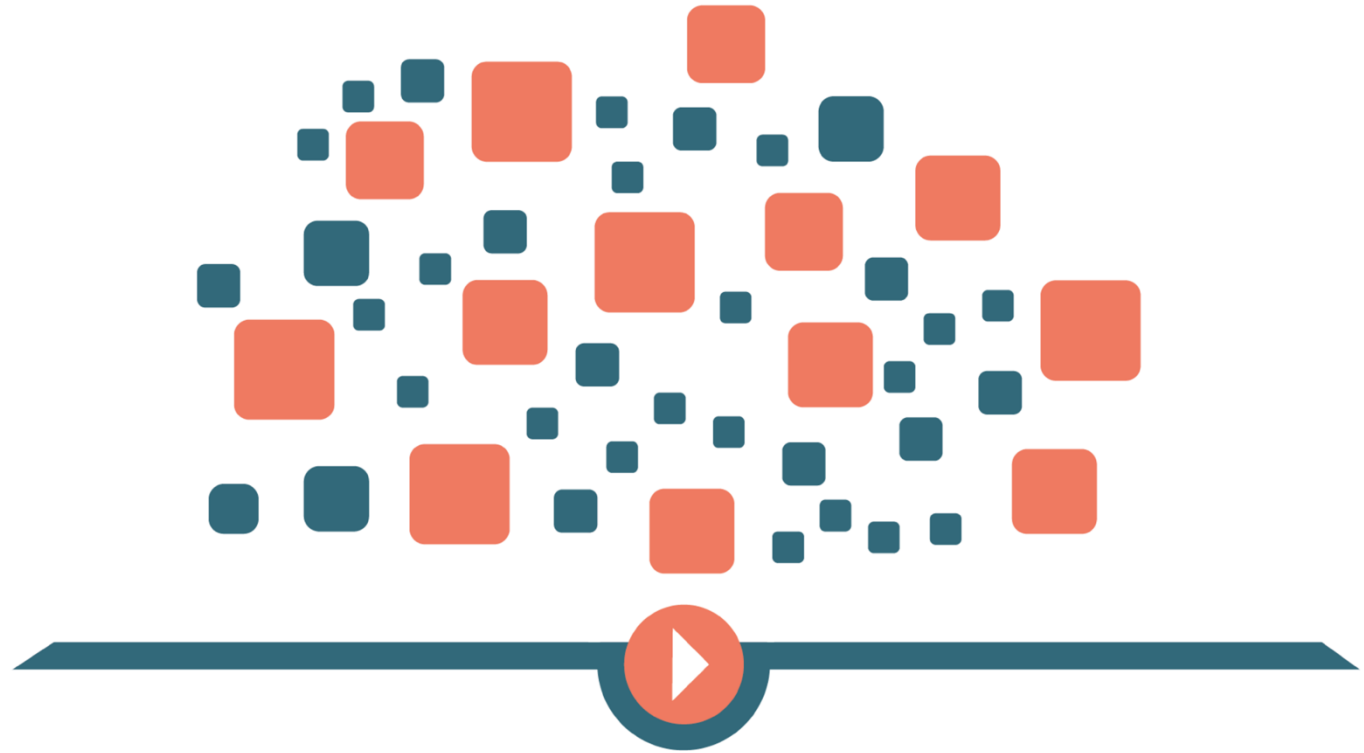


AFRANUM

Modules de formation numérique **AFRAVIH**

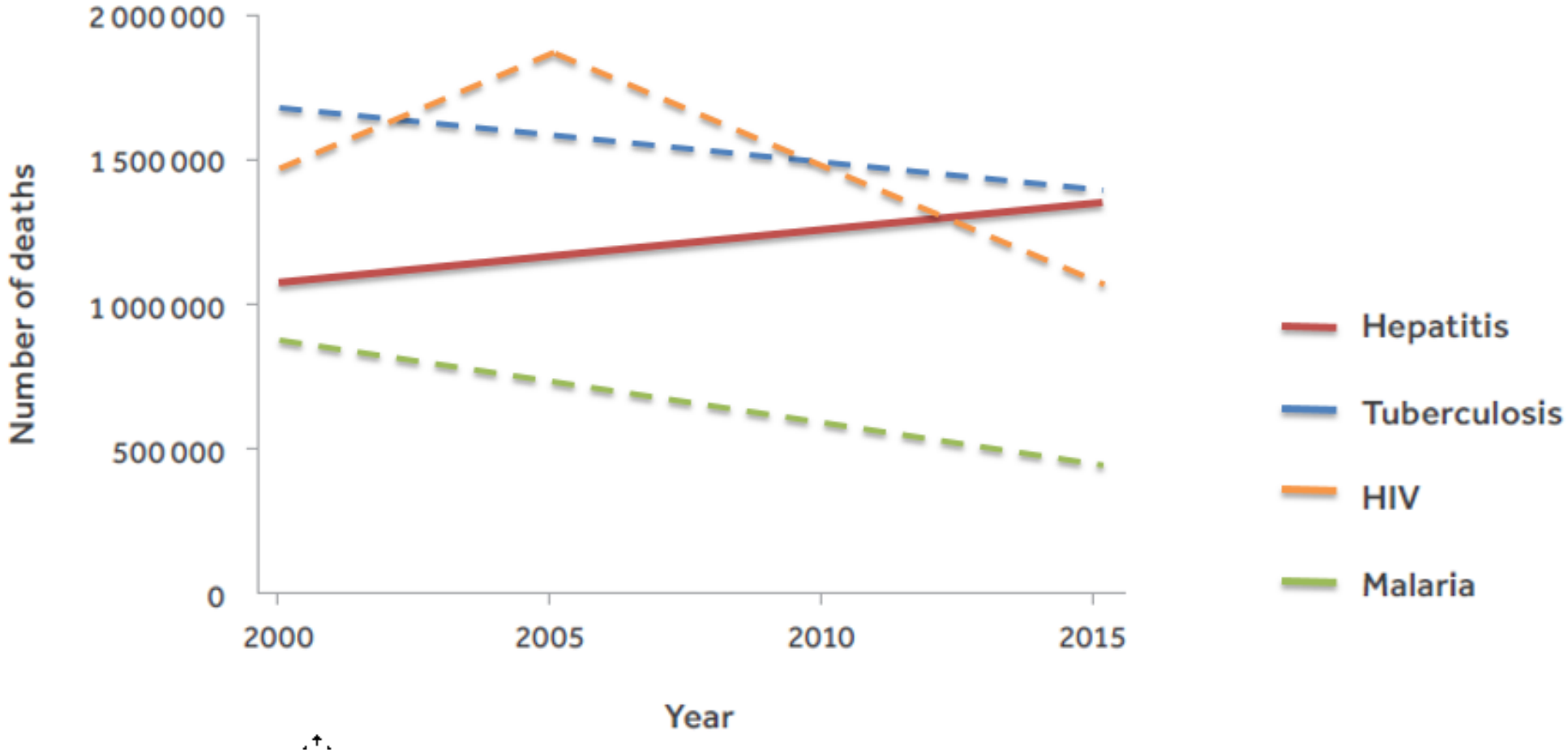
Stratégies de dépistage de l'hépatite C

Gilles Wandeler

gilles.wandeler@insel.ch

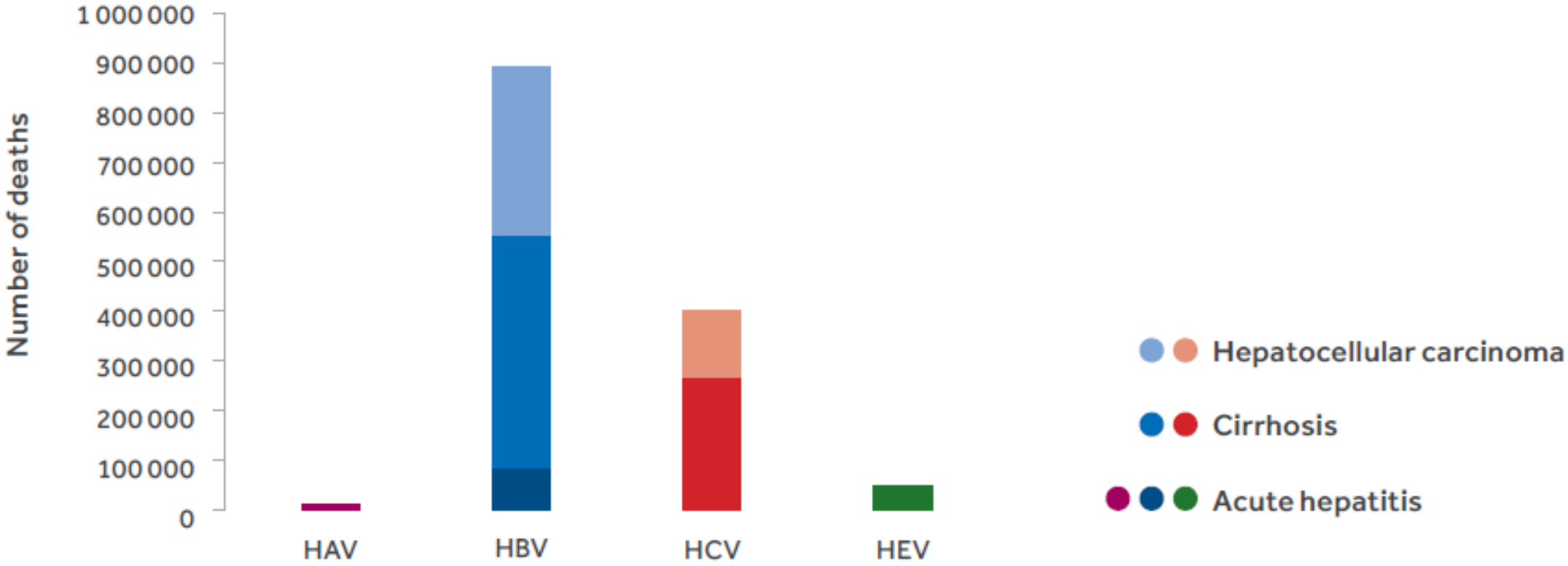
AFRANUM juin 2022

Mortalité liée aux hépatites virales en augmentation…



Global Hepatitis Report, *WHO* 2017

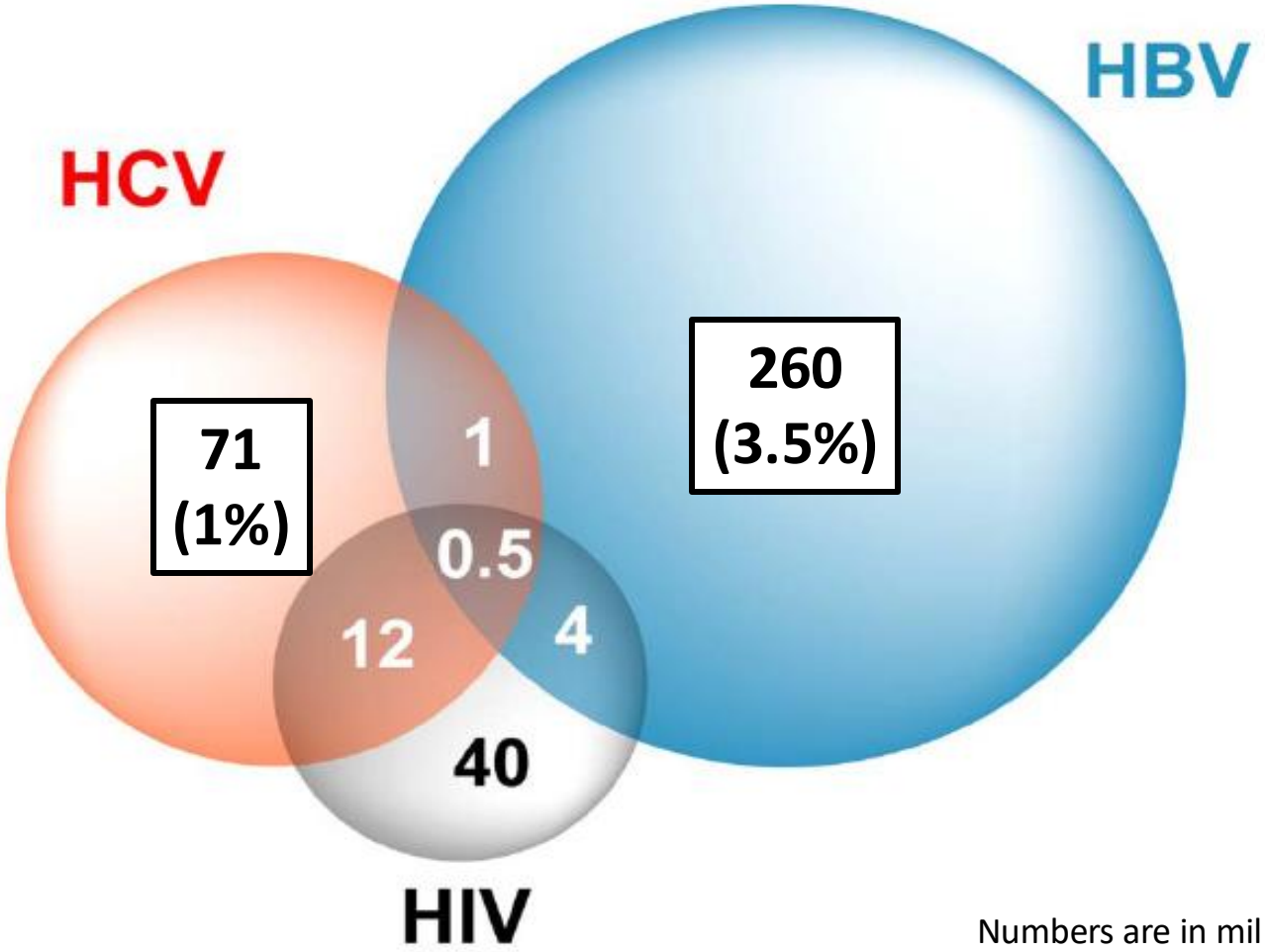
Près d'un demi-million de personnes meurt du VHC chaque année



