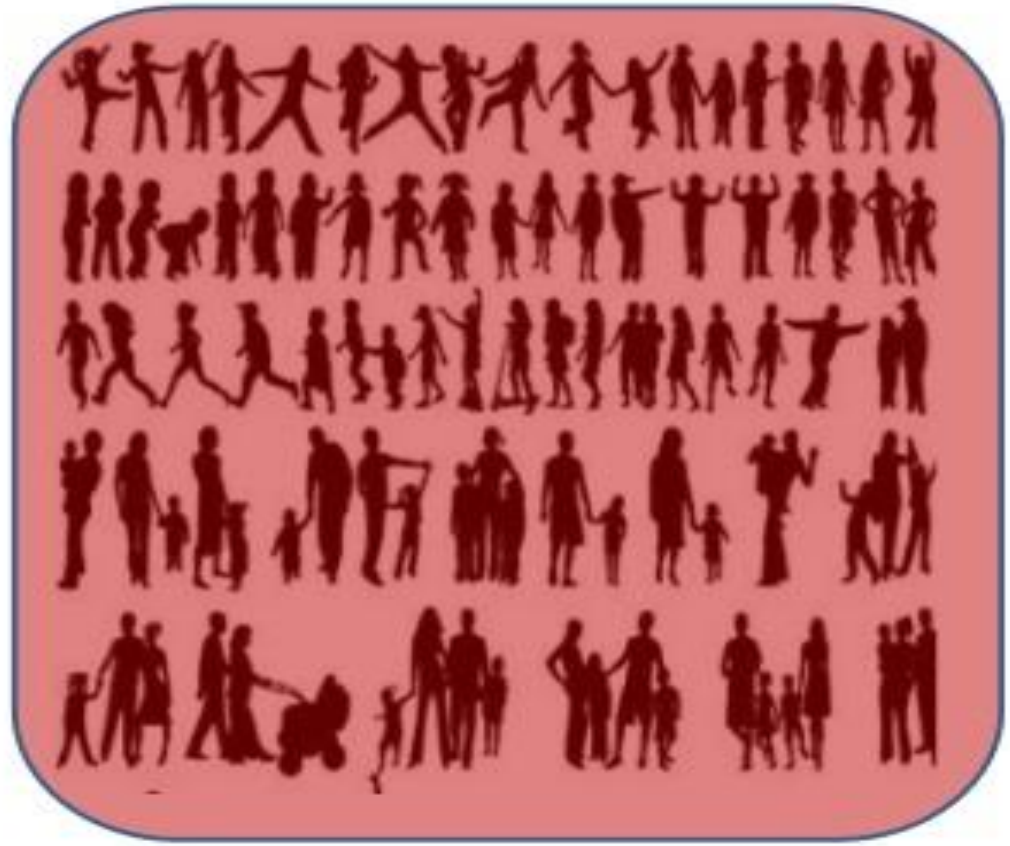
Generalised epidemic= universal screening

- Targeted testing not helpful
- Universal approach



US HCV: screening amongst ‘baby-boomers’

- Prevalence in this cohort > 3%
- One time ‘birth cohort’ screening if born 1945–65
- Highly cost-effective

Centers for Disease Control and Prevention. MMWR 2012;61:1–33.
Centers for Disease Control and Prevention. MMWR 1998;47:1–39.
Smith BD et al. AASLD 2011. Abstract 394.

Recommendations for One-time HCV Testing

One-time HCV testing is recommended for persons born between 1945 and 1965,* without prior ascertainment of risk.

- Rating: Class I, Level B

Other persons should be screened for risk factors for HCV infection, and one-time testing should be performed for all persons with behaviors, exposures, and conditions associated with an increased risk of HCV infection.

