

Viral Hepatitis

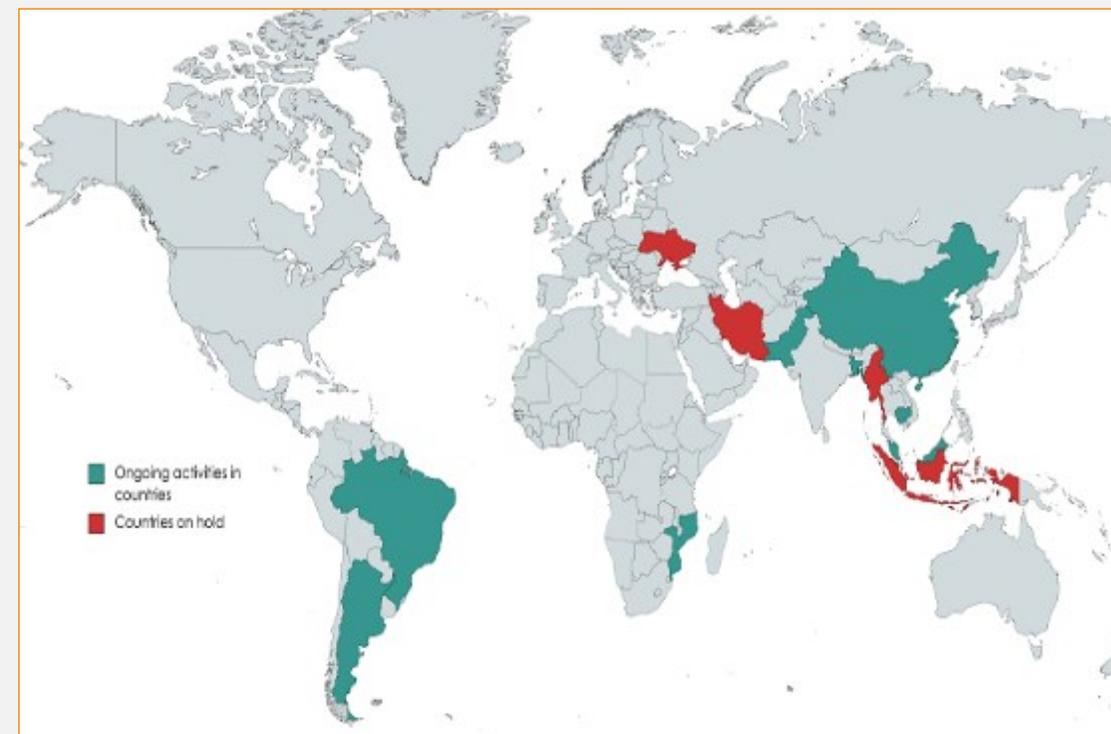
A Public Health Threat & Elimination Goals

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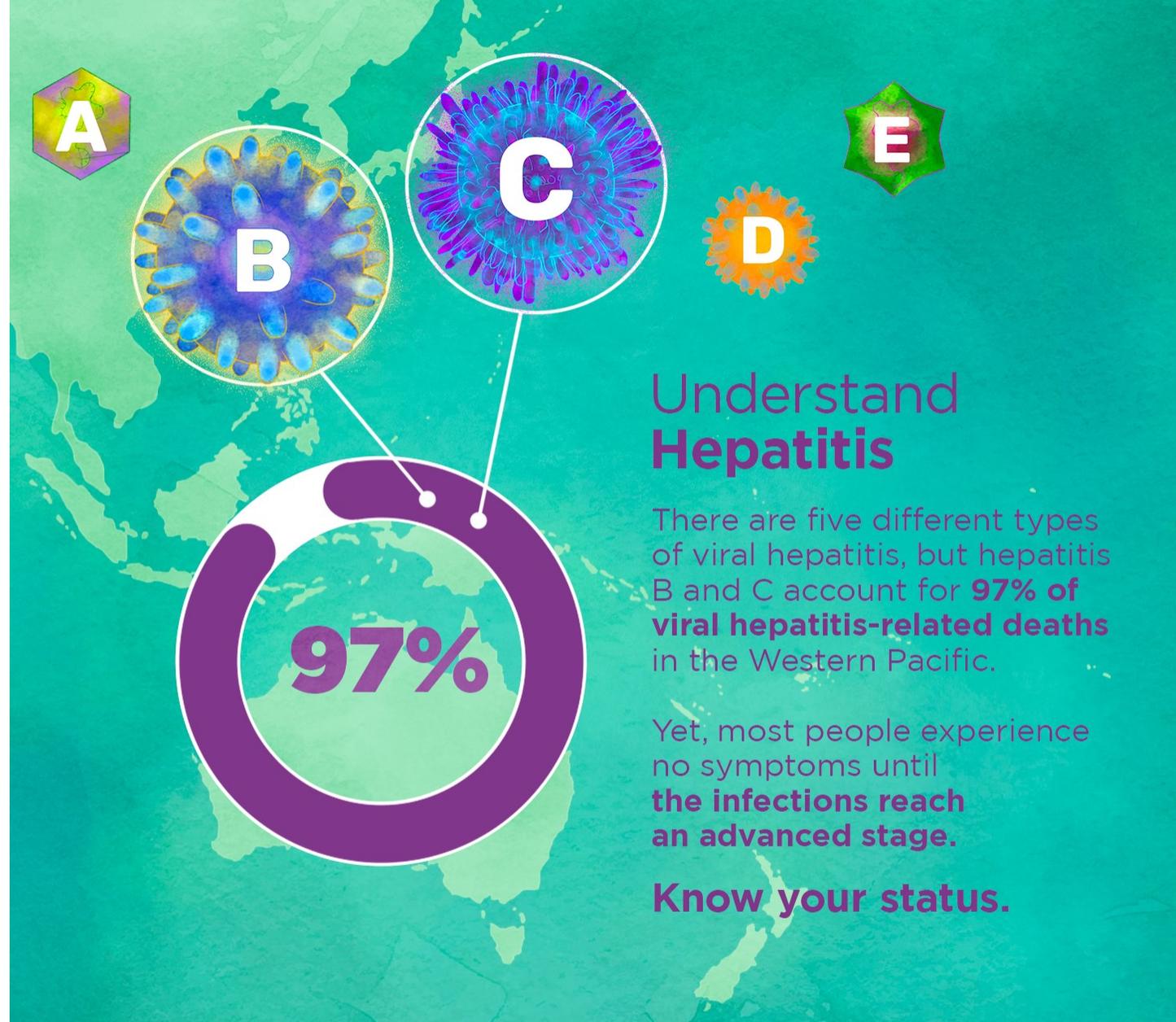
To help foster an enabling environment for improved availability of HCV diagnostics and treatments in LMICs