Global Hepatitis Report, *WHO* 2017

1% de la population mondiale est infectée par le VHC

11
1%



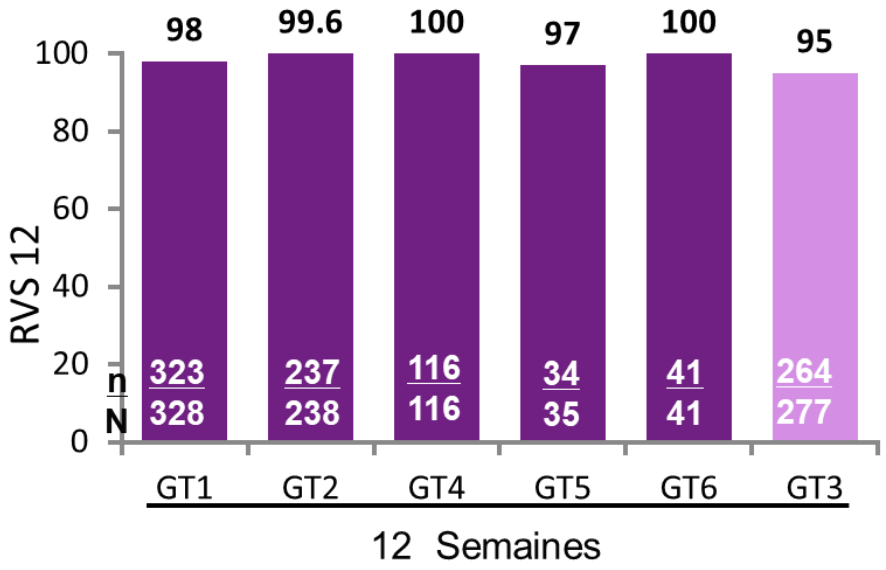
60
6.1%

Numbers are in millions of individuals

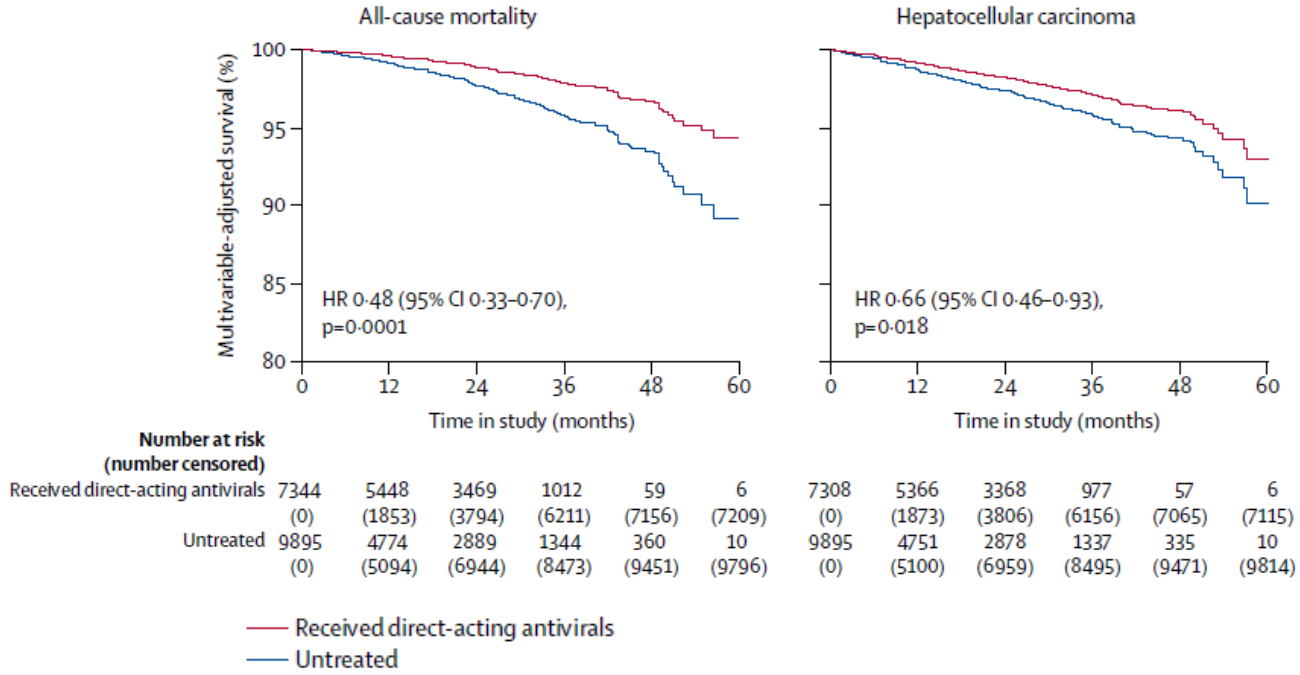
Global Hepatitis Report, *WHO* 2017

Les antiviraux à action directe permettent la guérison de l'infection

SOF/VEL 12 semaines quelque soit le stade de fibrose ou le génotype



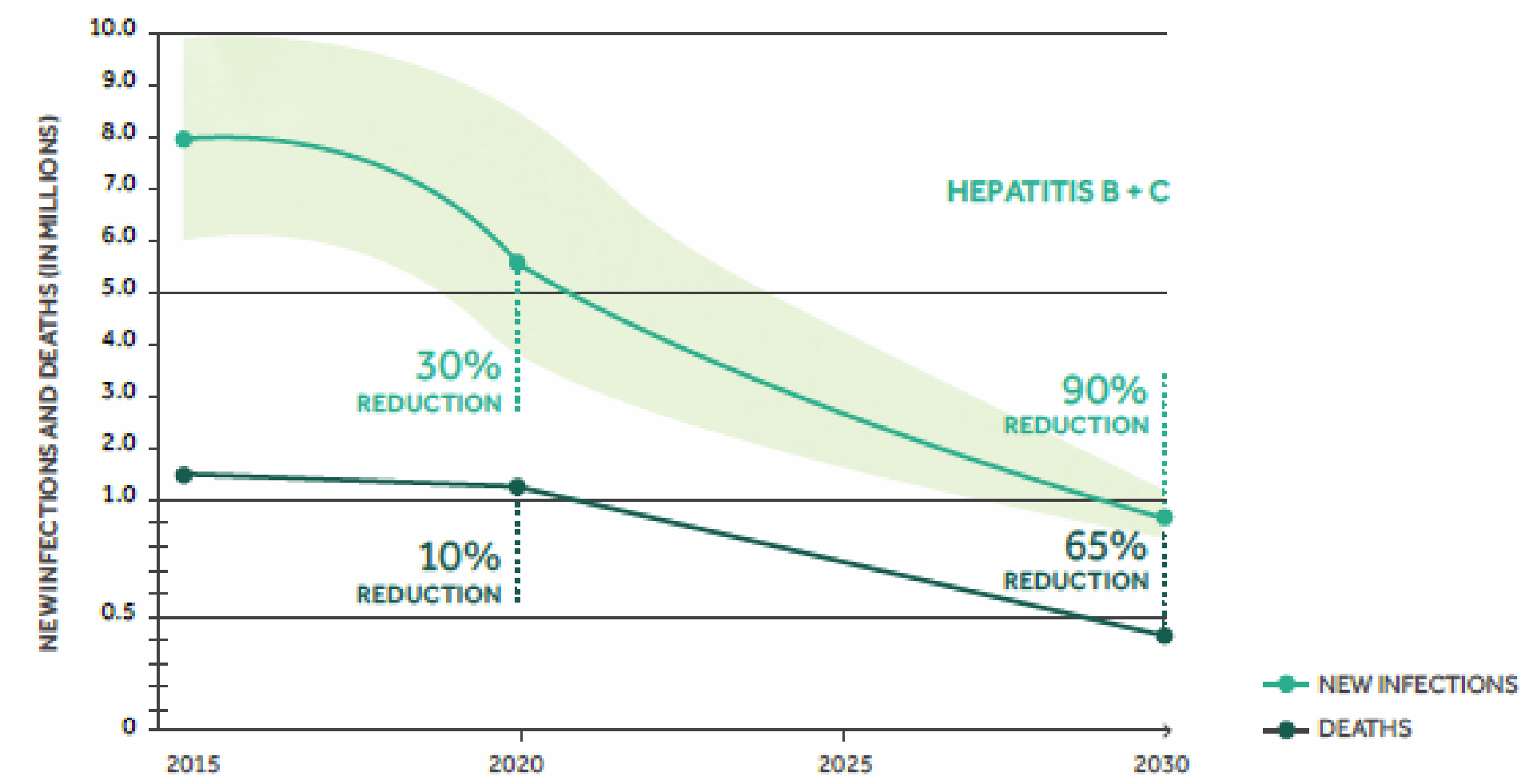
Réduction de la mortalité et du risque de cancer dans Hepather



Feld et al. *N Engl J Med* 2015
Foster et al. *N Engl J Med* 2015

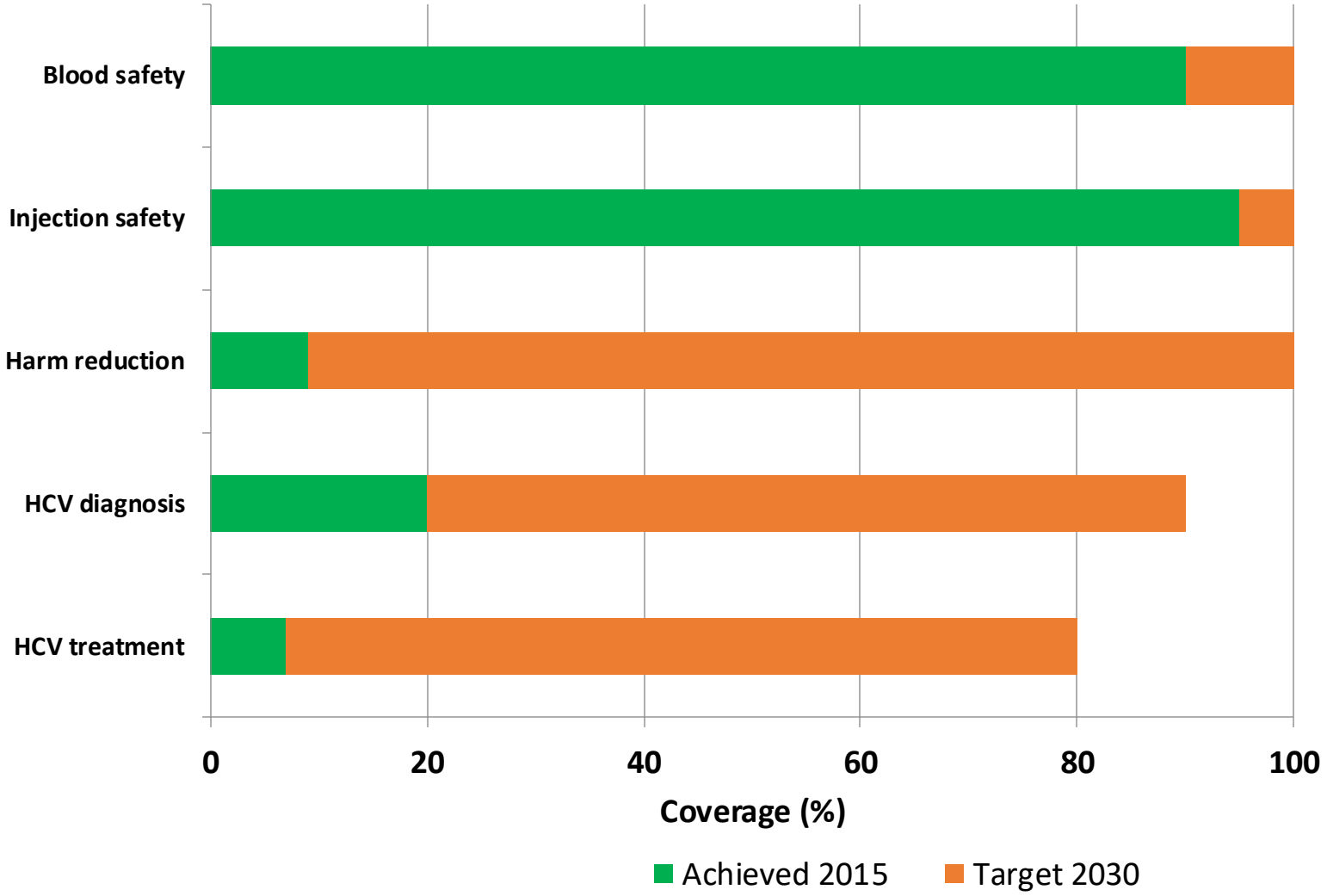
Carrat et al. *Lancet* 2019

L'élimination des hépatites virales comme problème de santé publique d'ici 2030