- Risk behaviors
- Injection-drug use (current or ever, including those who injected once)
- Intranasal illicit drug use

Risk exposures

- Persons on long-term hemodialysis (ever)
- Persons with percutaneous/parenteral exposures in an unregulated setting
- Healthcare, emergency medical, and public safety workers after needle sticks, sharps, or mucosal exposures to HCV-infected blood
- Children born to HCV-infected women
- Prior recipients of transfusions or organ transplants, including persons who:
- Were notified that they received blood from a donor who later tested positive for HCV infection
- Received a transfusion of blood or blood components, or underwent an organ transplant before July 1992 (Iran 1995)
- Received clotting factor concentrates produced before 1987 (Iran 1990)
- Persons who were ever incarcerated

Incarceration

- Lead person : nurse
- Awareness : Staff , admin , prisoners
- Consultation , testing , treatment
- Harm reduction ?

Other considerations

- HIV infection
- Sexually active persons about to start pre-exposure prophylaxis (PreP) for HIV
- Unexplained chronic liver disease and/or chronic hepatitis including elevated alanine aminotransferase levels
- Solid organ donors (deceased and living)


20–27
NOVEMBER
EUROPEAN
HIV-HEPATITIS
TESTING
WEEK
2015
TEST.TREAT.PREVENT.
www.testingweek.eu

Recommendation for HCV Testing those with Ongoing Risk Factors

- Persons who inject drugs
- HIV-seropositive
- Men who have unprotected sex with men
- Persons with ongoing risk factors for exposure to HCV

Rating: Class IIa, Level C

Counseling

Abstinence from alcohol and, when appropriate, interventions to facilitate cessation of alcohol consumption

- Rating: Class IIa, Level B

Evaluation for other conditions that may accelerate liver fibrosis, including HBV and HIV infections

- Rating: Class IIb, Level B

Evaluation for advanced fibrosis using liver biopsy, imaging, and/or noninvasive to facilitate an appropriate decision regarding HCV treatment strategy and to determine the need for initiating additional measures for the management of cirrhosis (eg, hepatocellular carcinoma screening

- Rating: Class I, Level A

Counseling

Vaccination against hepatitis A and hepatitis B

- Rating: Class IIa, Level C

Vaccination against pneumococcal infection is recommended to all patients with cirrhosis

- Rating: Class IIa, Level C

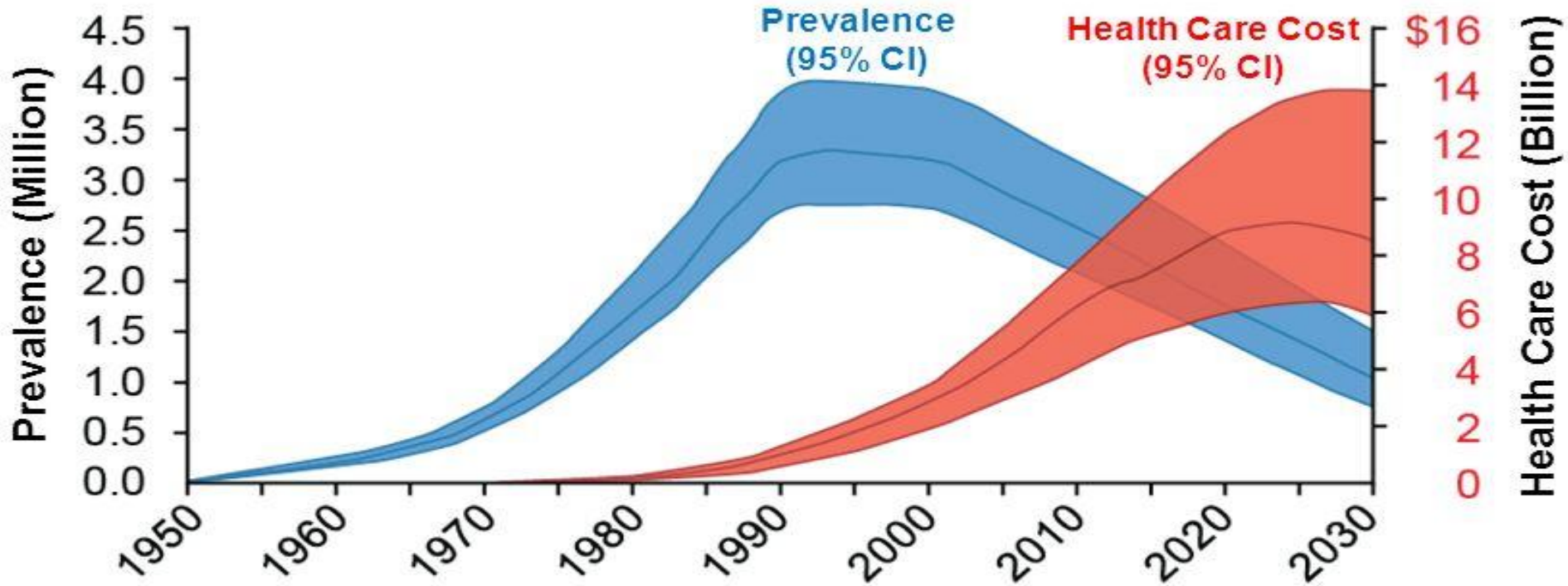
Education on how to avoid HCV transmission to others.