- Developing **awareness among decision-makers** of HCV and the opportunity for elimination
- Designing **sustainable financing** mechanisms for HCV scale-up in LMICs
- Supporting **simplified HCV diagnostic** tools and strategies
- Supporting improved **access to all simple and affordable DAA** treatments in high-burden LMICs

HEP C PACT, PRIORITY COUNTRIES:

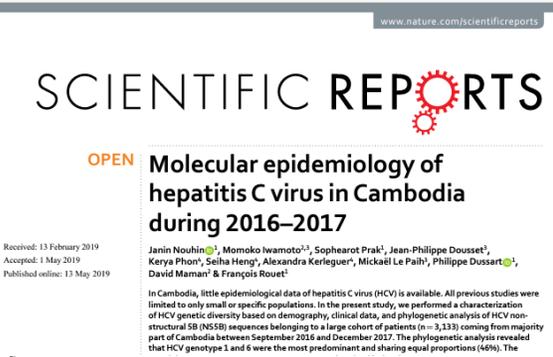


- 5 types of hepatitis virus
- Hep B & Hep C most commonly seen & generally no symptoms in early stage of infection



Summary 1: Risk factor of HCV similar to HIV

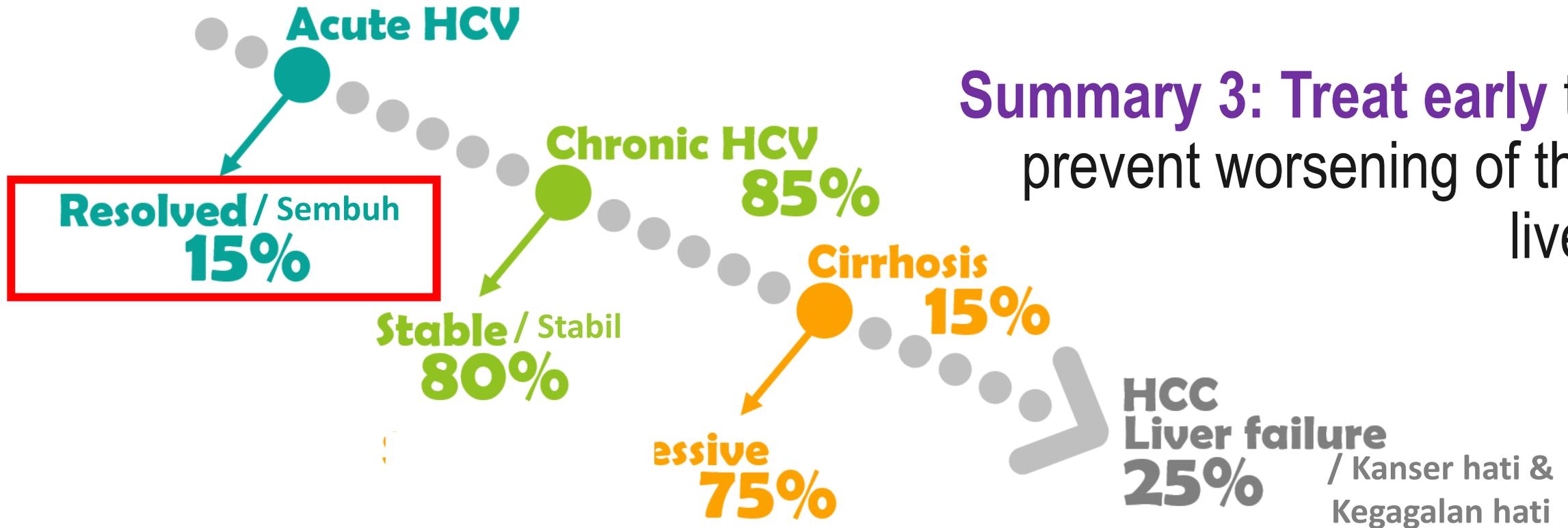
Patient characteristics	All subjects (n = 3,133)
Risk factors for infection, n (%)	
Invasive medical procedures	2,021/3,124 (64.7%)
Blood transfusion	307/3,107 (9.9%)
Partner with HCV	461/2,367 (19.5%)
Healthcare worker	220/3,119 (7.1%)
Imprisonment	40/3,108 (1.3%)
FEW, MSM, or TG	27/3,119 (0.9%)
History of drug use	18/3,120 (0.6%)



The prevalence of HCV ranges between **2.8%** and **14.7%** in rural areas depending on study sites and between 5.5% and 10.4% among people with HIV in hospital-based programs in Phnom Penh