Global Hepatitis Report, *WHO* 2017

Barrières à l'élimination du VHC d'ici 2030
L'importance du dépistage !



Global Hepatitis Report, *WHO* 2017

Epidémies VHC localisées en Afrique

	Estimates of the prevalence of HCV infection (%)		
		Uncertainty interval	
WHO region	Best	Lower	Higher
African Region	1.0	0.7	1.6
Region of the Americas	0.7	0.6	0.8
Eastern Mediterranean Region	2.3	1.9	2.4
European Region	1.5	1.2	1.5
South-East Asia Region	0.5	0.4	0.9
Western Pacific Region	0.7	0.6	0.8
Total	1.0	0.8	1.1

Global Hepatitis Report, *WHO* 2017

Stratégies de dépistage du VHC

Focused testing

In most affected populations

Test: anti-HCV (or HCV RNA)

Birth cohort HCV testing

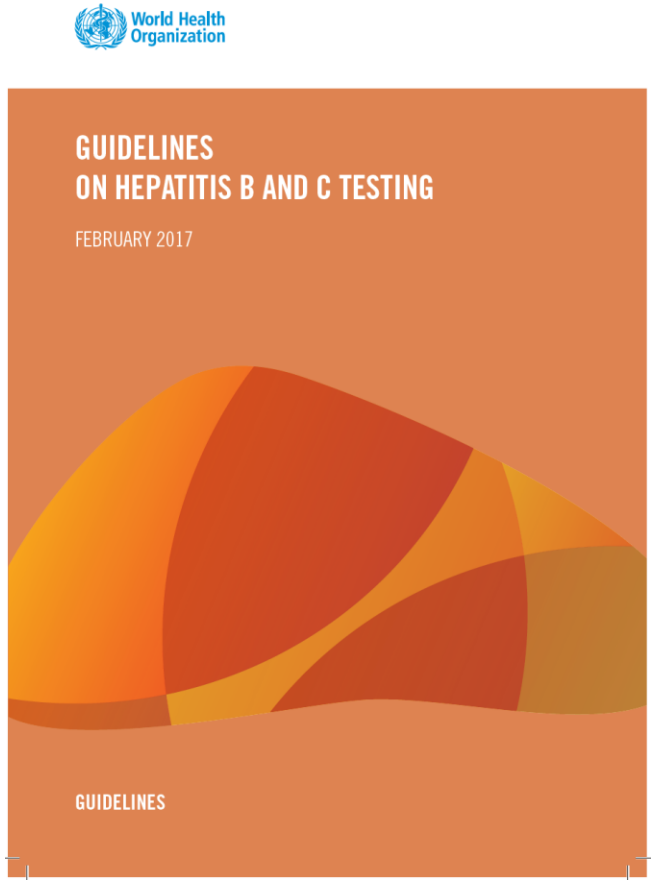
If prevalence is high in specific age groups