- Rating: Class I, Level C

Cost benefit Analysis / Cost Effective Analysis

- How much for what
- The best way of service delivery
- Use of available opportunities

Increasing Health Care Costs Associated With Progressive Liver Disease in the Aging HCV-Infected Population

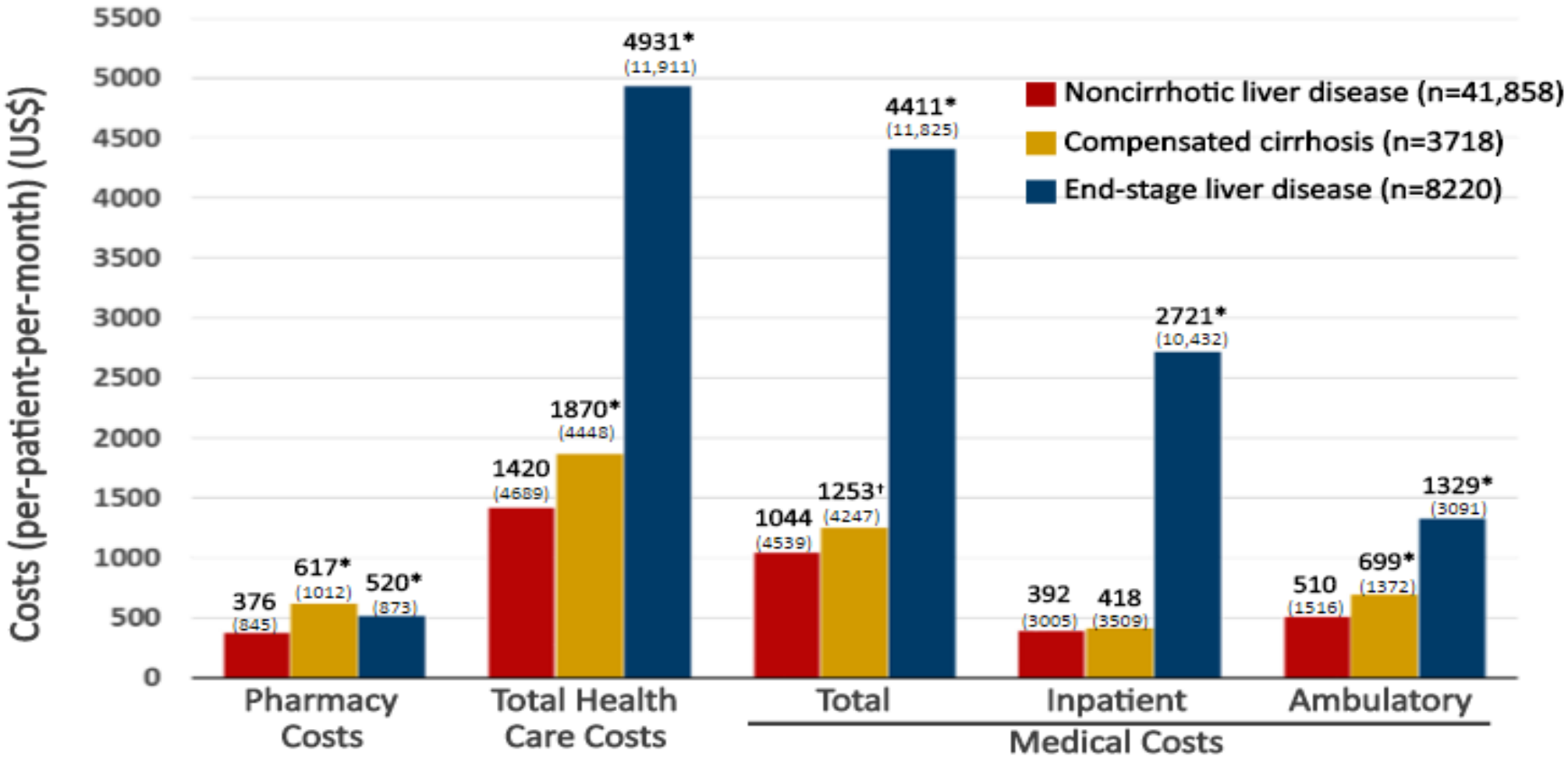


- While the prevalence of HCV infection is declining from its peak, the incidence of advanced liver disease and associated health care costs continue to rise