Summary 2: Hep C has no clear sign of infection for years

Summary 3: Treat early to prevent worsening of the liver



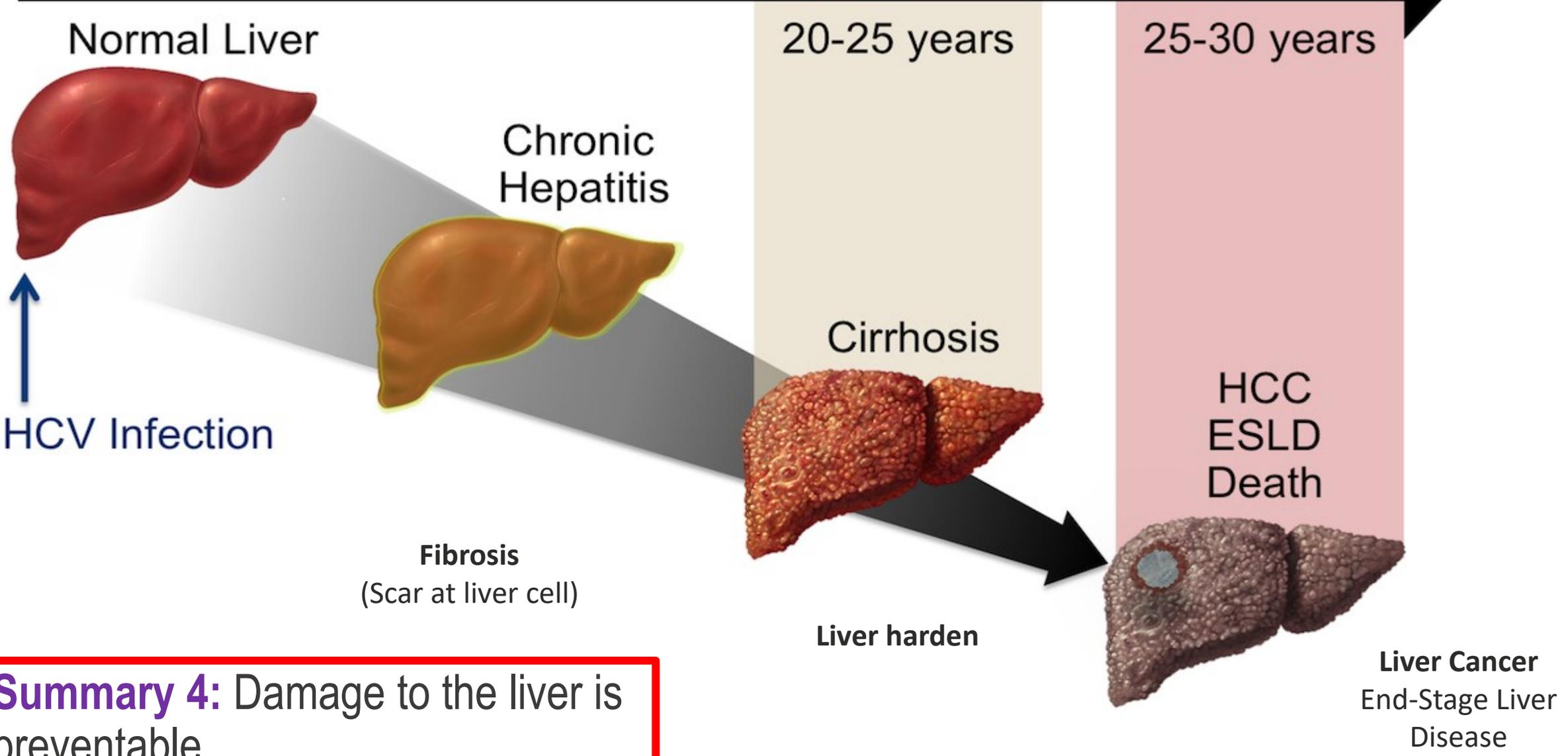
Time/year
Masa / Tahun

10

20

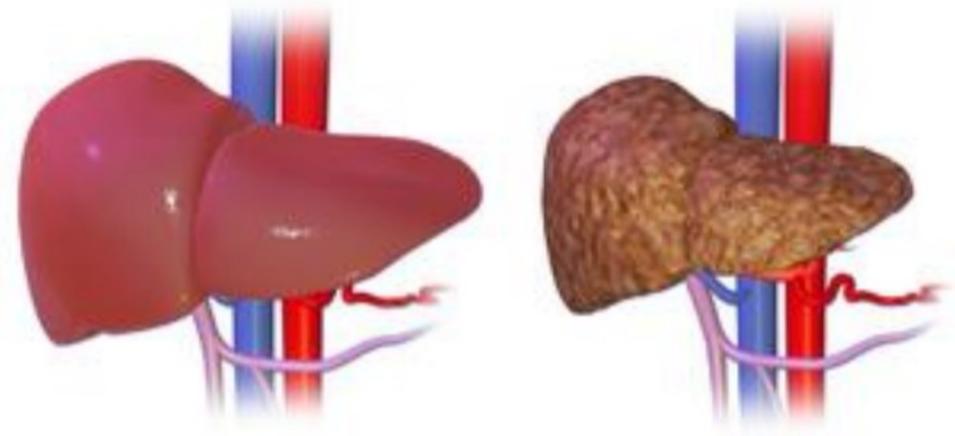
30

Time



Summary 4: Damage to the liver is preventable

Stages of Liver Attacked by Hepatitis C Virus



Normal Liver

Liver Cirrhosis

PROGRESSION OF LIVER DAMAGE			
HEALTHY LIVER	FIBROTIC LIVER	CIRRHOTIC LIVE	LIVER CANCER
			
A healthy liver is able to perform its normal functions effectively, e.g. aiding digestion and breaking down harmful drugs and poisons.	Continuous inflammation of the liver caused by hepatitis C can lead to fibrosis – the formation of scar tissue within the liver.	Extensive scarring can block the flow of blood through the liver and cause liver function to deteriorate over time - this is called cirrhosis.	Hepatitis C is a leading cause of liver cancer – the formation of a malignant tumour in the liver.

Fibrosis
(Scaring of the
Liver cell)

Hati Keras

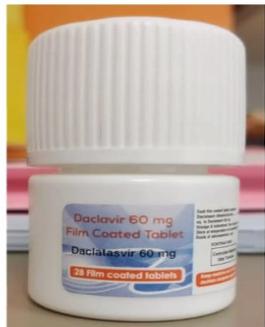
Kanser Hati
End-Stage Liver
Disease

Summary 5: Hep C can be Treated

Direct-Acting Antiviral (DAA) (vs HAART for HIV)