Test: anti-HCV

General population testing

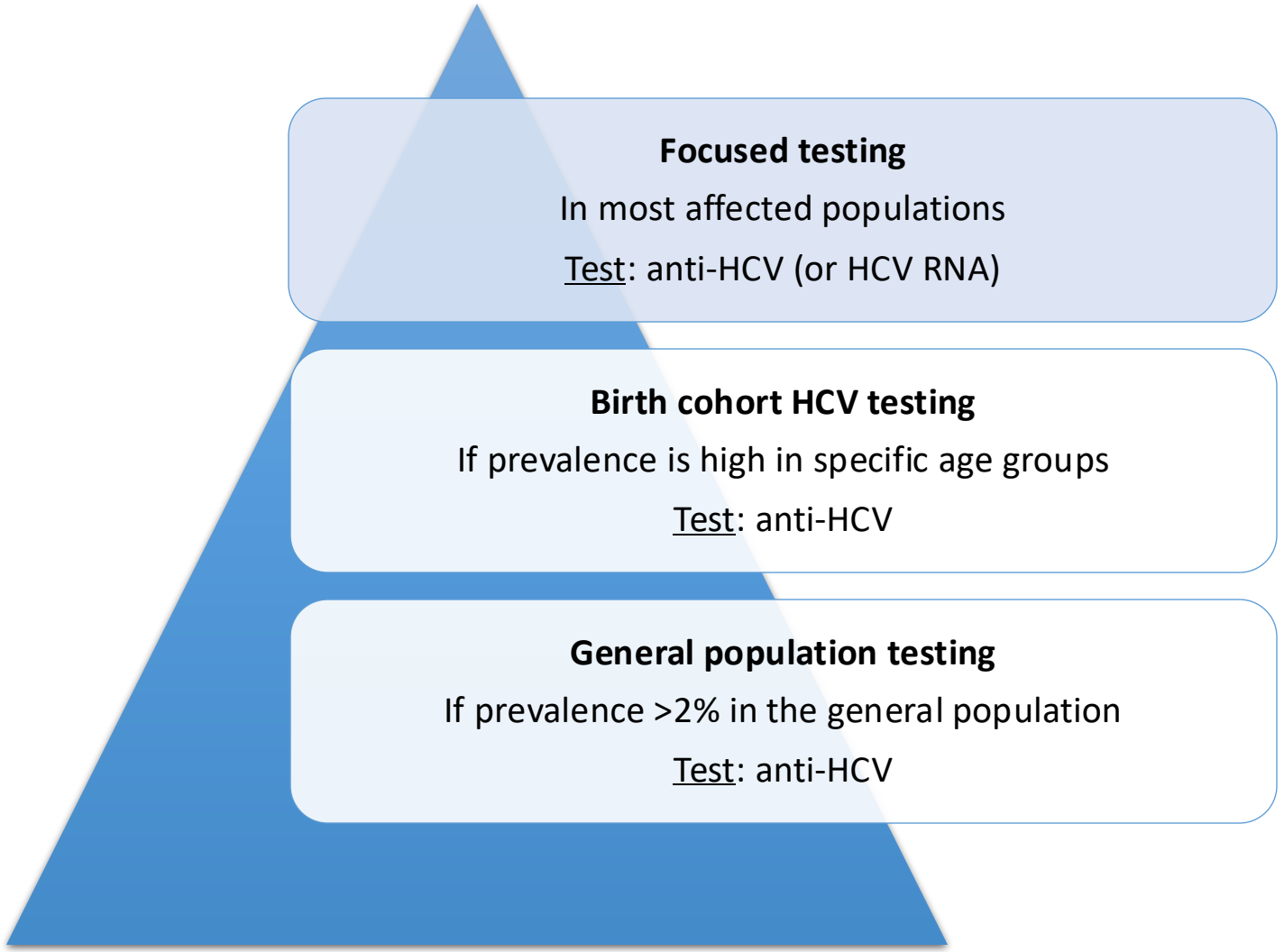
If prevalence >2% in the general population

Test: anti-HCV



Guidelines on HBV and HCV testing, *WHO* 2017

Stratégies de dépistage du VHC



- **Populations à séroprévalence élevée**
  - Populations mobiles/migrantes
  - Certaines populations indigènes
- **Anamnèse de risque élevé**
  - Personnes injectant des drogues
  - Prisonniers
  - HSH
  - Travailleurs/euses du sexe
  - Enfants de mères positives
  - Personnes vivant avec le VIH
- **Suspicion clinique d'hépatite**

IL FAUT CONNAITRE L'EPIDEMIO LOCALE !

Guidelines on HBV and HCV testing, *WHO* 2017

Les facteurs de risque VHC varient en Afrique !

Coiffeurs (n=150) : 5% anti-VHC+

Risque infectieux lié au sang chez les coiffeurs-barbiers traditionnels et leurs clients au Maroc

Cahiers Santé 2004 ; 14 : 211-6

PWID (n=506) : 23% anti-VHC+

Leprêtre A et al. *Journal of the International AIDS Society* 2015, **18**:19888
http://www.jiasociety.org/index.php/jias/article/view/19888 | http://dx.doi.org/10.7448/IAS.18.1.19888

JIAS Journal of the International AIDS Society

Research article

Prevalence and behavioural risks for HIV and HCV infections in a population of drug users of Dakar, Senegal: the ANRS 12243 UDSEN study

Pop. générale (n=18,111) : 14% anti-VHC+

Research Article

CrossMark

EASL JOURNAL OF HEPATOLOGY

Excess mortality rate associated with hepatitis C virus infection: A community-based cohort study in rural Egypt