- Modeling does not take into account any impact of birth cohort screening

A system dynamic modeling framework was used to quantify the HCV-infected population, the disease progression, and the associated cost from 1950-2030.
CI=confidence interval.

Razavi H, et al. *Hepatology*. 2013. Epub ahead of print.

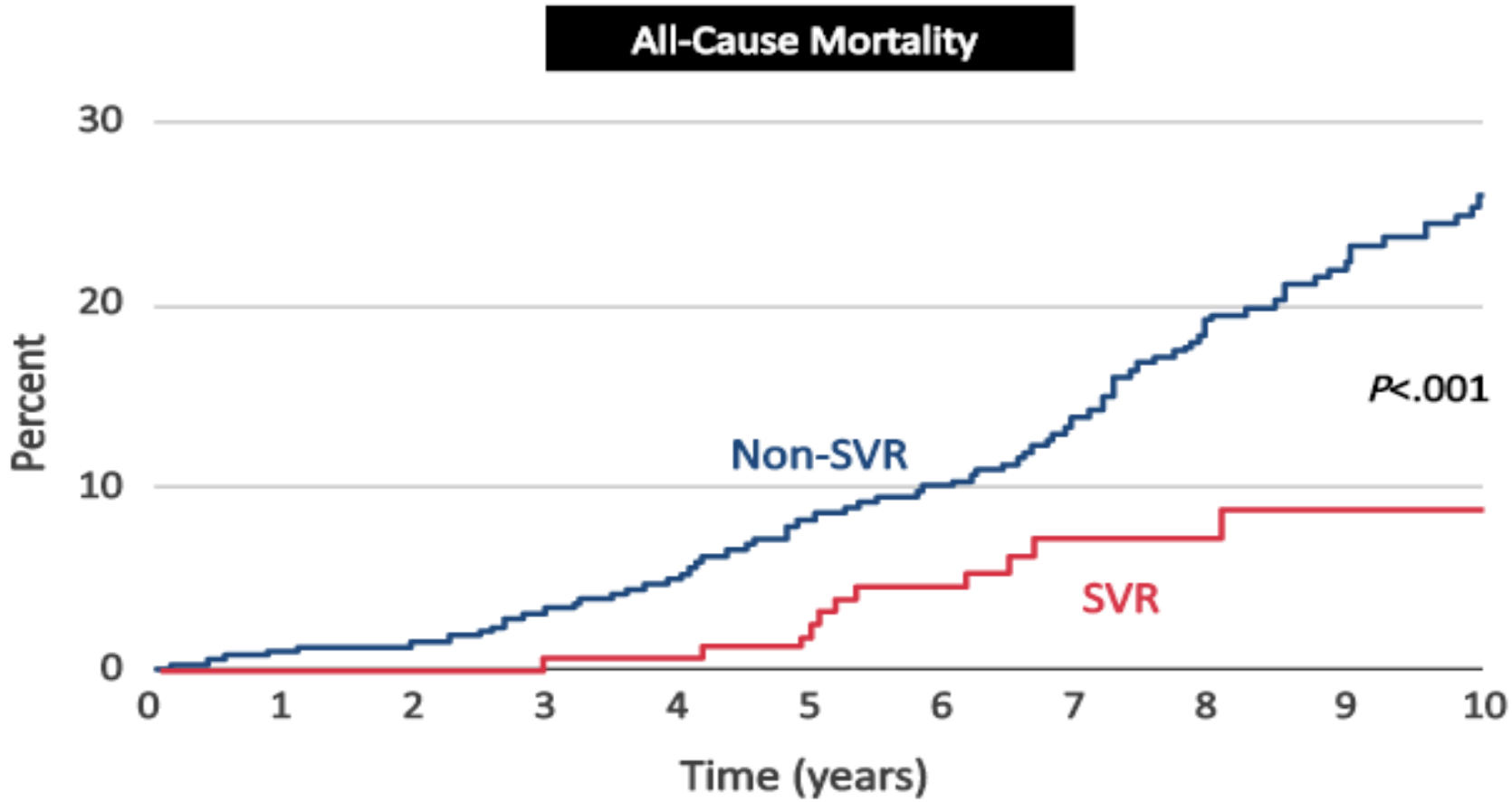
All-Cause Health Care Costs by Liver Disease Severity (US$, 2010)