- **Sofosbuvir + Daclatasvir**
- Sofosbuvir + Velpatasvir

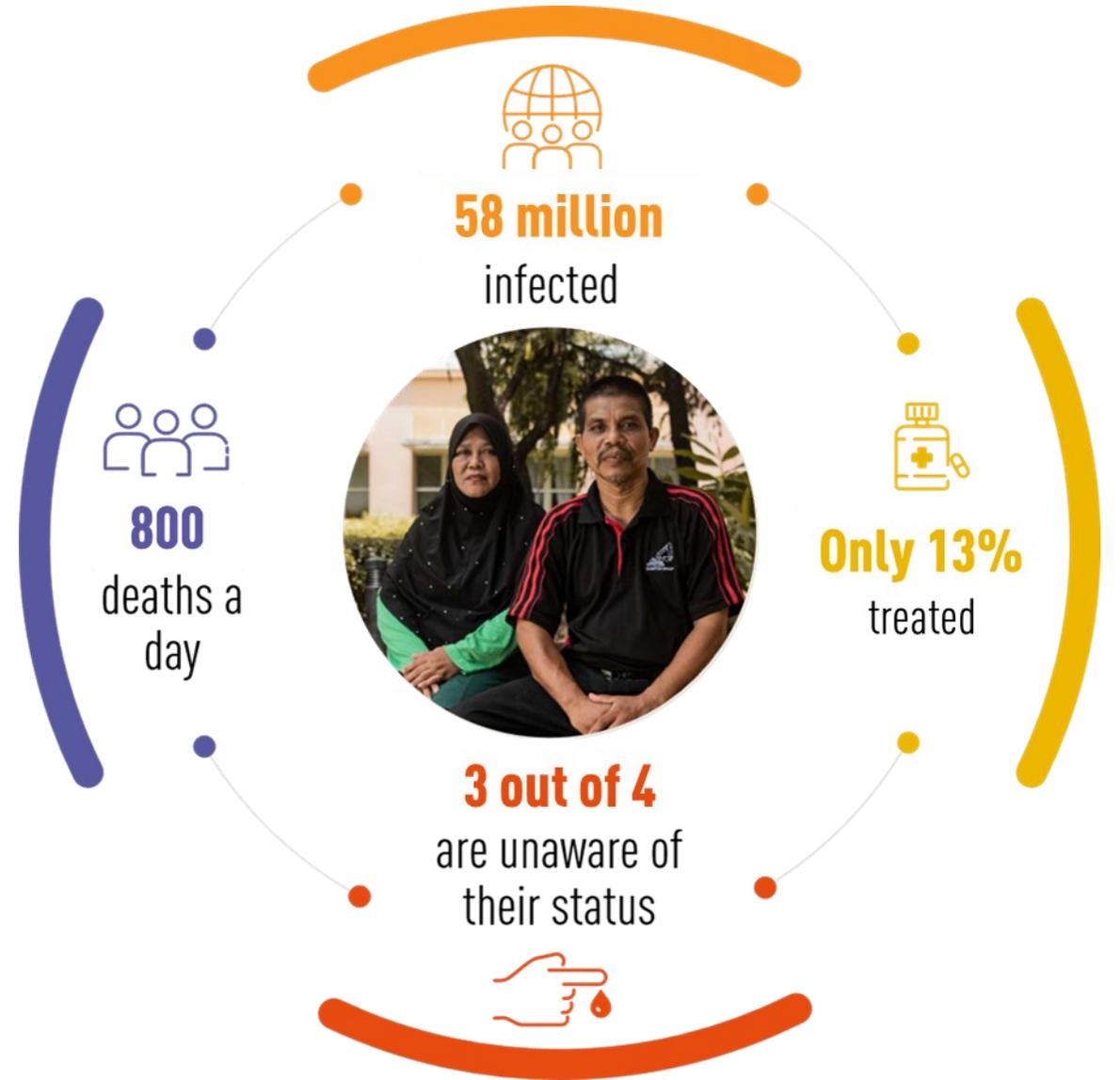
- 12-weeks or 24-week (3-6 months)
- Depending on liver stages (cirrhotic/non-cirrhotic)
- No serious side effect/well tolerated + **FREE***





Hepatitis C Situation Globally

HEPATITIS C is a Silent Epidemic

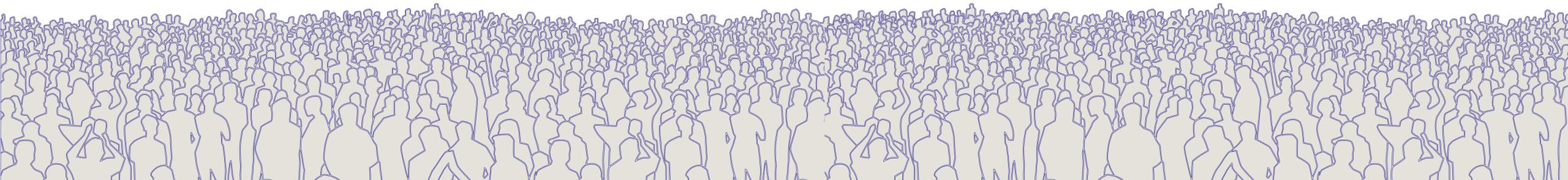
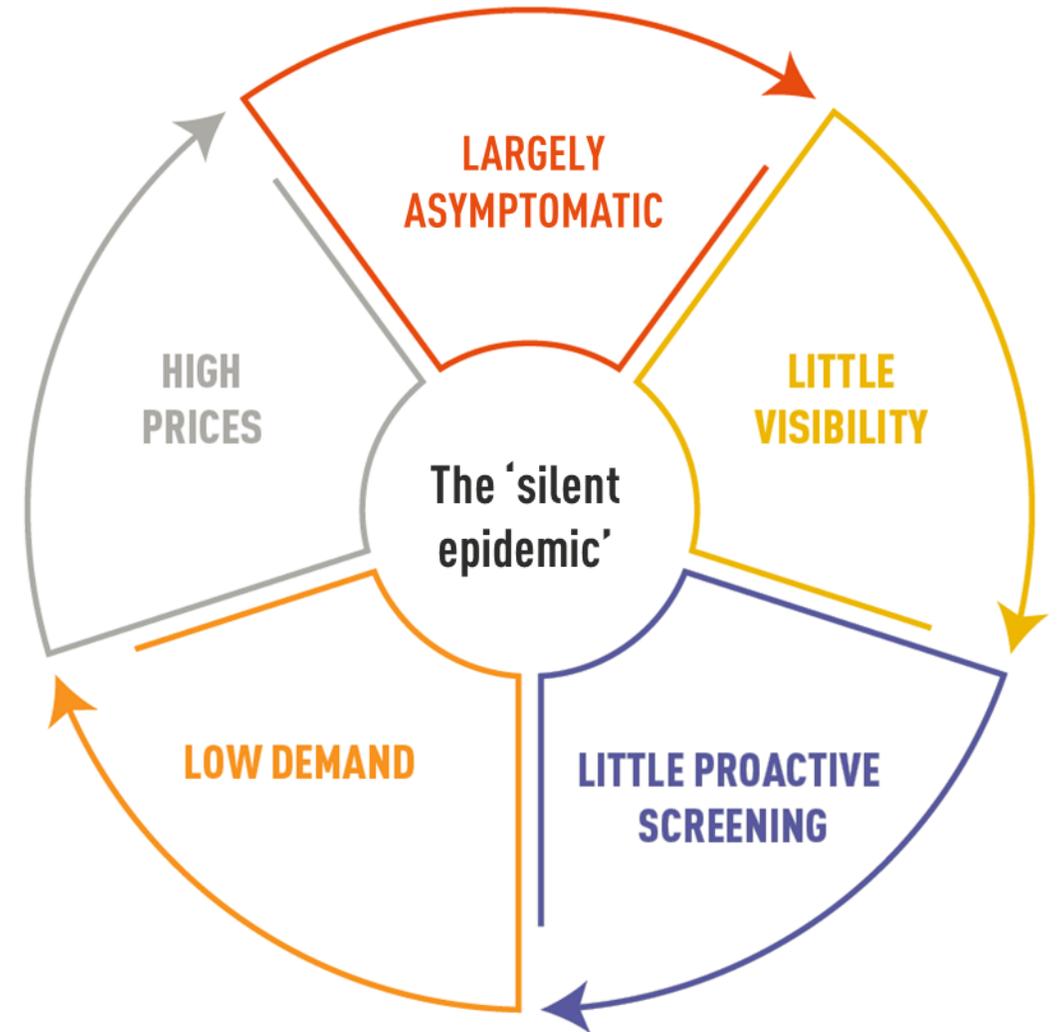