Hémophiles (n=70) : 50% anti-VHC+

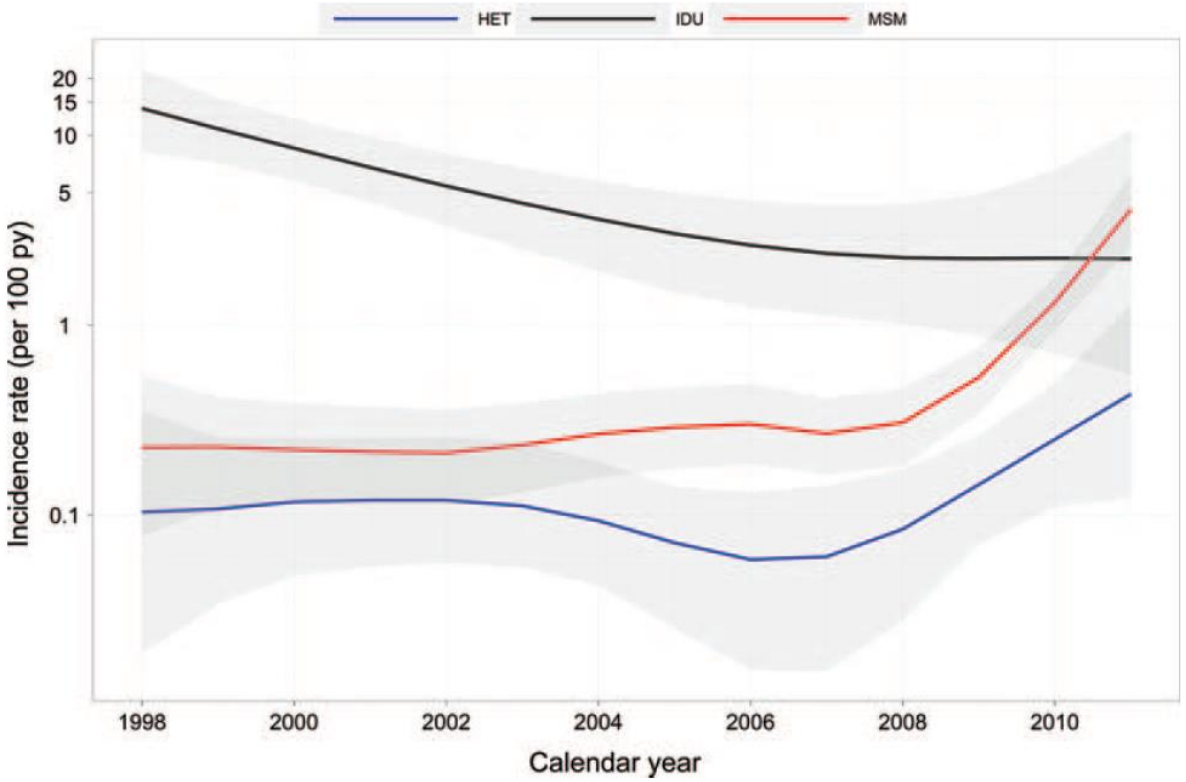
ELSEVIER

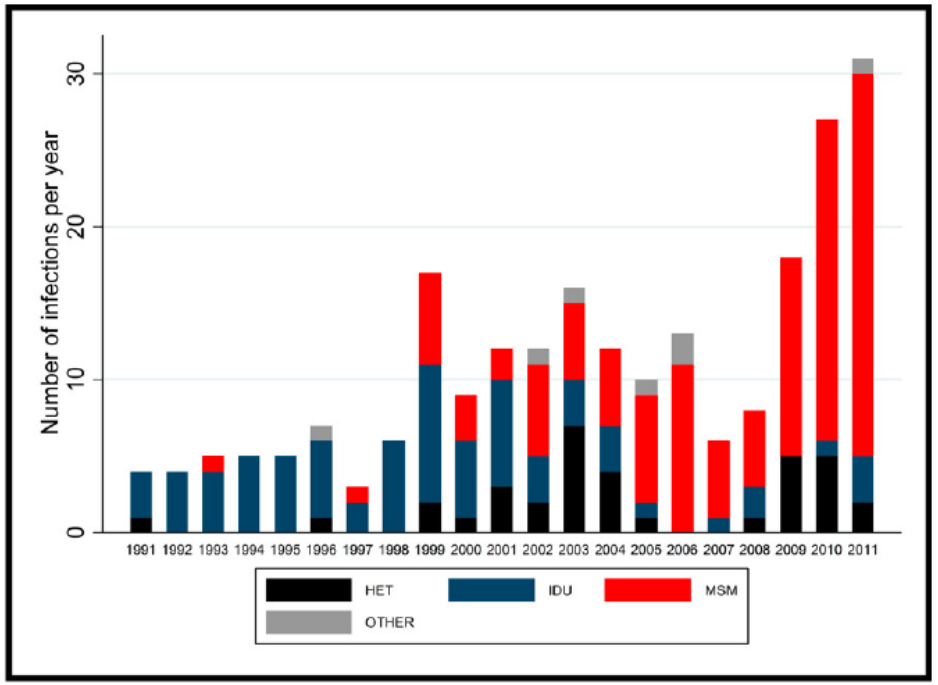
Available online at www.sciencedirect.com
SCIENCE DIRECT
Transfusion Clinique et Biologique 12 (2005) 301–305
TRANSFUSION CLINIQUE ET BIOLOGIQUE
http://france.elsevier.com/direct/TRACLI/

Article original

Infections par des virus transmissibles par le sang chez des hémophiles en Tunisie

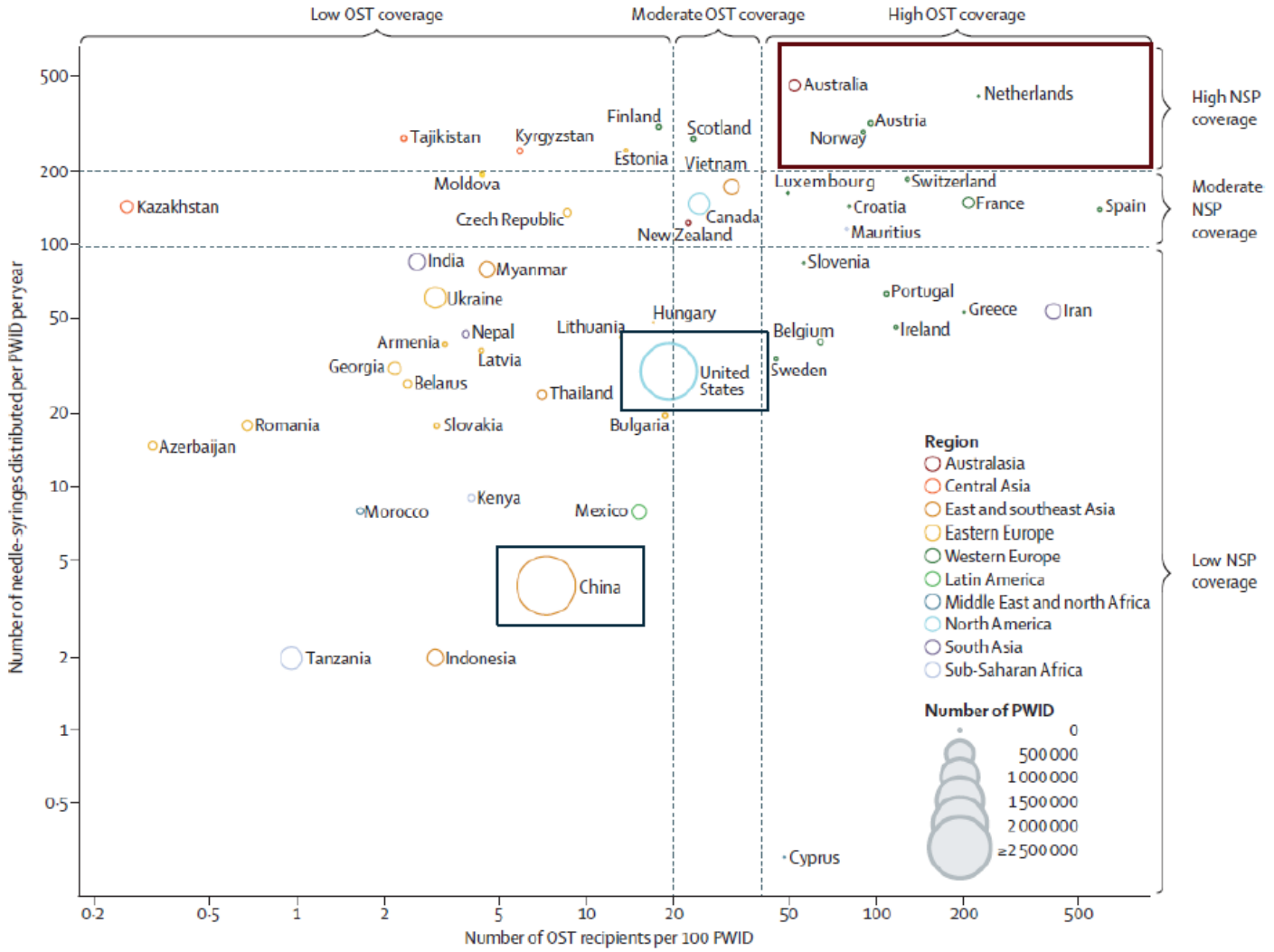
Changement de l'épidémiologie du VHC chez PvVIH au début des années 2000





Wandeler et al. *Clin Infect Dis 2012*
Wandeler et al. *Swiss Med Wkly 2015*

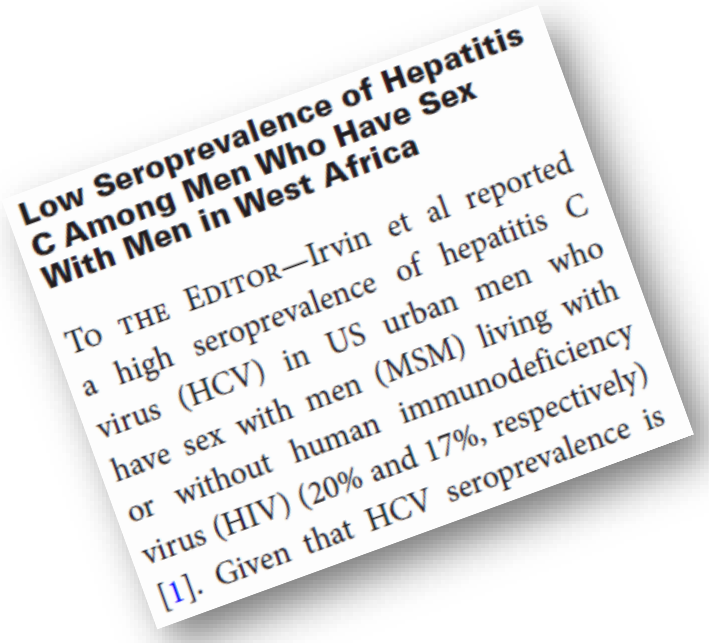
Réduction des risques : priorité pour l'élimination du VHC



- PWID comprise 8.5% of all HCV infections (absolute 6.1 M, prevalence among PWID 39%)
- >50% of infections are from 4 countries (Russia, USA, China, Brazil)
- Only 1% of PWID live in countries with high coverage of NSP and OSP (among those with available data
- Under current status, HCV elimination among PWID is impossible

Larney et al. *Lancet GH* 2017

Transmission faible du VHC chez HSH en Afrique



Low Seroprevalence of Hepatitis C Among Men Who Have Sex With Men in West Africa

To THE EDITOR—Irvin et al reported a high seroprevalence of hepatitis C virus (HCV) in US urban men who have sex with men (MSM) living with or without human immunodeficiency virus (HIV) (20% and 17%, respectively) [1]. Given that HCV seroprevalence is

Table 1. HCV Seroprevalence and its Associated Factors in 880 MSM in West Africa

	HCV Seroprevalence		Univariate Analysis[a]		Multivariate Analysis[a]	
	n+/N	% (95% CI)	PR (95% CI)	*P* Value	aPR (95% CI)	*P* Value
Study site						
Bamako, Mali	2/320	0.63 (0.02–2.40)	1		1	
Abidjan, Côte d'Ivoire	2/206	0.97 (0.04–3.70)	1.55 (0.22–10.95)	. 659	1.50 (0.29–7.64)	.628
Ouagadougou, Burkina Faso	2/183	1.09 (0.04–4.15)	1.75 (0.25–12.32)	.575	1.49 (0.25–8.95)	.663
Lomé, Togo	1/171	0.58 (0.00–3.57)	0.94 (0.09–10.26)	.957	1.18 (0.14–10.17)	.881
HIV status						
Negative	5/630	0.79 (0.28–1.90)	1			
Positive	2/250	0.80 (0.03–3.06)	1.01 (0.20–5.17)	.992		

Yaya et al. *Clin Infect Dis* 2021

Tester les populations à risque en Suisse : faisable ?

A. Clinical signs or symptoms of hepatitis
Persons with elevated liver enzymes (transaminases)
Persons with clinical signs or symptoms of hepatitis
Patients with liver cirrhosis, fibrosis or hepatocellular carcinoma
B. Risk factors
Medical
Recipients of clotting-factor concentrates and blood products before 1987
Recipients of blood transfusions before July 1992
Recipients of solid-organ transplants before July 1992
Patients who are undergoing or have undergone haemodialysis
Persons with HIV infection
Persons with HBV infection
Persons who have received repeated percutaneous injections
Persons who have had invasive medical and paramedical or dental work in settings with high prevalence or poor infection control practices
Demographic
Persons and migrants born or having lived in regions of high HCV endemicity
Behavioural
Persons who inject or have ever injected drugs (injection drug users)
Persons who use or have ever used intranasal drugs
Men who have sex with men
Household members or sexual partners of persons with HCV infection
Occupational
Healthcare workers at risk for occupational exposure to blood or blood-contaminated body fluids
Healthcare workers after exposure to blood or blood-contaminated body fluids (e.g. needlestick injury)
Public-safety workers at risk for occupational exposure to blood or blood-contaminated body fluids
Others
Persons with imprisonment history
Persons with body piercings or tattoos if being performed in poor hygienic environments
Children of HCV-infected mothers
Persons with accidental needlestick injury in public places (e.g. park or street)

Fretz et al. *Swiss Med Wkly* 2013

Stratégies de dépistage du VHC

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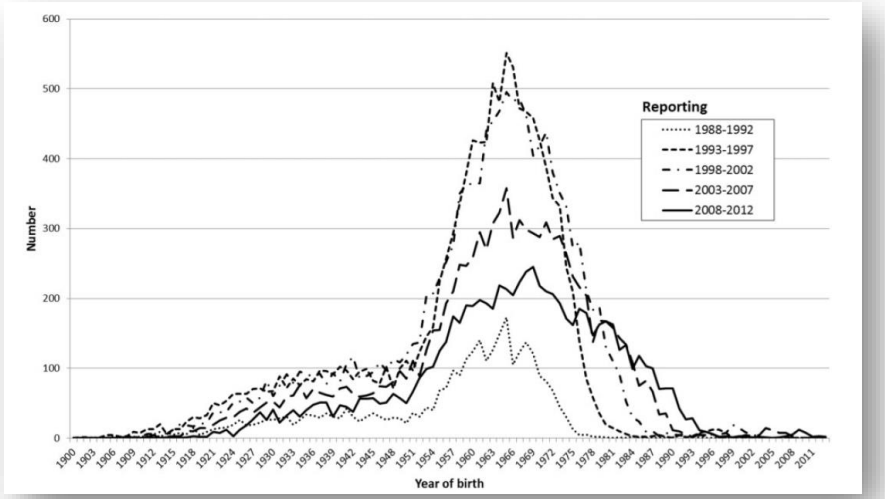
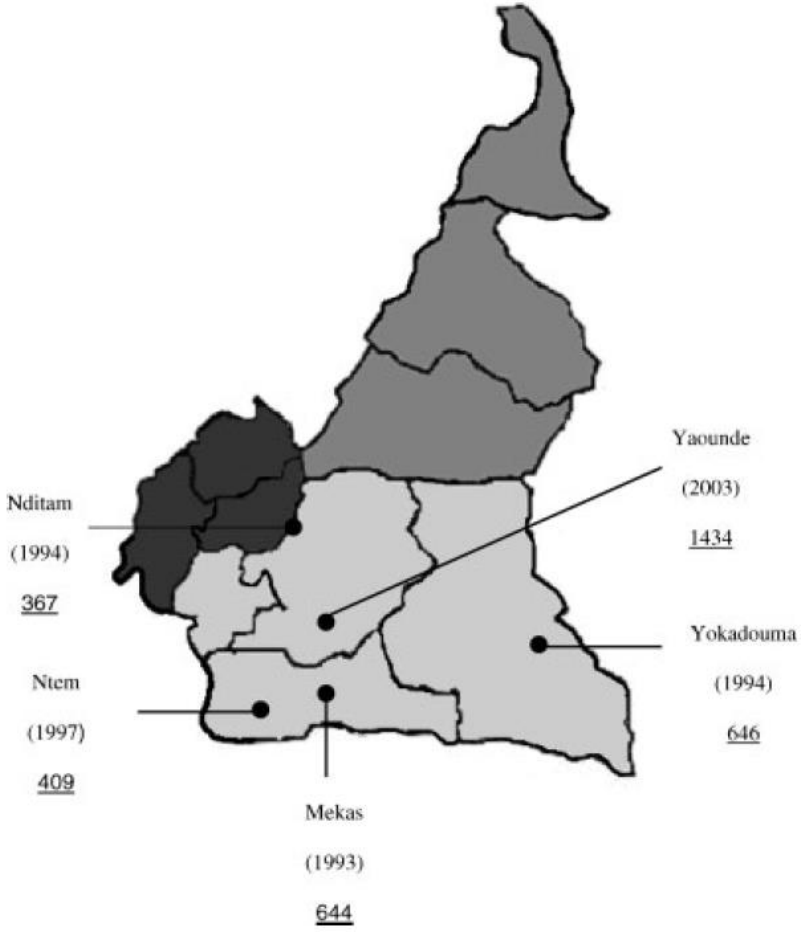
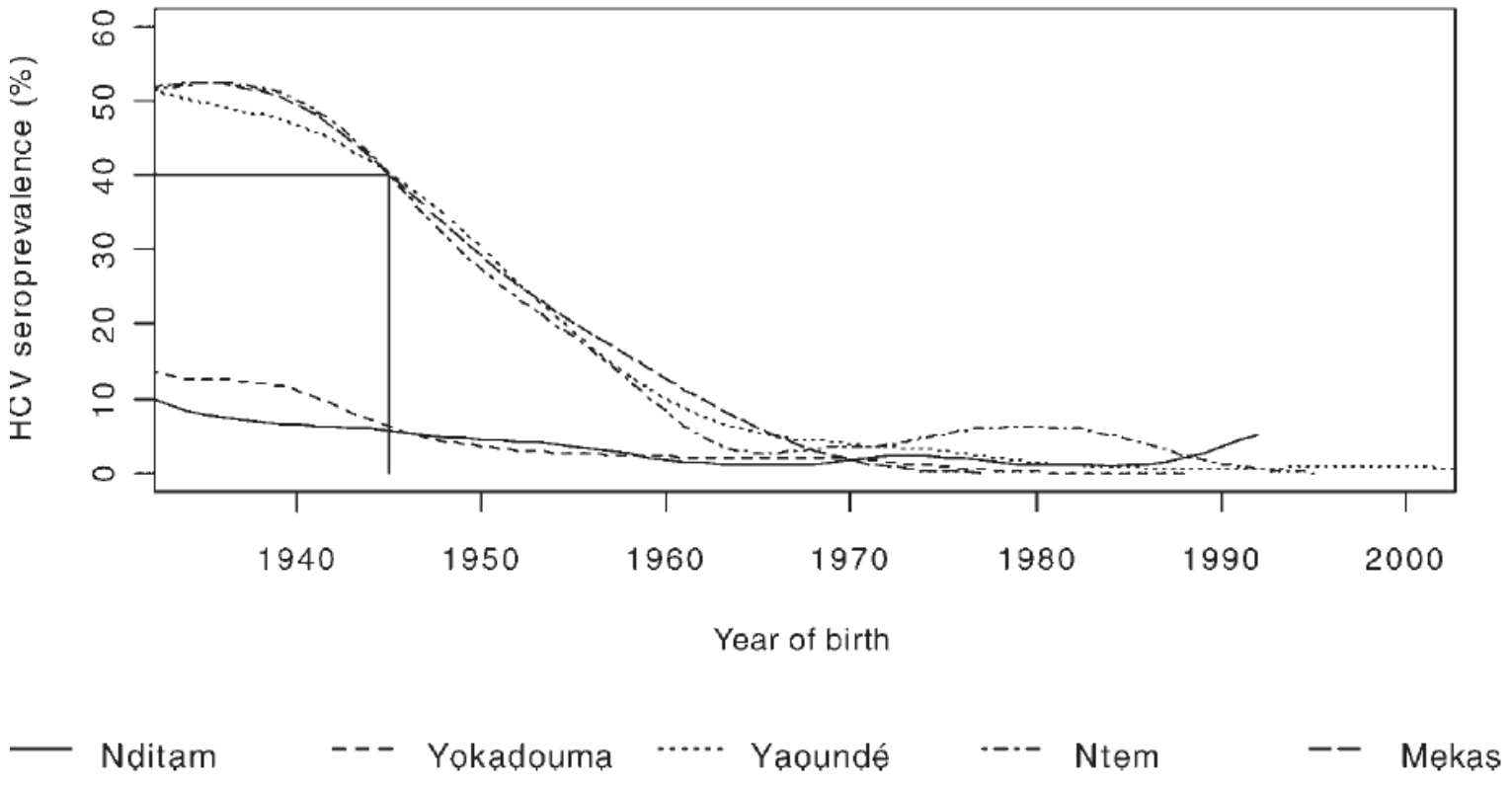


Guidelines on HBV and HCV testing, *WHO* 2017
Bruggmann et al. *Eur J Public Health* 2015

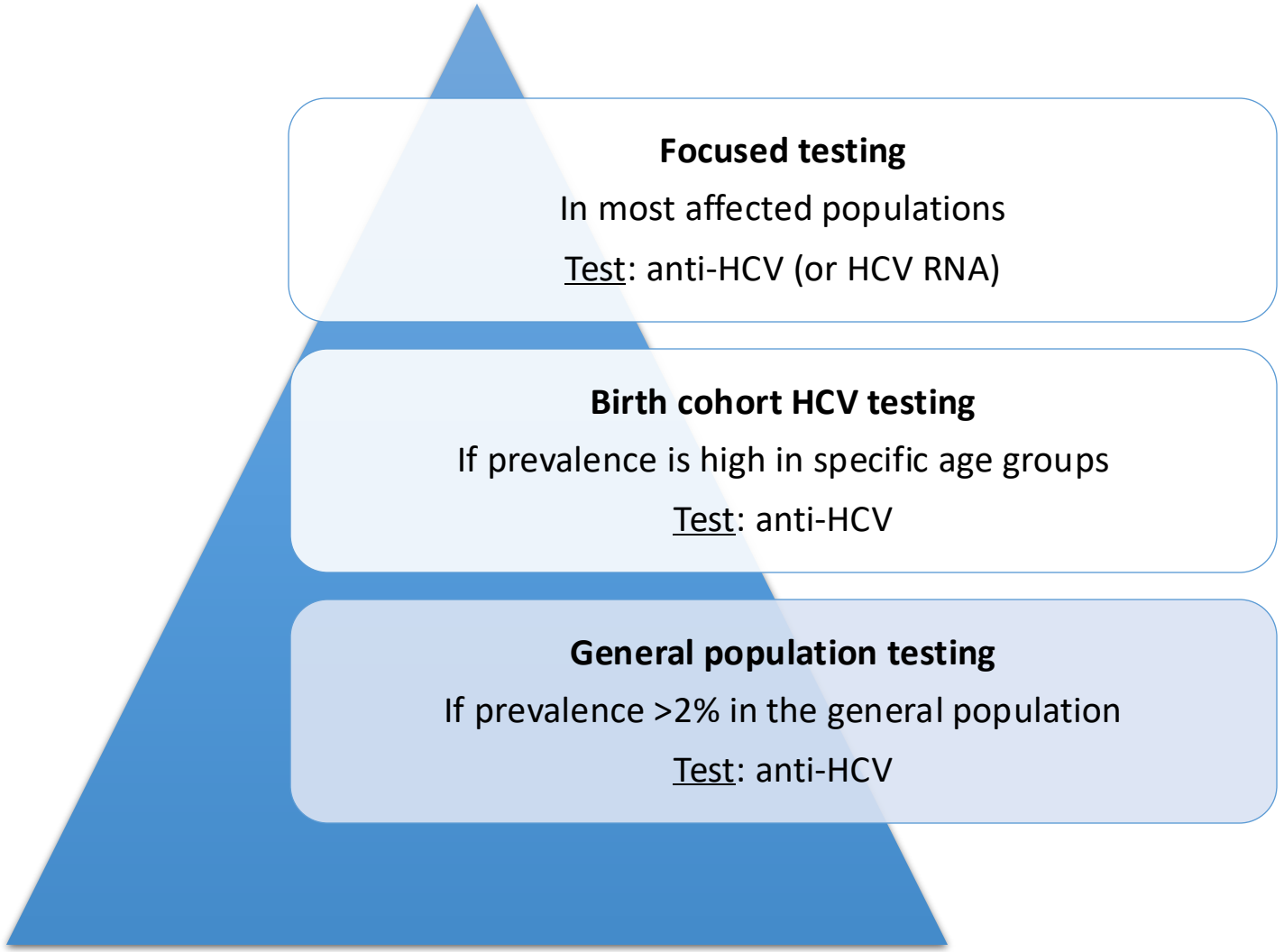
Cohorte de naissance VHC au Cameroun ?





Nerrienet et al. *J Med Virol* 2005

Stratégies de dépistage du VHC



AFEF
ASSOCIATION FRANÇAISE POUR L'ÉTUDE DU FOIE

RECOMMANDATIONS AFEF POUR L'ÉLIMINATION DE L'INFECTION PAR LE VIRUS DE L'HÉPATITE C, EN FRANCE

RECOMMANDATIONS :

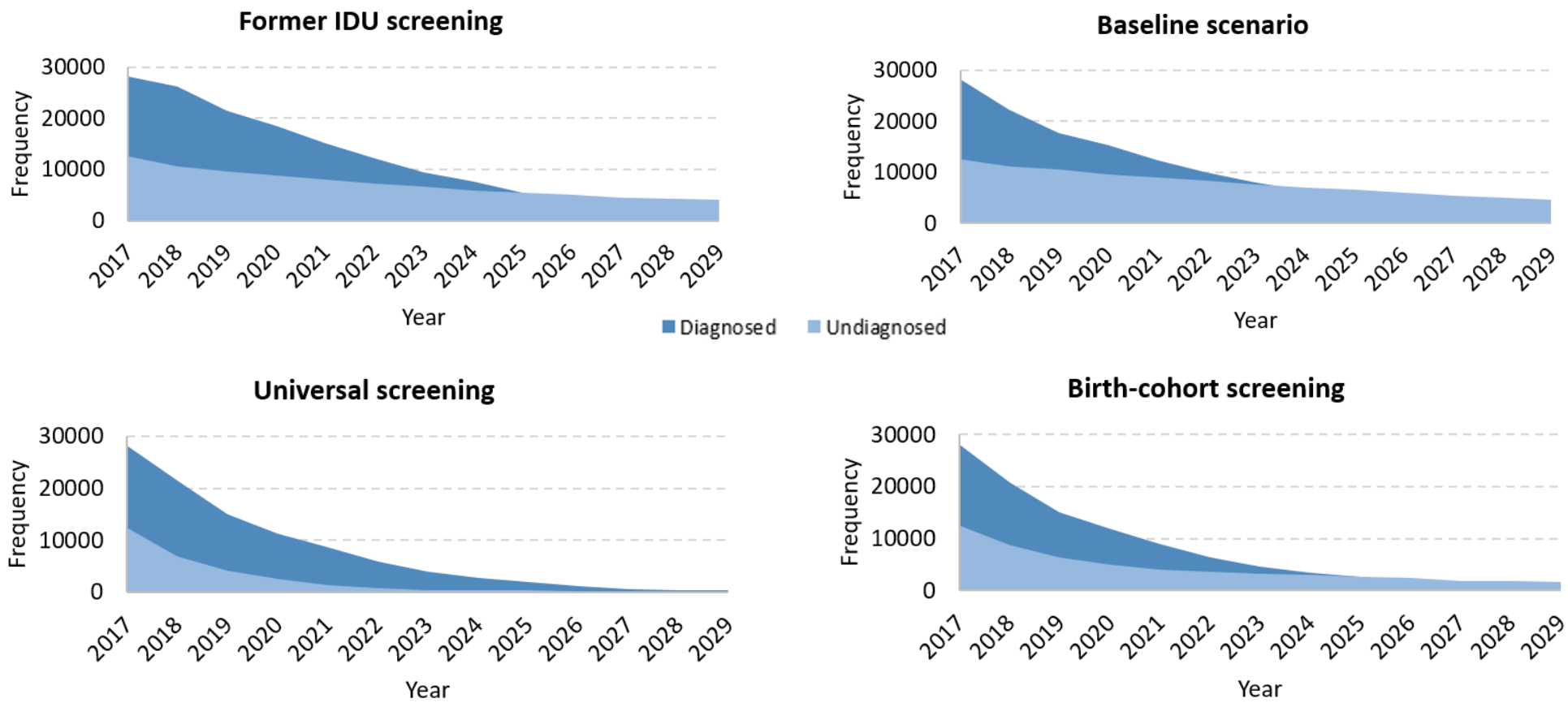
1. Le dépistage de chaque adulte au moins une fois dans sa vie est recommandé (AE)
2. Le dépistage du VHB, du VHC et du VIH doit être combiné (AE)
3. Tous les tests de dépistage doivent être remboursés à 100% par la sécurité sociale (AE)

Assessing the cost-effectiveness of hepatitis C screening strategies in France

Sylvie Deuffic-Burban[1,2,*], Alexandre Huneau[1], Adeline Verleene[1], Cécile Brouard[3], Josiane Pillonel[3], Yann Le Strat[3], Sabrina Cossais[1], Françoise Roudot-Thoraval[4], Valérie Canva[5], Philippe Mathurin[2,5], Daniel Dhumeaux[6], Yazdan Yazdanpanah[1,7]

Guidelines on HBV and HCV testing, *WHO* 2017
Deuffic-Burban et al. *J Hepatol* 2018

Réduction de la population virémique grâce à un dépistage à grande échelle



Importance des 5-10,000 non-diagnostiqués (morbidité, transmission)?

Sadeghimehr et al. *J Virus Erad* 2019

Tests de dépistage VHC : attention aux faux-positifs !!

1,000 PVVIH testées en Ouganda

- 76 anti-HCV pos.
- 0 HCV RNA pos.

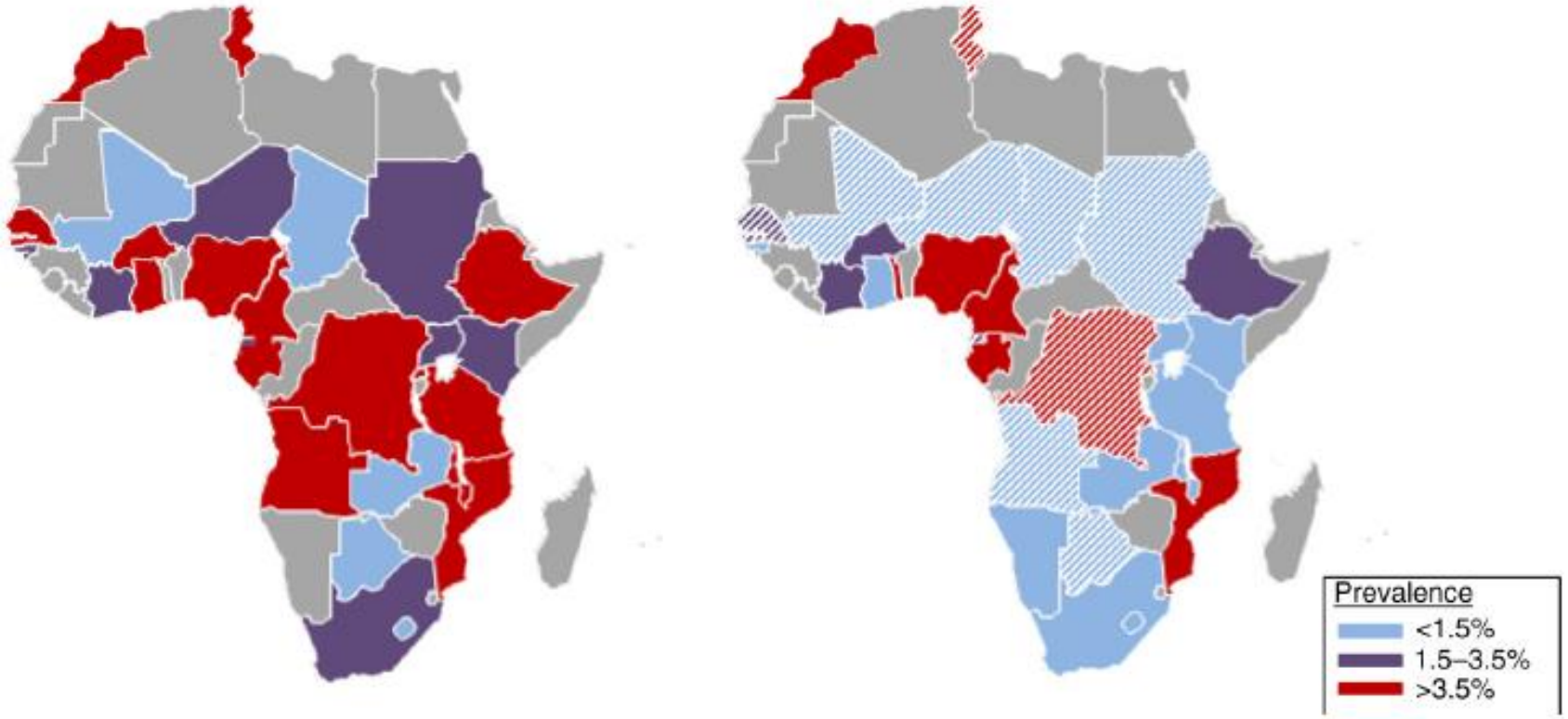
Table 1. Factors Associated With Positive Hepatitis C Virus Enzyme-Linked Immunosorbent Assay

Factor	% HCV ELISA Positive (No.)	OR (95% CI)	*P* Value	Adjusted OR (95% CI)	*P* Value
Age, y					
<30	18.42 (14/191)	1		1	
30–34	13.16 (10/220)	0.60 (.26–1.39)	.234	0.61 (.26–1.42)	.255
35–39	18.42 (14/192)	0.99 (.46–2.15)	.989	0.99 (.46–2.17)	.989
40–44	23.68 (18/167)	1.53 (.73–3.17)	.257	1.57 (.75–3.30)	.235
45–49	17.11 (13/152)	1.18 (.54–2.60)	.676	1.20 (.54–2.66)	.653
≥50	9.21 (7/78)	1.25 (.48–3.22)	.649	1.39 (.53–3.67)	.505
Sex					
Female	6.87 (46/670)	1		1	
Male	9.09 (30/330)	1.36 (.84–2.19)	.213	1.23 (.754–2.02)	.404
HIV status					
Negative	9.00 (45/500)	1		1	
Positive	6.20 (31/500)	0.67 (.42–1.08)	.097	0.61 (.37–1.00)	.049
Schistosoma Ab					
Negative	6.58 (58/882)	1		1	
Positive	15.38 (18/117)	2.58 (1.46–4.56)	.001	2.80 (1.57–5.01)	.001

Mullis et al. *Clin Infect Dis* 2013

Tests anticorps surestiment la prévalence du VHC

Méta-analyse : 108,000 PvVIH de 152 études et 35 pays en Afrique



Ac-pos.: 8.5% (95% CI: 6.9-10.1)

RNA-pos.: 2.0% (95% CI: 1.5-2.6)

Castro et al. *J Int AIDS Soc* 2016

Charge virale VHC rarement disponible en Afrique

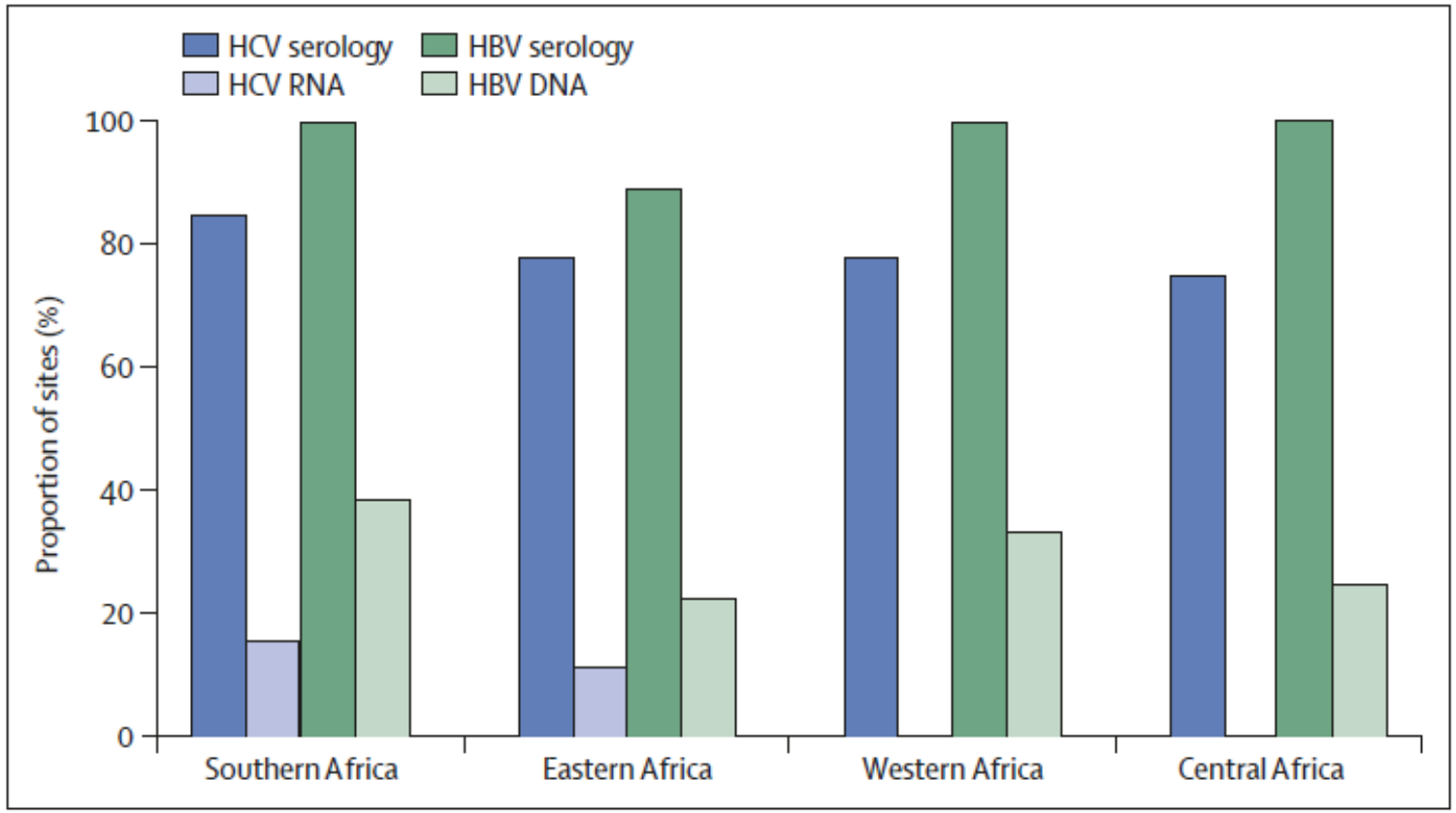


Figure: **Availability of HCV and HBV diagnostic tests in 35 HIV clinics across sub-Saharan Africa**
Data are from the International Epidemiological Databases to Evaluate AIDS collaboration.[6] HCV=hepatitis C virus. HBV=hepatitis B virus.

Wandeler et al. *Lancet* 2018

Take home messages

- 1% de la population mondiale a une hépatite C chronique, la plupart des infections étant concentrée dans des populations à risque
- Différentes stratégies de dépistage possibles, selon l'épidémiologie locale: ciblé, cohorte de naissance ou généralisé
- Testing VHC ciblé : stratégie attractive dans un monde parfait, mais…
  - le contexte épidémiologique est généralement mal défini
  - son efficacité n'est pas prouvée
  - sa faisabilité est douteuse…

Merci de votre attention