Numbers in parentheses are ± standard deviation. * $P<.001$ and † $P=.004$ vs noncirrhotic liver disease. Total health care costs include pharmacy and medical costs. Pharmacy costs are based on 2-drug therapy with PegIFN and RBV.

Adapted from Gordon SC, et al. *Hepatology*. 2012;56:1651-1660.

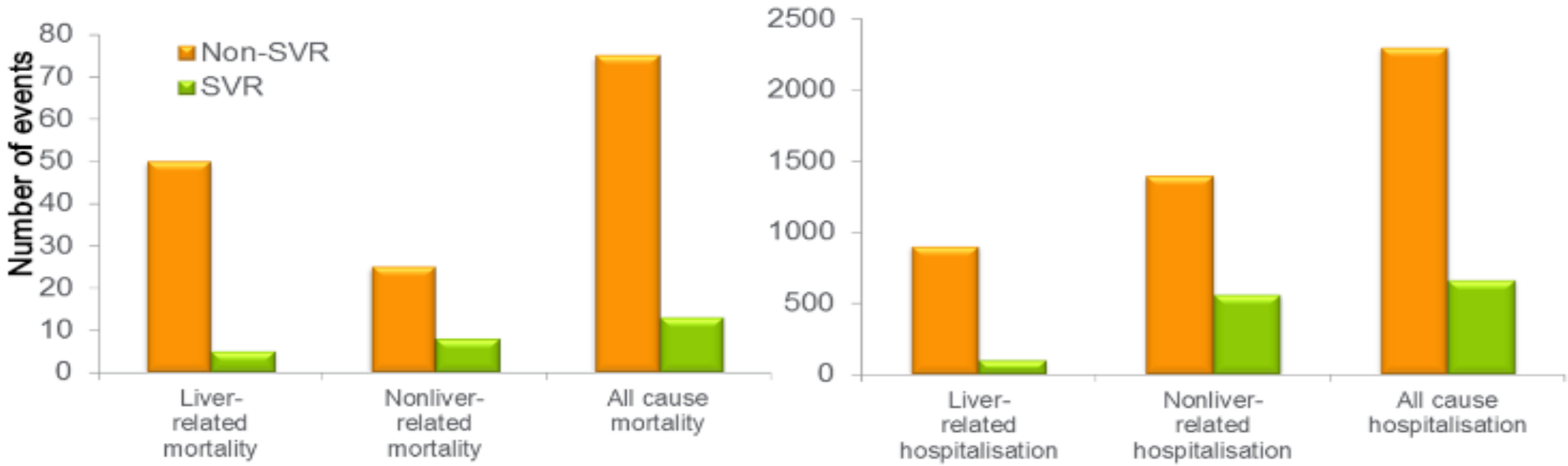
SVR Was Associated With Reduced Long-Term Risk of All-Cause Mortality in an International, Multicenter Study