Hepatitis C is a 'silent epidemic'

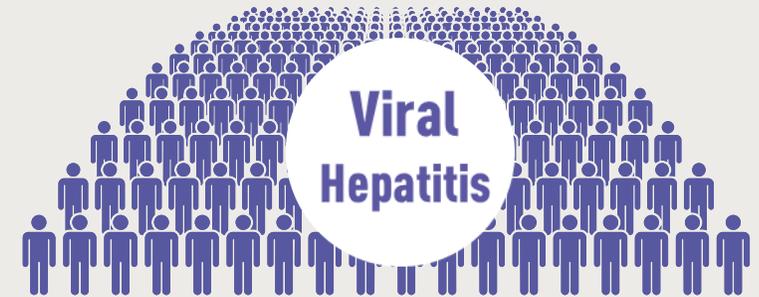
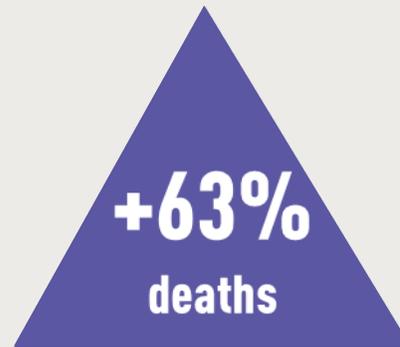
~300,000 deaths due to hepatitis C each year

- About **70%** of people infected **develop chronic disease**
- **15%-30%** of people with chronic hepatitis C develop **liver cirrhosis** within 20 years
- **75%** of people with hepatitis C live in **low- and middle-income countries**

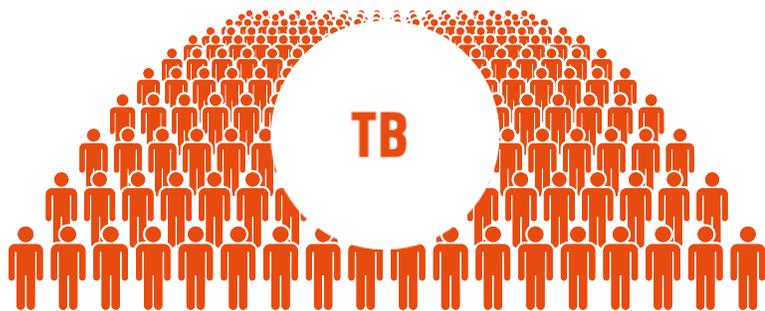


Viral hepatitis has become one of the leading causes of deaths and disability across the globe

2016 study shows that viral hepatitis (A, B, C, D, E) deaths increased by 63% in 23 years (1990-2013)



Killing at least as many people annually as:



The global burden of viral hepatitis from 1990 to 2013: findings from the Global Burden of Disease Study 2013.

The Lancet, July 2016 DOI: 10.1016/S0140-6736(16)30579-7

Hepatitis B and C new infections and mortality by WHO region, 2019

GLOBAL

Hepatitis B
New Infection: **1 500 000**
[1 100 000–2 600 000]
Deaths: **820 000**
[450 000–950 000]

Hepatitis C
New Infection: **1 500 000**
[1 300 000–1 800 000]
Deaths: **290 000**
[230 000–580 000]

REGION OF THE AMERICAS

Hepatitis B
New infections: **10 000**
[5 100–26 000]
Deaths: **15 000**
[8 500–23 000]

Hepatitis C
New infections: **67 000**
[63 000–73 000]
Deaths: **31 000**
[19 000–84 000]

EUROPEAN REGION

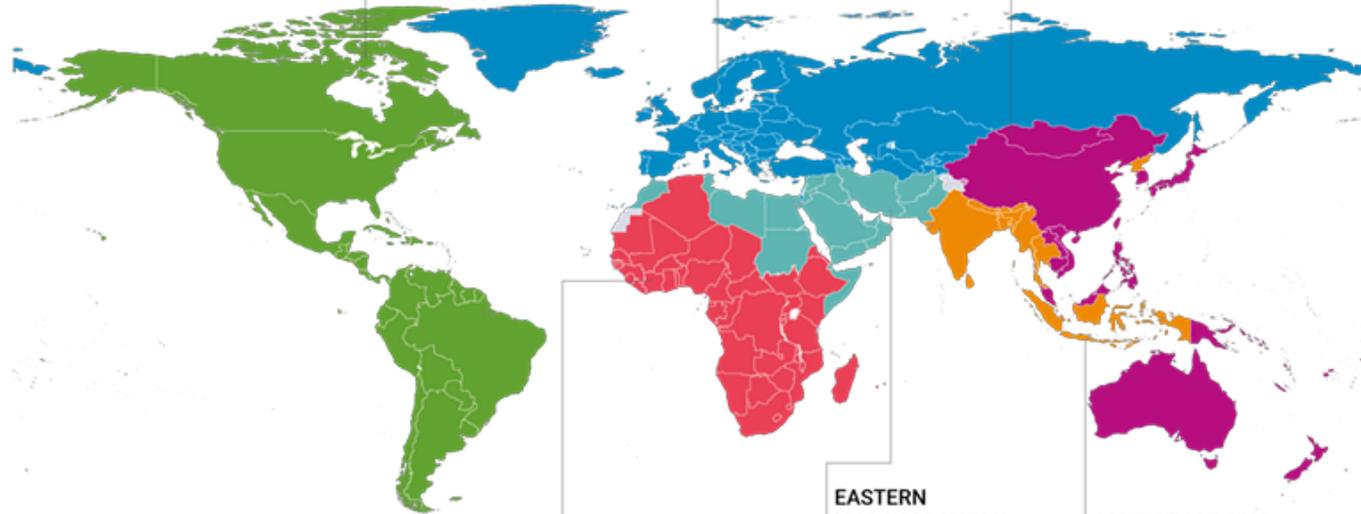
Hepatitis B
New infections: **19 000**
[9 400–38 000]
Deaths: **43 000**
[34 000–51 000]

Hepatitis C
New infections: **300 000**
[240 000–320 000]
Deaths: **64 000**
[39 000–72 000]

WESTERN PACIFIC REGION

Hepatitis B
New infections: **140 000**
[96 000–210 000]
Deaths: **470 000**
[200 000–490 000]

