VIRAL HEPATITIS

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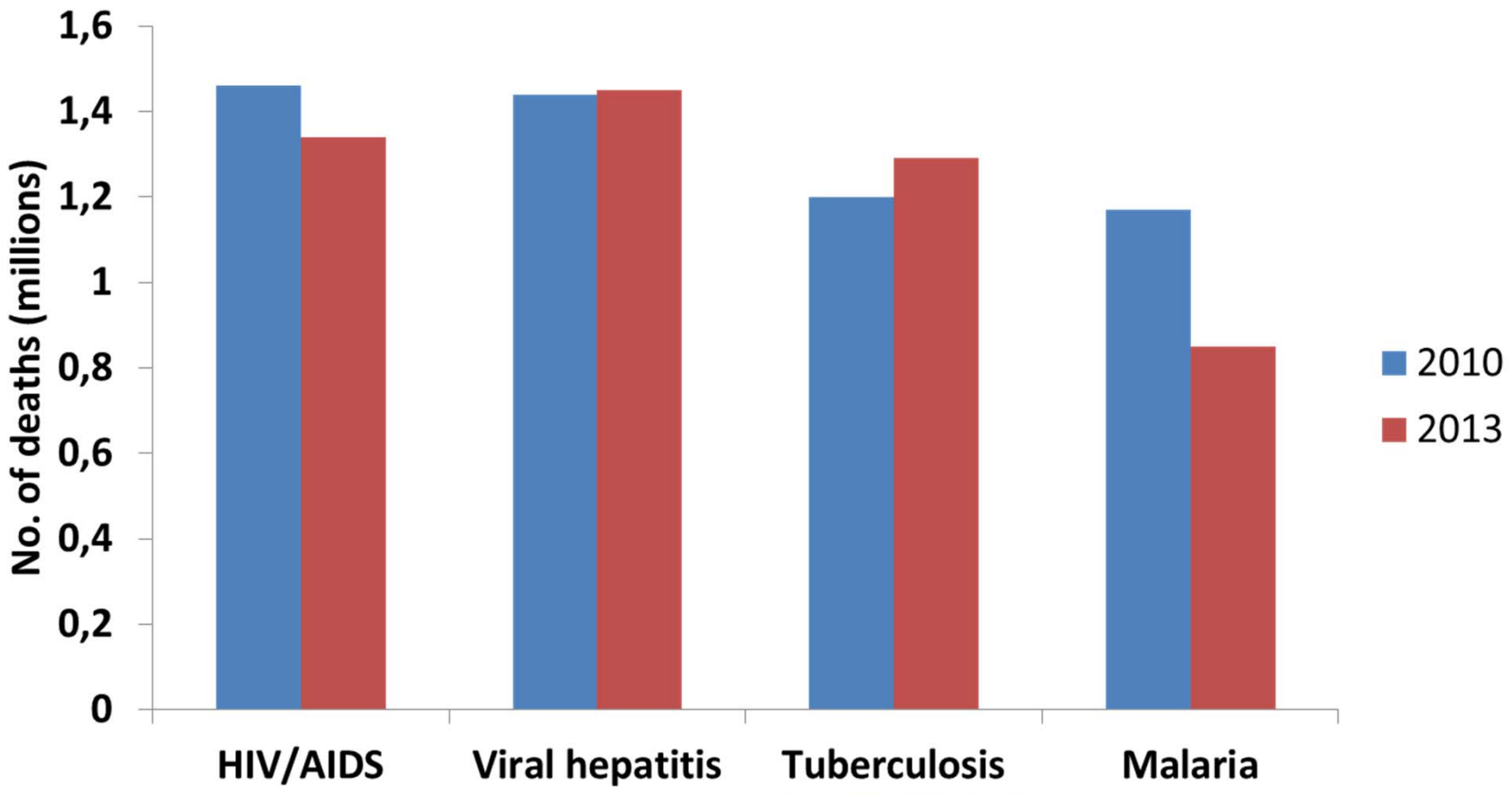
World Health Organization