International, multicenter, long-term follow-up study from 5 large tertiary care hospitals in Europe and Canada. Patients with chronic HCV infection started an interferon-based treatment regimen between 1990 and 2003 (n=530).

van der Meer AJ, et al. *JAMA*. 2012;308:2584-2593.

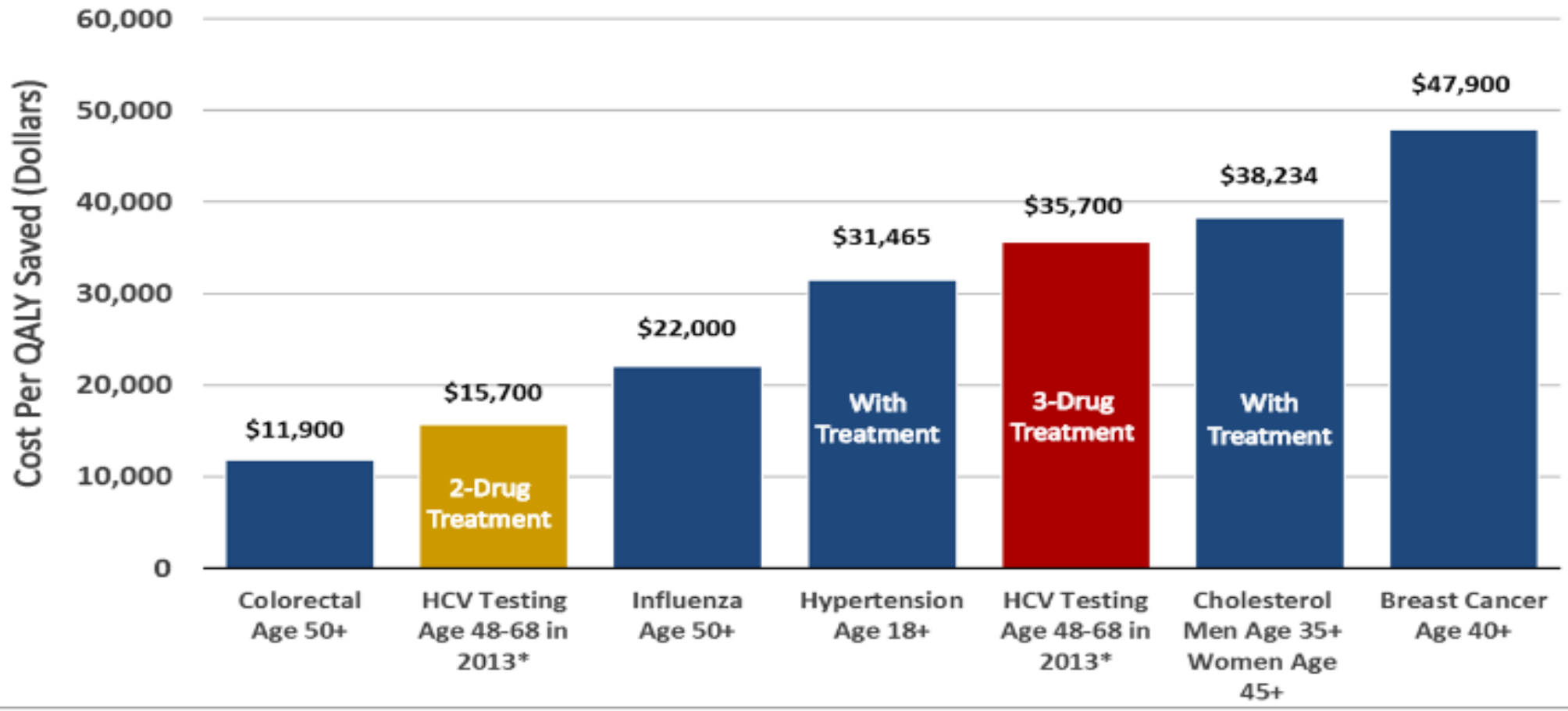
Benefits of SVR: reduction in liver-related disease