Hepatitis C
New infections: **230 000**
[220 000–260 000]
Deaths: **77 000**
[77 000–140 000]



WHO REGIONS

- African Region
- Region of the Americas
- South-East Asia Region
- European Region
- Eastern Mediterranean Region
- Western Pacific Region
- Not applicable

AFRICAN REGION

Hepatitis B
New infections: **990 000**
[660 000–1 600 000]
Deaths: **80 000**
[47 000–110 000]

Hepatitis C
New infections: **210 000**
[150 000–370 000]
Deaths: **45 000**
[23 000–72 000]

EASTERN MEDITERRANEAN REGION

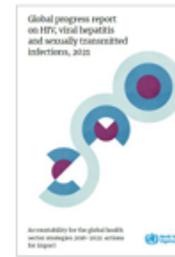
Hepatitis B
New infections: **100 000**
[79 000–140 000]
Deaths: **33 000**
[26 000–60 000]

Hepatitis C
New infections: **470 000**
[240 000–520 000]
Deaths: **31 000**
[31 000–74 000]

SOUTH-EAST ASIA REGION

Hepatitis B
New infections: **260 000**
[180 000–590 000]
Deaths: **180 000**
[140 000–300 000]

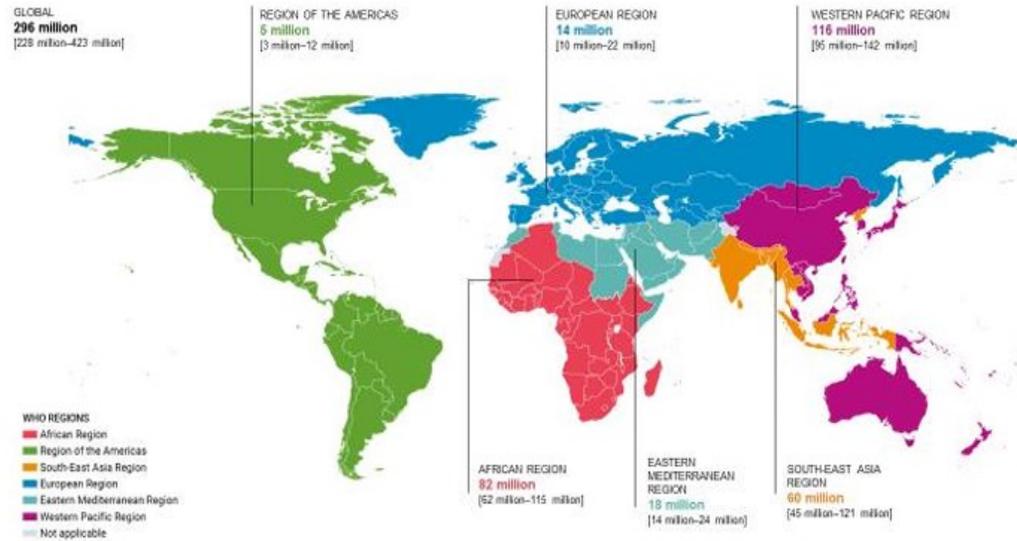
Hepatitis C
New infections: **230 000**
[200 000–430 000]
Deaths: **38 000**
[37 000–130 000]



Burden of Hep B and C, by WHO region 2019



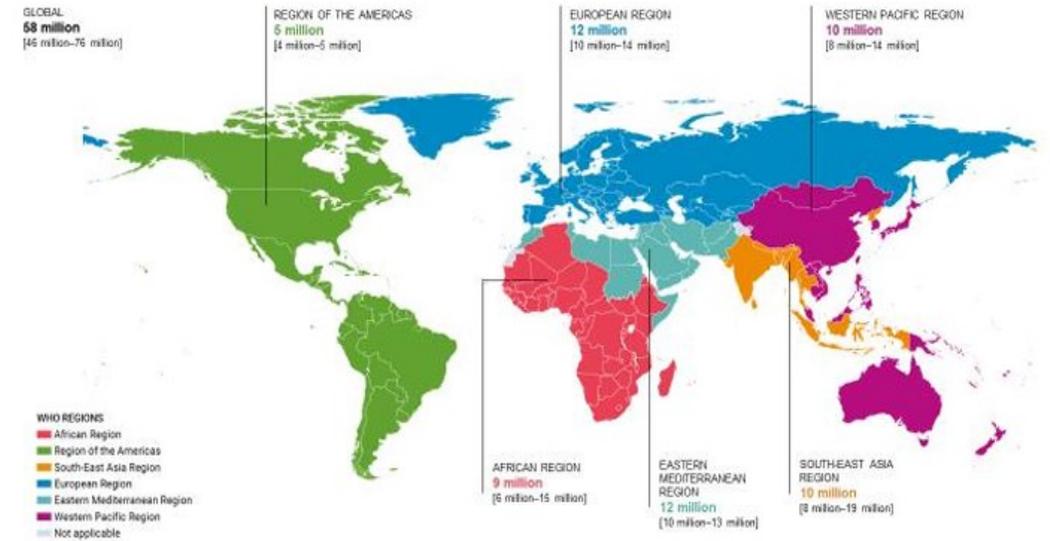
Burden of chronic hepatitis B infection (HBsAg positivity) by WHO Region, 2019



The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

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Burden of chronic hepatitis C viraemic infection by WHO Region, 2019



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5

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Burden of chronic hepatitis C viraemic infection by WHO Region, 2019

GLOBAL
58 million
[46 million–76 million]

REGION OF THE AMERICAS
5 million
[4 million–5 million]

EUROPEAN REGION
12 million
[10 million–14 million]

WESTERN PACIFIC REGION
10 million
[8 million–14 million]



WHO REGIONS

- African Region
- Region of the Americas
- South-East Asia Region
- European Region
- Eastern Mediterranean Region
- Western Pacific Region
- Not applicable

Burden of chronic hepatitis B infection (HBsAg positivity) by WHO Region, 2019

GLOBAL
296 million
[228 million–423 million]

REGION OF THE AMERICAS
5 million
[3 million–12 million]

EUROPEAN REGION
14 million
[10 million–22 million]

WESTERN PACIFIC REGION
116 million
[95 million–142 million]