Overview

- What do we know about viral hepatitis?
- What can be done in hepatitis prevention, diagnosis and treatment?
- Current response: gaps and new opportunities

Number of deaths/year from selected conditions, Global Burden of Disease Study 2010 and 2013



GBD 2013 Mortality and Causes of Death Study: Lancet 2014

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Characteristics of main types of viral hepatitis infections

	Hep A	Hep E		Hep B ± D	Hep C
Mode of transmission	Contaminated food, water			Blood, sex, mother-to-child	
Number chronic infections	0	Very few		~240 million	~130-150 million
Annual* deaths	15,000	50,000		686,000	704,000

*Source: Global Burden of Disease Study 2010 Lozano et al, Lancet 2012

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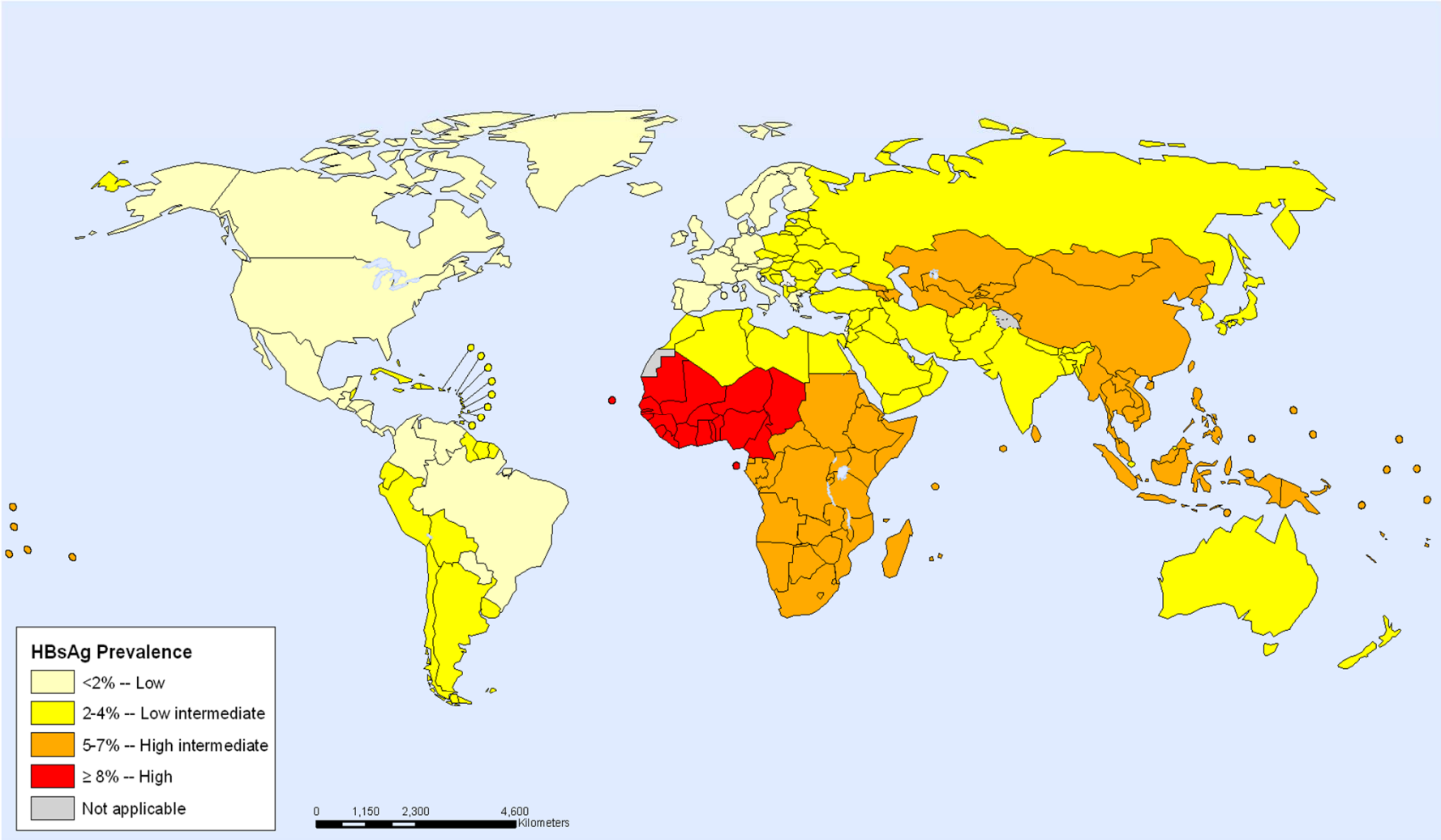
Global prevalence of chronic hepatitis B virus infection, 2005, adults (19-49 years)