Mortality Rates and Hospital Episode Rates (Per 100 Person Years) by SVR Status Observed Among 1,215 Post-Treatment HCV Patients in Scotland, 1996-2007

Innes HA et al. Hepatology 2011;54:1547-1558

Cost-Effectiveness of HCV Testing vs Other Routine Preventive Services



*Birth cohort testing, 1945-1965.
2-drug treatment=PegIFN+RBV; 3-drug treatment=PegIFN+RBV+PI.
QALY=quality-adjusted life-year.
www.prevent.org/National-Commission-on-Prevention-Priorities/Rankings-of-Preventive-Services-for-the-US-Population.aspx.
Rein DB, et al. *Ann Intern Med* 2012;156:263-270.

Barrier’s for Rx

Contraindications to treatment (eg, comorbidities, substance abuse, and psychiatric disorders)

- Referral to services (eg, psychiatry and opioid substitution therapy)
- Optimize treatment with simpler and less toxic regimens

Barrier's for Rx

Lack of access to treatment (high cost, lack of insurance, geographic distance, and lack of availability of specialists)

- Leverage expansion of coverage through insurance
- Participate in models of care involving close collaboration between primary care practitioners and specialists
- Pharmaceutical patient assistance programs
- Co-localize services (primary care, medical homes, drug treatment)

Barrier’s for Rx

Lack of practitioner expertise

- Collaboration with specialists (eg, via Project ECHO-like models and telemedicine)
- Develop accessible and clear HCV treatment guidelines
- Develop electronic health record performance measures and clinical decision support tools (eg, pop-up reminders and standing orders)

The ECHO model

- **Extension for Community Healthcare Outcomes™**
- Does not actually “provide” care to patients.
- Increases access to specialty treatment in rural and underserved areas by providing front-line clinicians with the knowledge and support
- Patients with complex conditions such as HCV , RA , DM
- Engaging clinicians in a continuous learning system and partnering them with specialist mentors at an academic medical center or hub.

Barrier’s for Rx

Competing priorities

Loss to follow-up

- Conduct counseling and education
- Engage case managers and patient navigators
- Co-localize services (eg, primary care, medical homes, and drug treatment)
- Directly observed therapy (tuberculosis model)

Remaining Challenges

- **Lack of awareness** both in community and in health professionals
- **Inadequate surveillance system** , lack of evidence based policy
- **Safe injection**
- **Occupational hazard**, safe health care facilities, medical wastage
- **Tattooing , piercing**
- **STD**
- **IDU**

Remaining Challenges

- Quality of screening tests, need for responsibility
- Adequate knowledge for population counseling when and where it is needed
- Cost of treatment
- HIV coinfection

Conclusion

- With advent of new Rx for HCV , it is an eliminable disease
- Surveillance system is needed for hepatitis in general and HCV in special
- PHC could have a central role in elimination program
- HCV is a one time test and Rx for most patients
- Insurance coverage with adherence to guideline is a cost effective approach in long term