WHO REGIONS

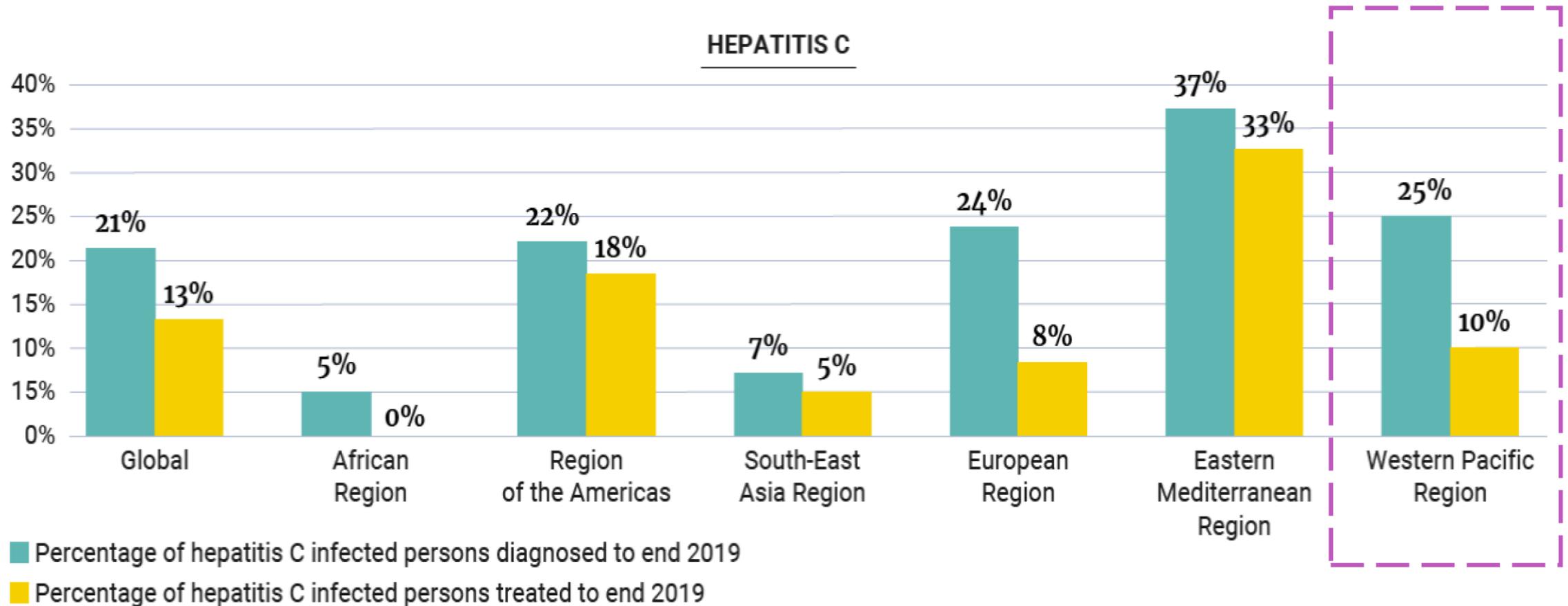
- African Region
- Region of the Americas
- South-East Asia Region
- European Region
- Eastern Mediterranean Region
- Western Pacific Region
- Not applicable

AFRICAN REGION
82 million
[62 million–115 million]

EASTERN MEDITERRANEAN REGION
18 million
[14 million–24 million]

SOUTH-EAST ASIA REGION
60 million
[45 million–121 million]

Hanya 21% daripada 58 juta orang yang dianggarkan hidup dgn jangkitan HCV kronik di tahun 2019 mengetahui status mereka



Source: Global progress report on HIV, viral hepatitis and sexually transmitted infections, 2021



Hepatitis: What Cambodia need to do?

The burden of hepatitis C is especially high in Cambodia

Hepatitis C is highly prevalent in Cambodia, resulting in a heavy health burden and high mortality

Cambodia overview



Prevalence rate

1.3%-2%



Chronic cases

~ 200k



Prevalence rate among 45y+

6%



Annual new infections

~4,000



Annual deaths

~3,000

HCV is one of the main causes of cancer in Cambodia



Liver cancer is the most frequently reported cancer in Cambodia

- 1st common cancer among men and 3rd most frequent cancer among women in Cambodia
- HCV is the main risk factor in 43% of the cases of liver cancer/HCC

HCV is one of the leading infectious disease threats in Cambodia

Disease	Prevalence	Annual deaths
HCV	~2%	2,976
HBV	3%	2,446
HIV/AIDS	0.5%	1,296
TB	0.82%	3,240
Malaria	1.29%	345

Cirrhosis is the 4th main cause of death in Cambodia

1	Stroke
2	Lower respiratory infect
3	Ischemic heart disease
4	Cirrhosis
5	Tuberculosis

Cambodia has the 6th highest rate of liver cancer in the world

1	Mongolia
2	Egypt
3	Gambia
4	Vietnam
5	Laos
6	Cambodia

Simplified service delivery

Decentralization:¹ We recommend delivery of HCV testing and treatment at peripheral health or community-based facilities, and ideally at the same site, to increase access to diagnosis, care and treatment. These **facilities** may include primary care, harm reduction sites, prisons and HIV/ART clinics as well as community-based organizations and outreach services.
(strong recommendation; certainty of evidence:² moderate (people who inject drugs, prisoners); low (general population, people living with HIV))

Integration:³ We recommend integration of HCV testing and treatment with existing care services at peripheral health facilities. These **services** may include primary care, harm reduction (needle and syringe programme (NSP)/opioid agonist maintenance therapy (OAMT) sites), prisons and HIV/ART services.
(strong recommendation; certainty of evidence: moderate (people who inject drugs, prisoners); low (general population, people living with HIV))

Task sharing:⁴ We recommend delivery of HCV testing, care and treatment by trained non-specialist doctors and nurses to expand access to diagnosis, care and treatment.
(strong recommendation; moderate certainty of evidence)

¹ Decentralization of services refers to service delivery at peripheral health facilities, community-based venues and locations beyond hospital sites or conventional health care settings, bringing care nearer to patients' homes.

² The systematic review was based on an analysis by population group (people who inject drugs, prisoners, general population and people living with HIV) rather than setting or services (harm reduction sites, prisons, primary care or HIV/ART clinics), although these were highly related to population group.

³ Integrated service delivery refers to delivery of different health services in a way that ensures people receive a continuum of health promotion, disease prevention, diagnosis and treatment.

⁴ Task sharing refers to the rational redistribution of tasks from "higher-level" cadres of health care providers to other cadres, such as trained lay providers, including community members.