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Data Source: refer to data/models described in manuscript
Map Production: Public Health Information and Geographic Information Systems (GIS)
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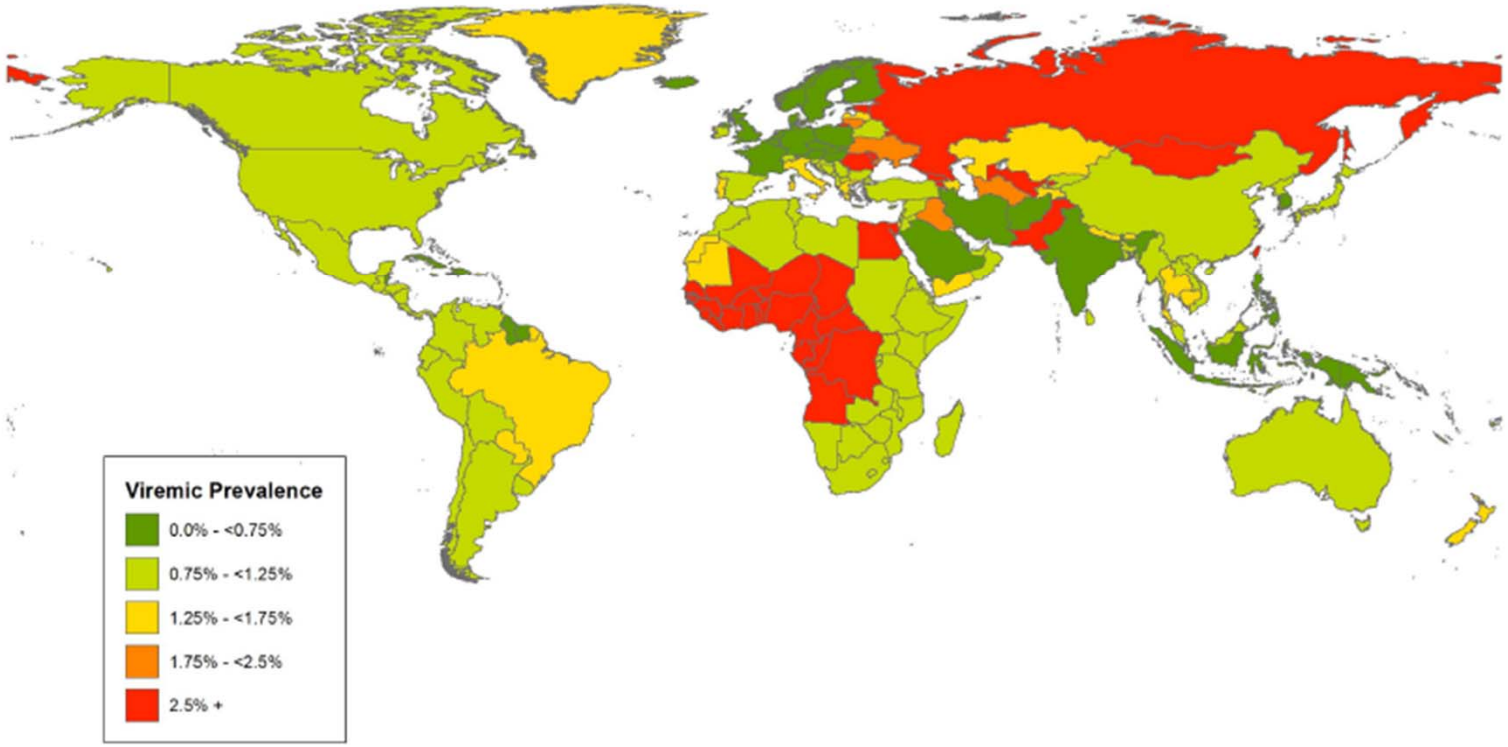
Source: Ott et al. Vaccine 2012

HCV viremic prevalence, reported and estimated



Gower et al. J. Hepatology 2014

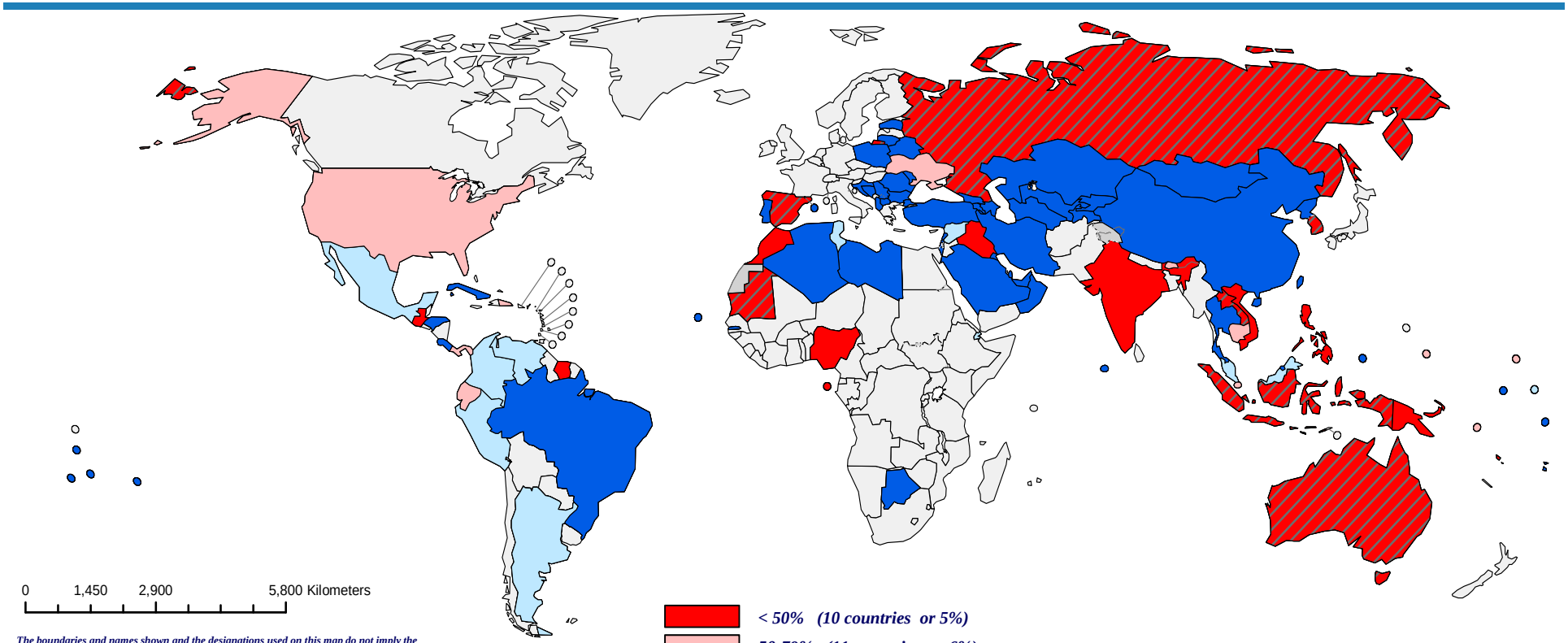
What can be done? HAV and HEV

Hepatitis virus	Intervention	Status
HAV and HEV	Safe food and water	Variable access
	HAV vaccine	Universal childhood immunization in 12 countries
	HEV vaccine	Vaccine available; used primarily in China

What can be done? HBV and HCV

Intervention	HBV	HCV	Status
HBV vaccine	✓		HBV vaccine coverage: • 81% for childhood immunization • 38% for birth dose
Safe blood	✓	✓	39 countries without universal testing of blood donations
Infection control practices	✓	✓	Significant risk in some countries due to overuse of injections and reuse of syringes
Harm reduction	✓	✓	Insufficient coverage of services
Safer sex practices	✓	✓	Vaccination (HBV), condom promotion, partner reduction
Prenatal interventions	✓		Inadequate coverage or HBV birth dose, role of HBIG, antivirals?
Treatment	✓	✓	Very low coverage

Immunization coverage with Birth dose of HepB, 2013



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Source: WHO/UNICEF coverage estimates 2013 revision, July 2014. 194 WHO Member States. Map production: Immunization Vaccines and Biologicals, (IVB). World Health Organization

Date of slide: 30 July 2014

- *< 50% (10 countries or 5%)*
- *50-79% (11 countries or 6%)*
- *80-89% (10 countries or 5%)*
- *>= 90% (54 countries or 28%)*
- *HepB Birth dose in schedule but no coverage data available (8 countries or 4%)*
- *Not available or HepB not administered at birth (101 country or 52%)*
- *Not applicable*

unicef World Health Organization

Evaluation of injection practices, 2000 and 2010

	2000	2010
Number of healthcare injections (per person per year)	3.40	2.88
Proportion of re-use during healthcare injections	0.398	0.055
Number of unsafe healthcare injections (per person per year)	1.35	0.16

Pepin J et al: Evolution of the Global Use of Unsafe Medical Injections, 2000–2010. PLOSOne 2013

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WHO guideline on the use of safety-engineered syringes for intramuscular, intradermal and subcutaneous injections in health-care settings

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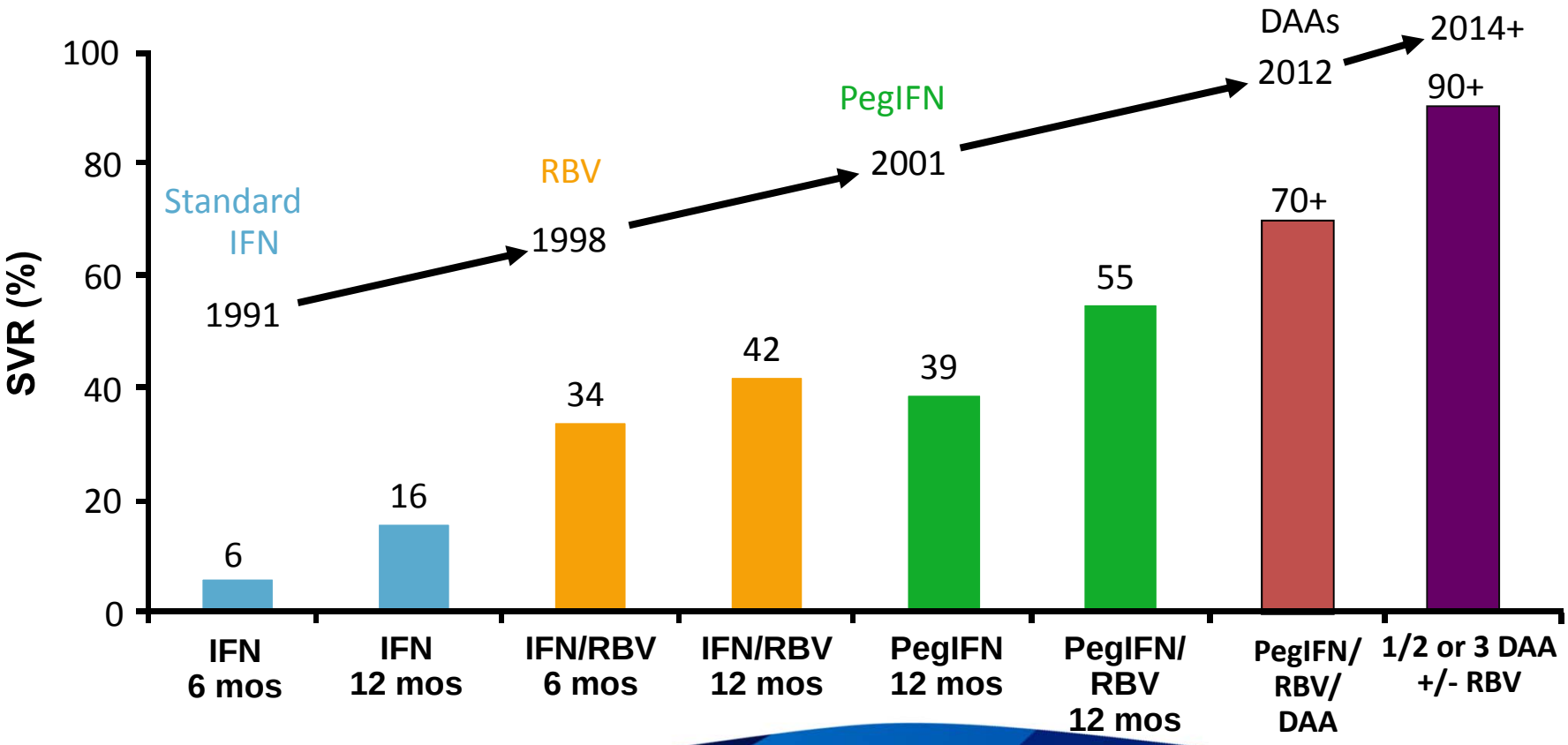
Hepatitis Treatment

- Hepatitis B
  - Safe, effective
  - Leads to reversal of cirrhosis and reduced risk of cancer, cirrhosis, and death
  - Usually life-long
  - Generics available
  - Cost as little as US$4/month
- Hepatitis C
  - Safe, effective
  - Leads to reversal of cirrhosis and reduced risk of cancer, cirrhosis, and death
  - 12 weeks of treatment
  - >90% cure
  - Cost US$ 900 – 100,000/patient

Improved sustained virological response (cure rate) with newer HCV medicines



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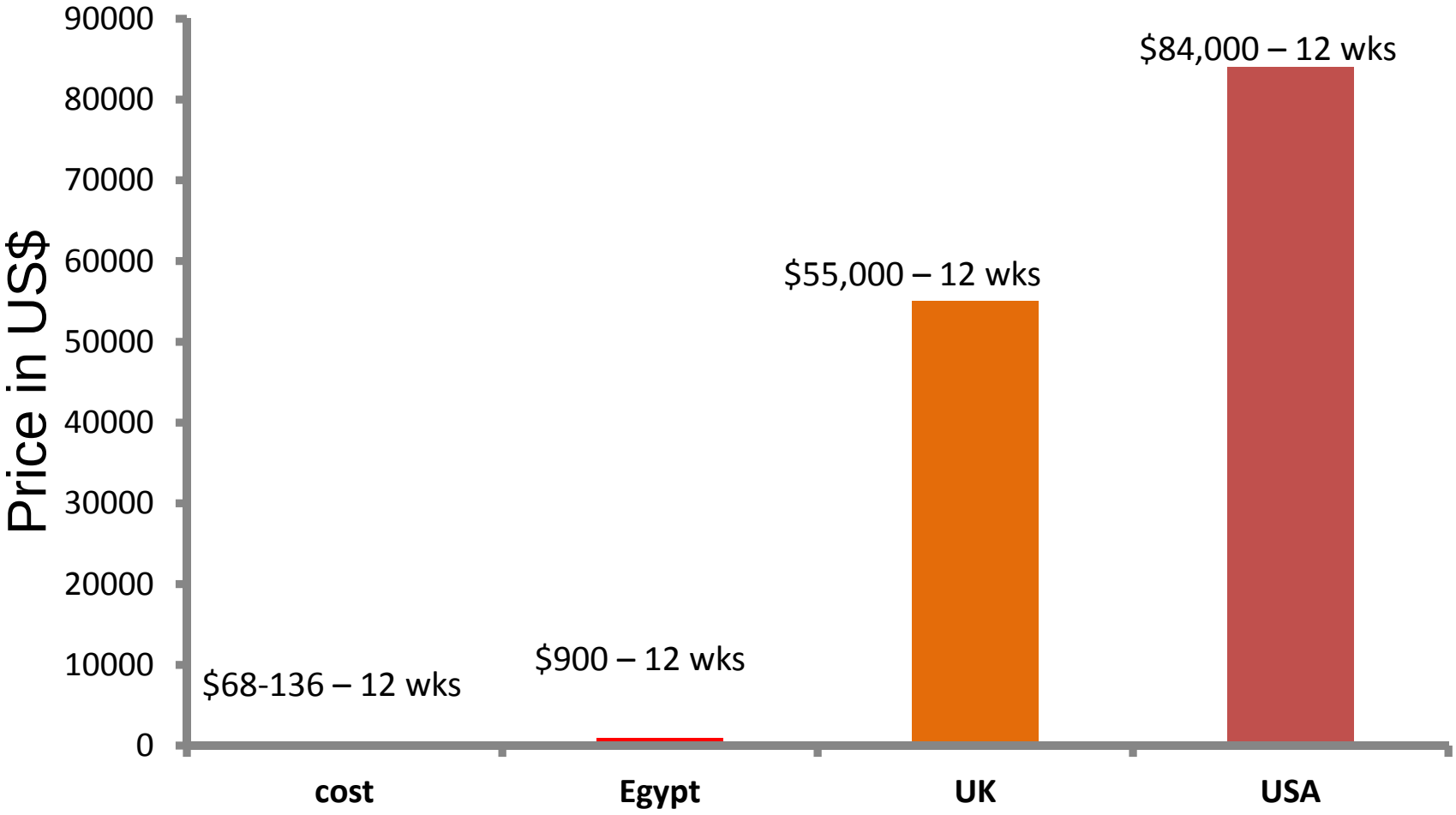
Prices of sofosbuvir

list price for 12 weeks of treatment, per patient US$



Source: Hill et al, Clin Infect Dis. Feb 2014
Reuters news website April 2014

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WHO's role in improving access to hepatitis therapy

Screening → Care → Treatment

World Hepatitis Day observance
Improved prevalence estimates

Treatment Guidelines
Prequalification of generic medicines
Essential Medicines List
Simplifying regulatory approval process
Technical assistance with intellectual property
Advocacy, guidance and technical assistance for improved treatment access
Multi-stakeholder engagement

Awareness → **Testing** → **Referral** → **Disease-stage assessment** → **Treatment** → **Monitoring**

Prequalification of diagnostics
Screening/ testing guidelines

Promoting development of national hepatitis plans

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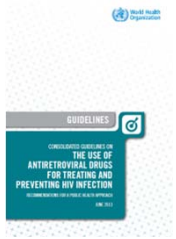
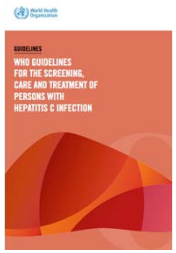
Timeline of key WHO hepatitis guidelines

Hepatitis prevention Among PWID

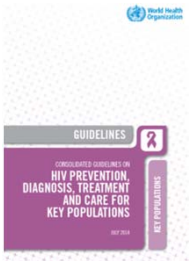
Consolidated HIV Treatment



HCV Treatment



Key population



HBV Treatment

HCV Treatment Update

Hepatitis Testing Guideilnes

Hepatitis Consolidated Guideilnes

2013	2014	2015	2016

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Member States with National Viral Hepatitis Plans (NVHP)

n=22

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