New

New

New

UPDATED RECOMMENDATIONS ON TREATMENT OF ADOLESCENTS AND CHILDREN WITH CHRONIC HCV INFECTION, AND HCV SIMPLIFIED SERVICE DELIVERY AND DIAGNOSTICS



BOX 6.1 Case study: CAMBODIA – Médecins Sans Frontières (MSF) – simplified model of decentralized HCV care in a rural health operational district in Battambang province, Cambodia (169-171)

In LMICs, increasing overall access to HCV care remains an ongoing issue, particularly for populations outside of urban centres. MSF implemented a simplified model of decentralized HCV care in a rural health operational district in Battambang province, Cambodia.

Model of care

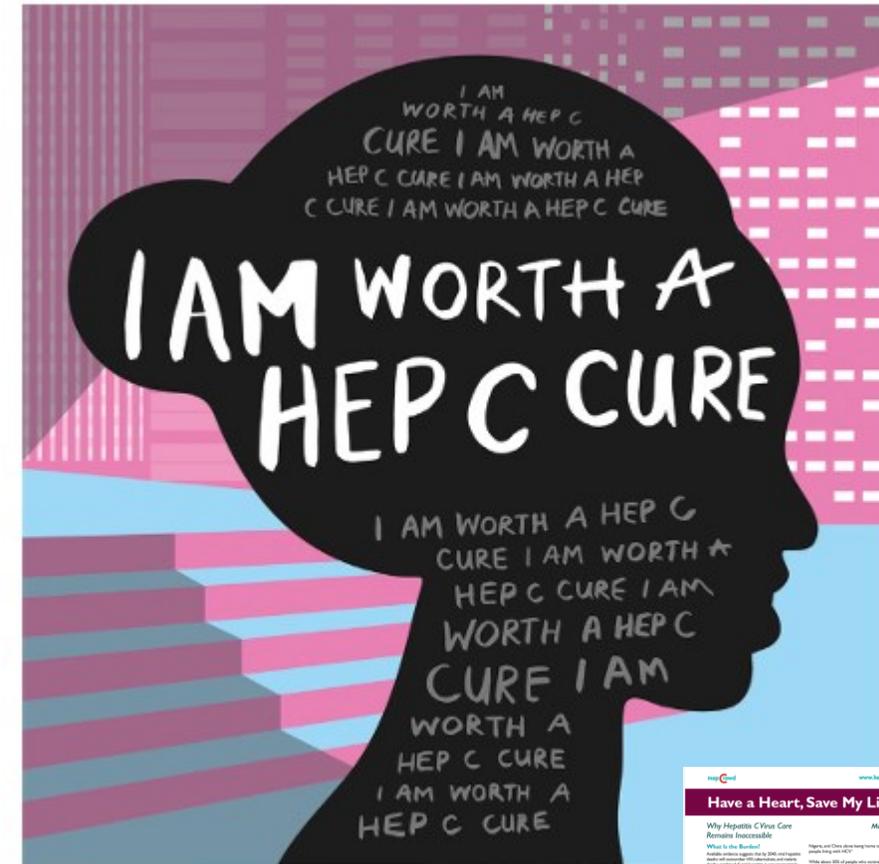
The pilot project was implemented from June 2020 among the adult residents (≥ 18 years of age) of two operational districts (ODs) in Battambang province with 27 participating rural health centres. Voluntary HCV antibody screening was undertaken through both active case finding (testing people in villages) and passive case finding (patients presenting to rural health centres). Serology testing was done with an RDT (SD Bioline®). If HCV-Ab serology positive, testing for HIV via rapid test, blood glucose, and blood pressure were also offered. Blood draw for HCV viral load (HCV-VL) test was done weekly at each health centre due to cold chain considerations for HCV viral load testing at the district referral hospital lab, using GeneXpert – a near POC molecular technology. Health center staff (primarily nurses) were trained in and assessed for competency to identify signs of decompensated liver cirrhosis and provided two-day training in the nurse-led initiation model. To expedite DAA initiation for HCV viraemic patients, pre-treatment assessment was performed by nurses. Viraemic patients who did not have additional complications received all HCV care follow-up with

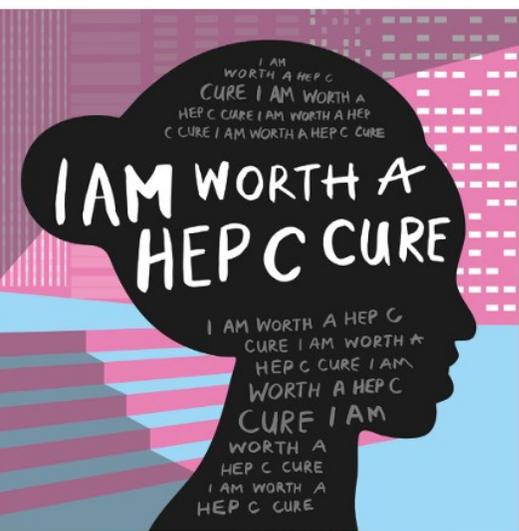
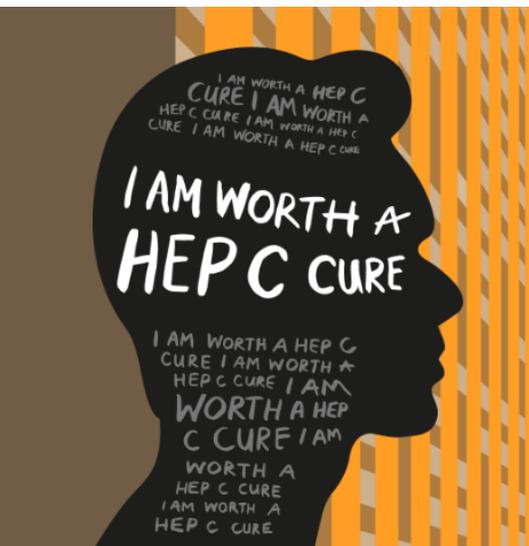
Key Recommendations for Cambodia

Community and national governments work together to raise funding for HCV elimination, to find the missing millions of people living with HCV, and to scale up HCV diagnostics

National hepatitis programs should continuously **raise awareness about HCV**, subsidize HCV screening programs to encourage more people to screen

Countries put in place **systems to record epidemiological data** regarding HCV diagnosis, treatment, and care to track and guide policies





Awareness & Community Response is key

Thank you!

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To help foster an enabling environment for improved availability of HCV diagnostics and treatments in LMICs

- Developing **awareness among decision-makers** of HCV and the opportunity for elimination
- Designing **sustainable financing** mechanisms for HCV scale-up in LMICs (Cambodia & Bangladesh)
- Supporting **simplified HCV diagnostic** tools and strategies
- Supporting improved **access to all simple and affordable DAA** treatments in high-burden LMICs including ravidasvir + sofosbuvir

HEP C PACT, PRIORITY COUNTRIES:

