

Elimination of Viral Hepatitis in sub-Saharan Africa — the researchers' view

G. Wandeler, MD MSc

gilles.wandeler@insel.ch

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Towards the Elimination of Hepatitis B and C by 2030
The draft WHO Global Hepatitis Strategy, 2016-2021
and global elimination targets



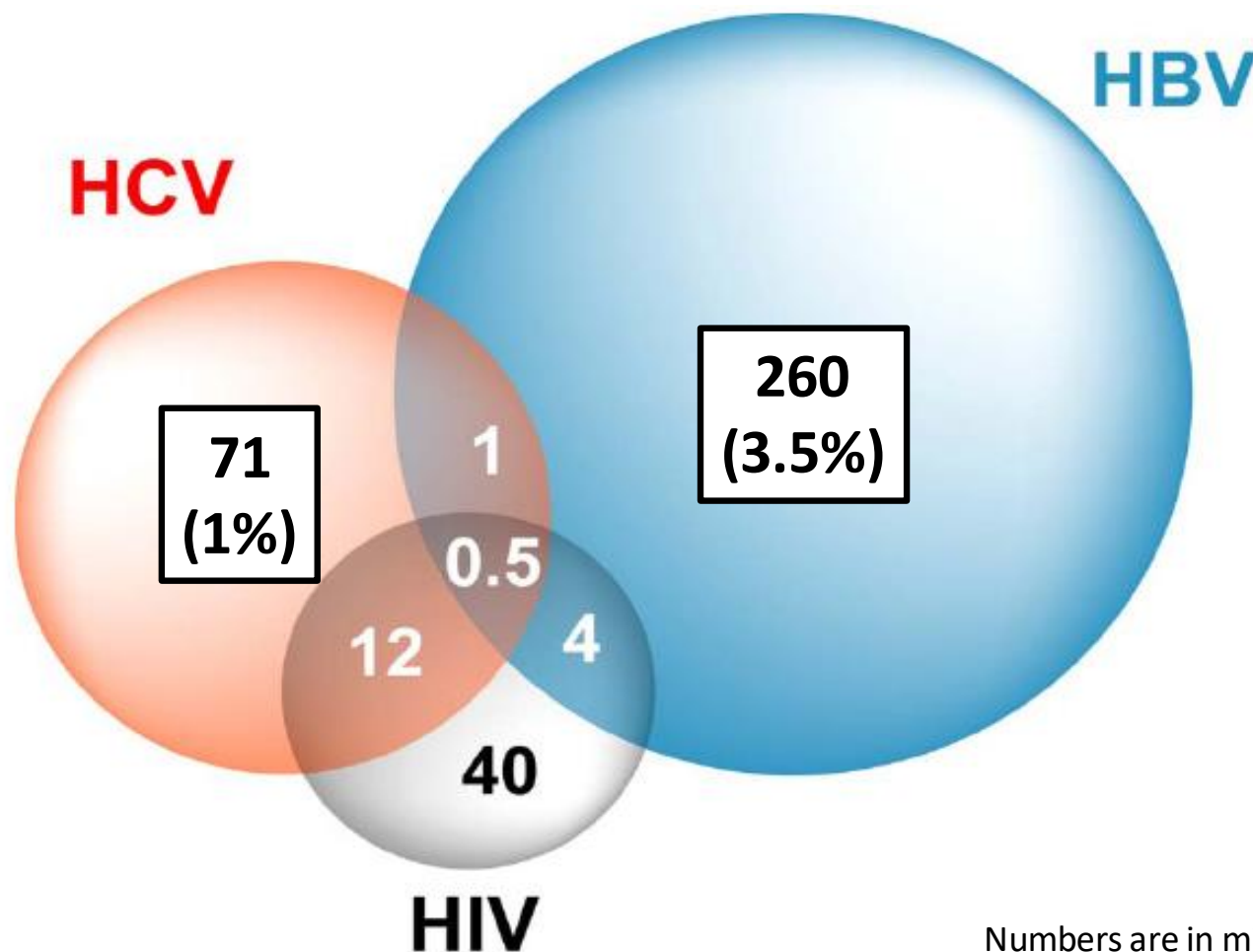
HBV and HCV in the World and in Africa



11
1%

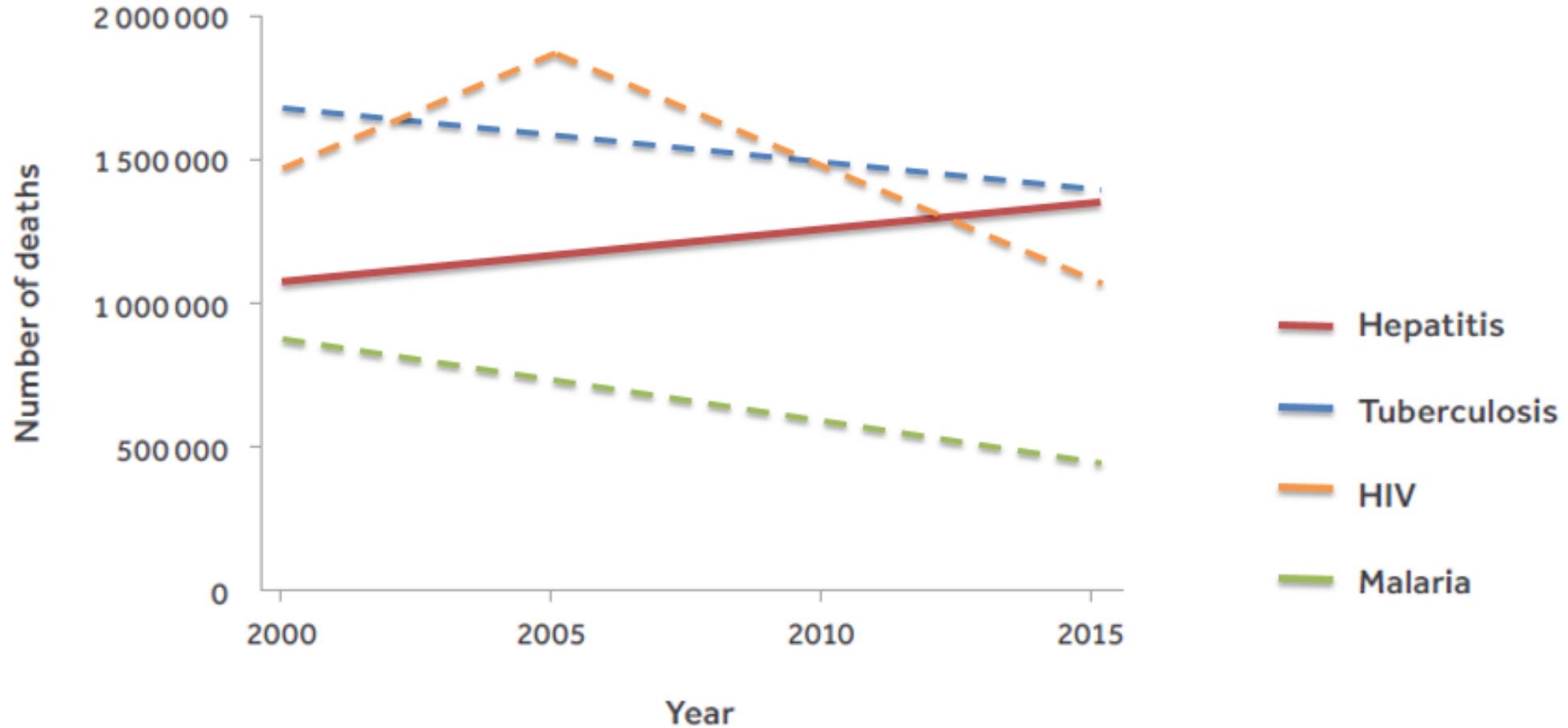


60
6.1%

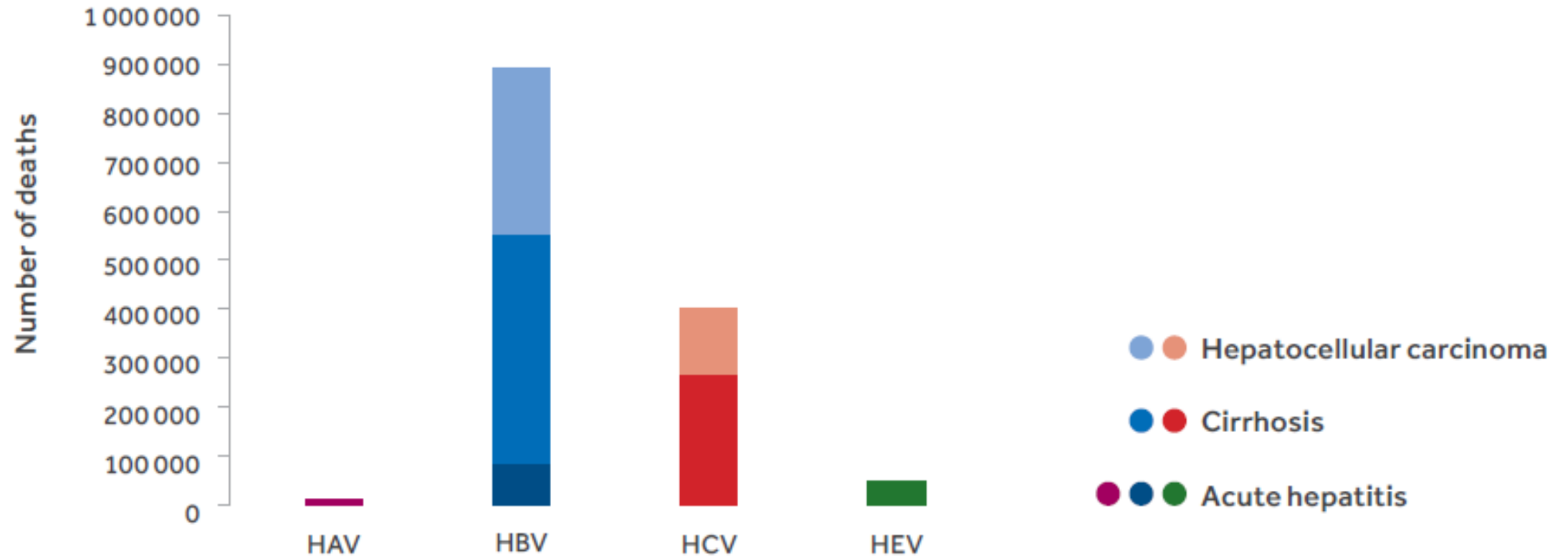


Numbers are in millions of individuals

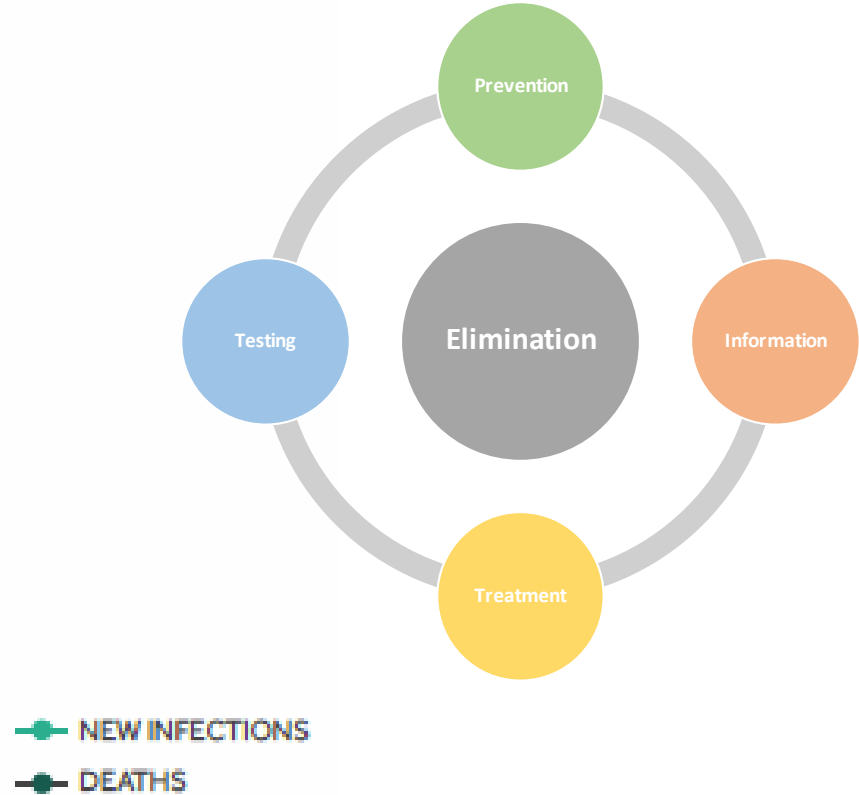
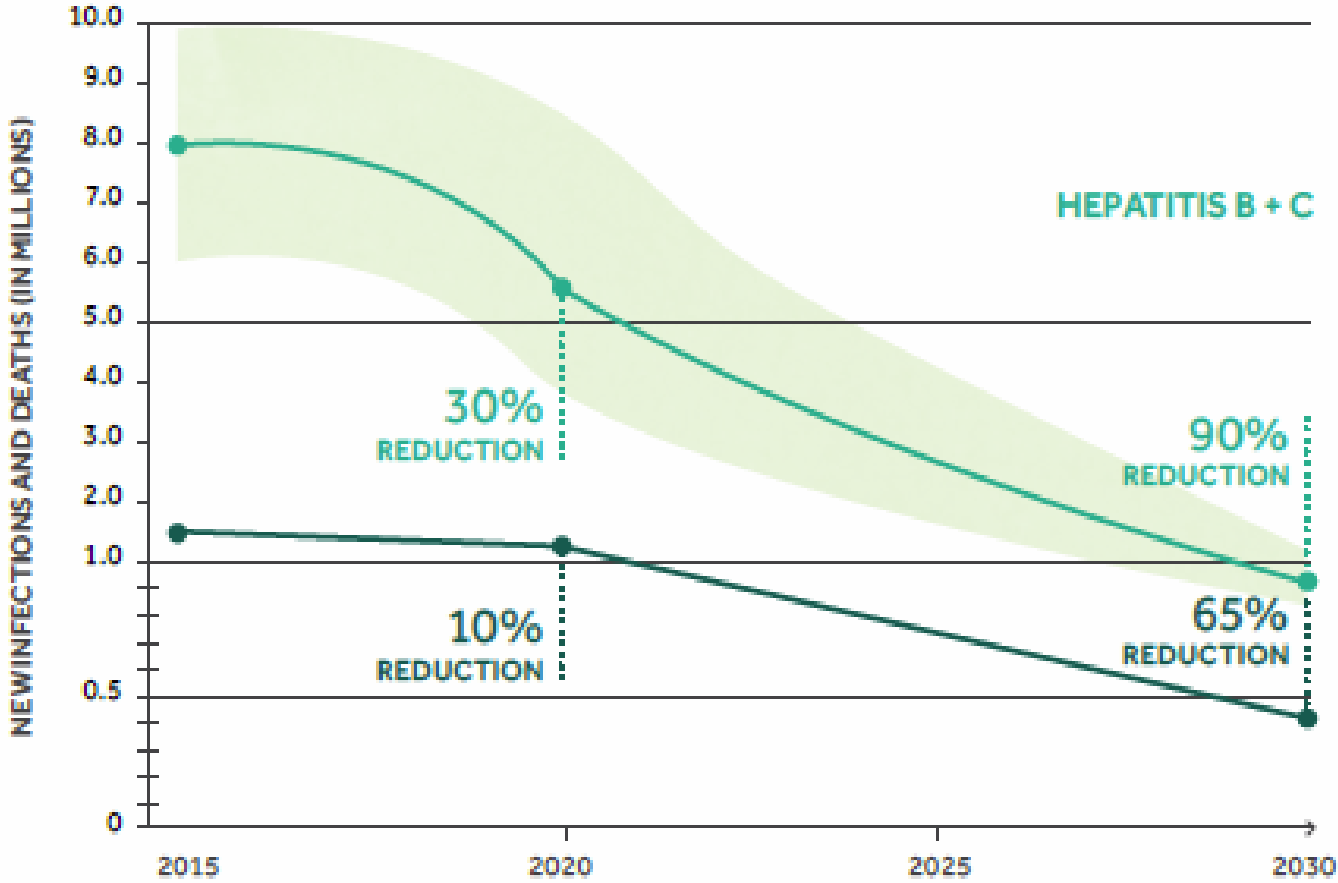
Viral hepatitis-related mortality is increasing...



...and most of it is due to HBV and HCV infections



WHA 2016 : elimination of viral hepatitis as a public health threat by 2030



Transmission differs across regions *the example of HBV infection*

Low-endemic regions
(North America, Western Europe)



5-10%

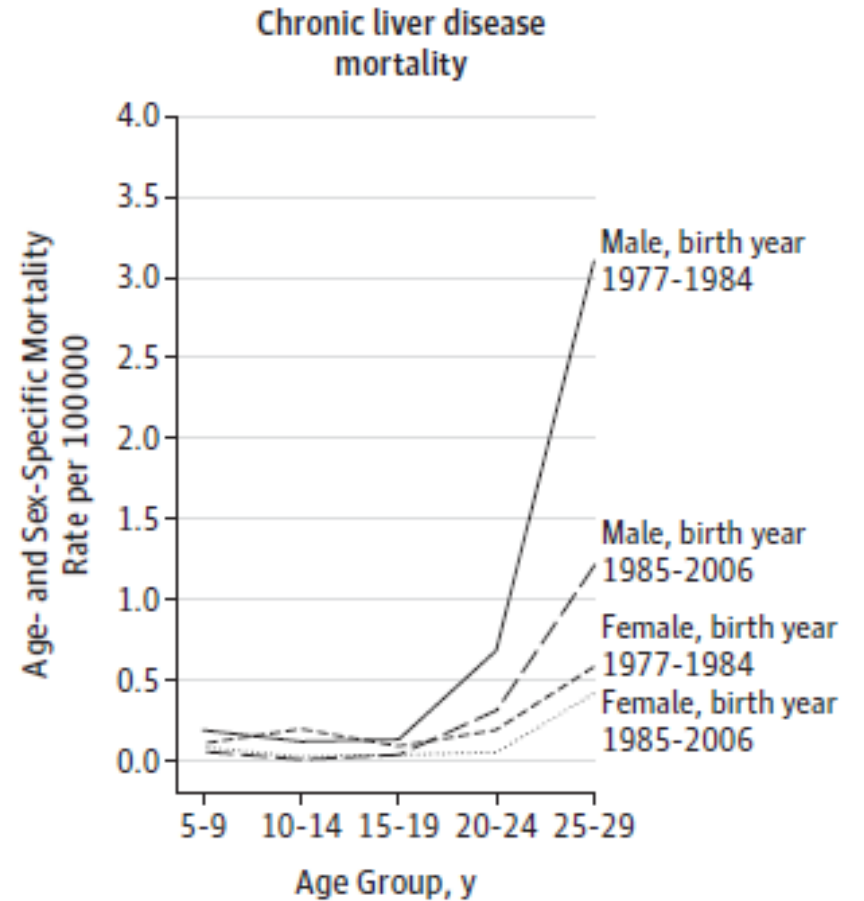
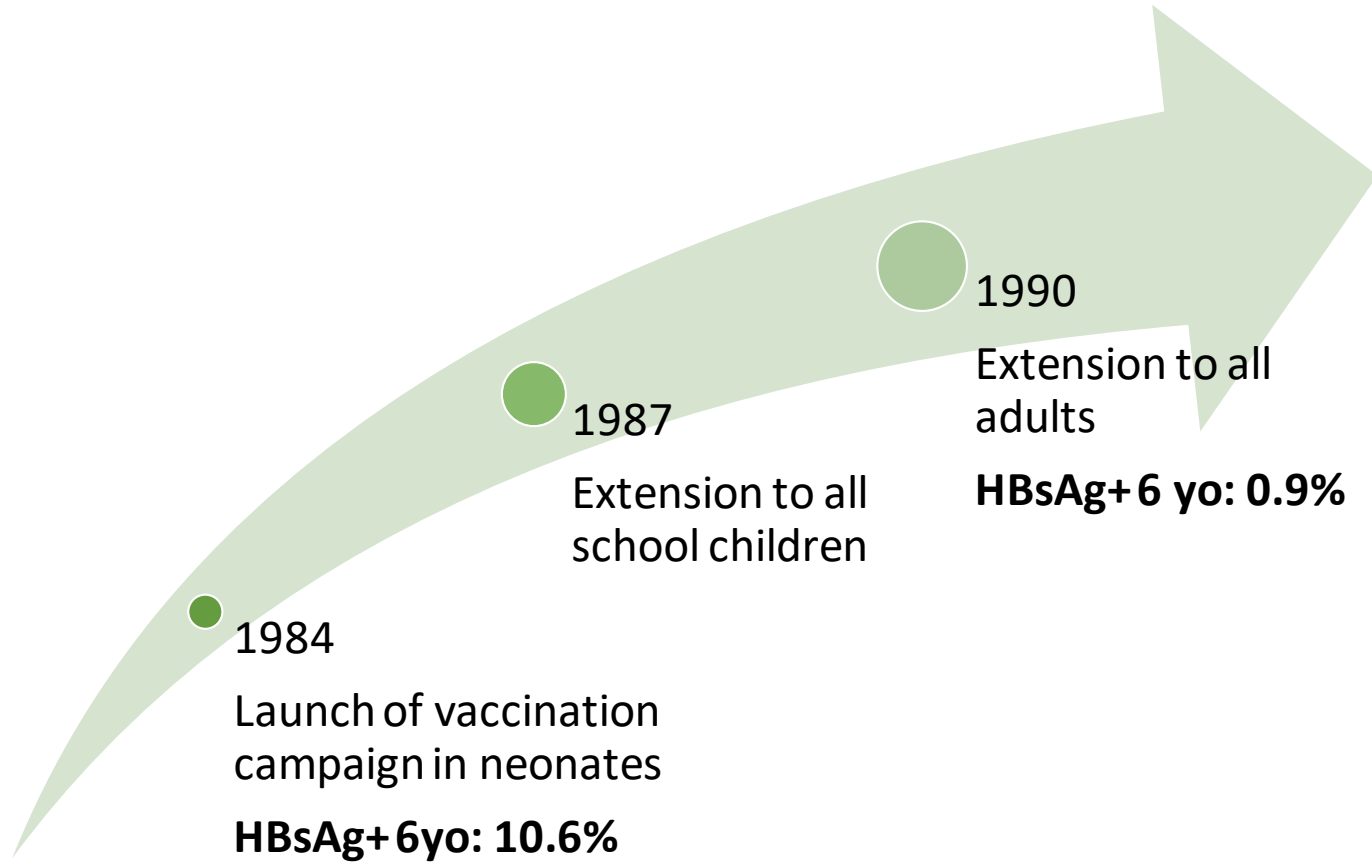
High-endemic regions
(sub-Saharan Africa, Asia)



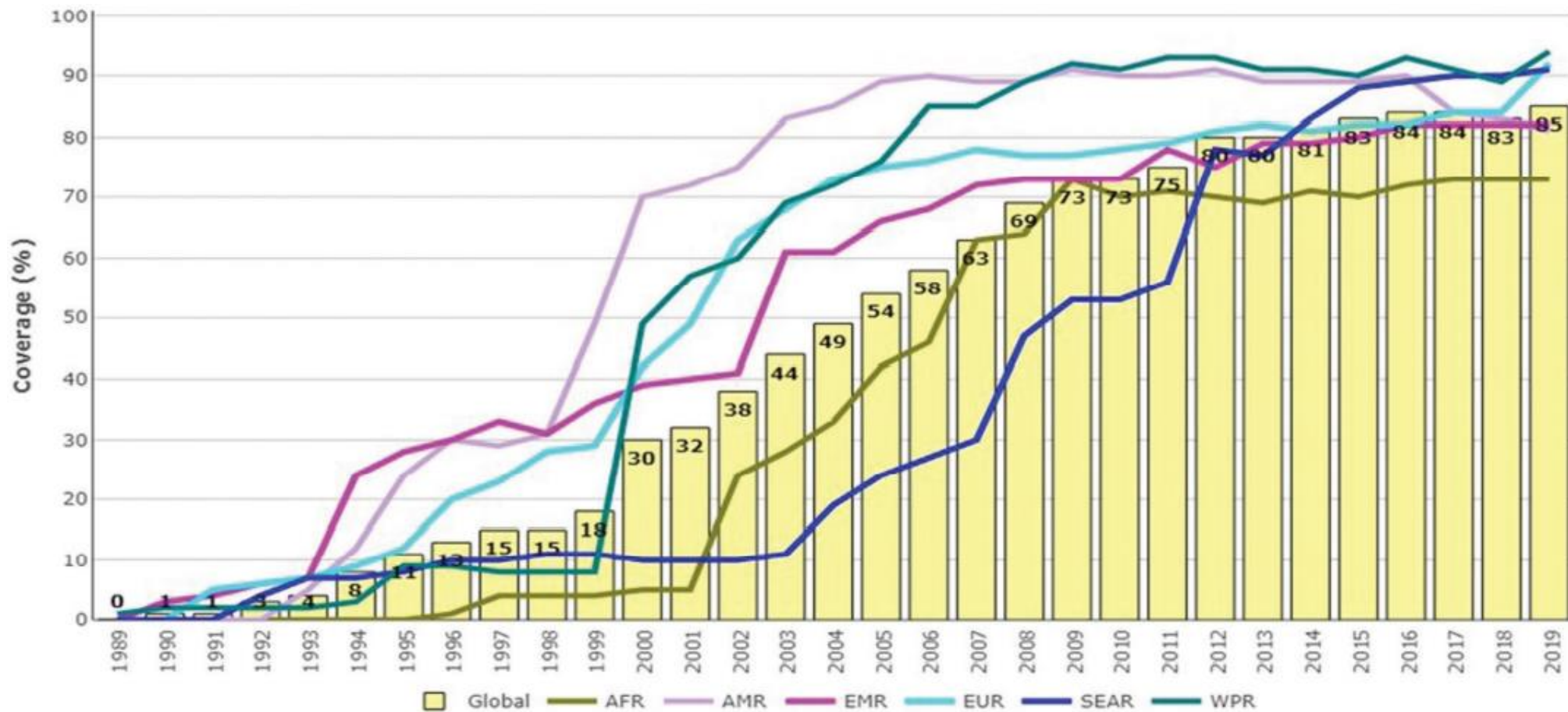
50-90%

Chronic infection

HBV vaccination a public health success story in Taiwan

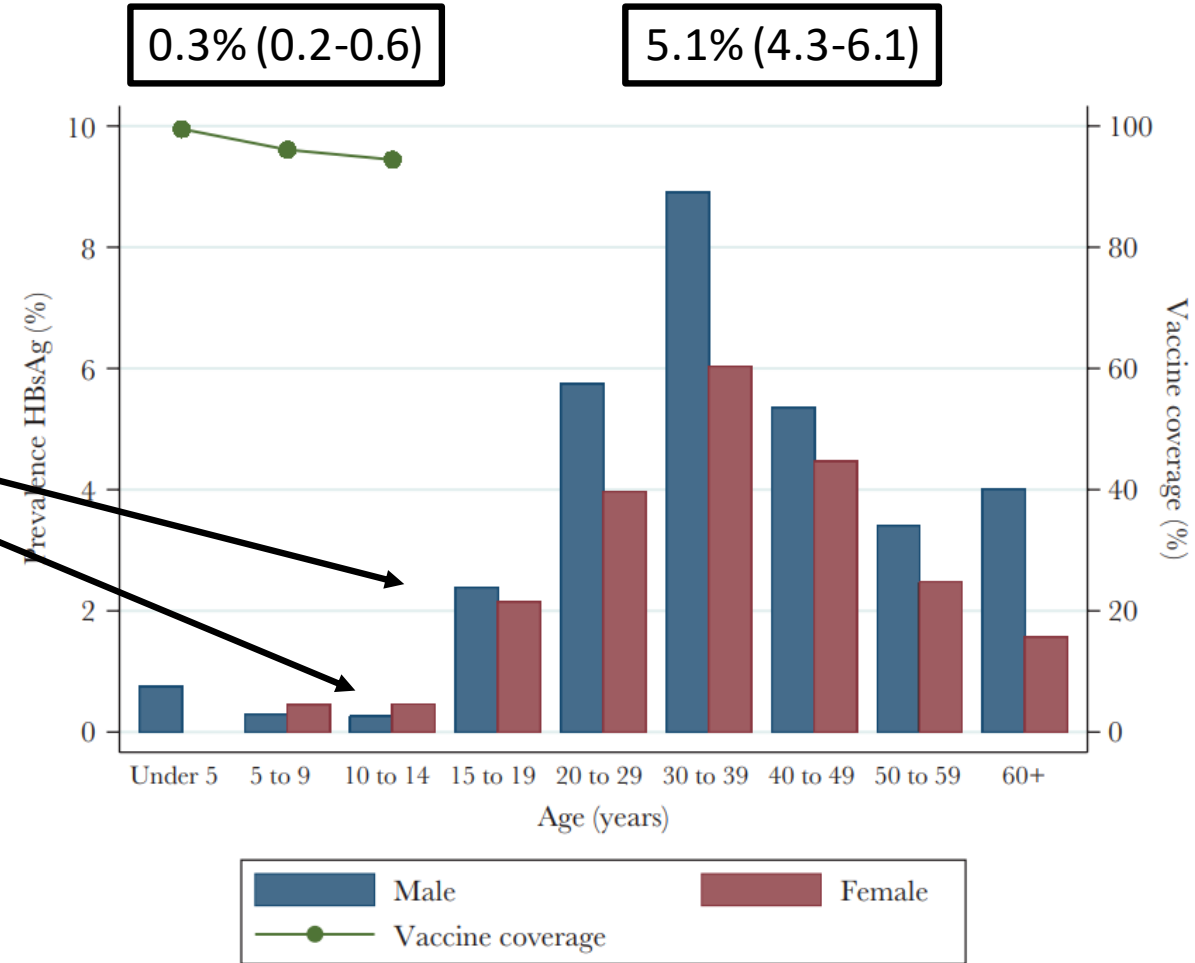


Global HBV vaccination coverage is 85%







HBV vaccination: impact on epidemiology in Malawi

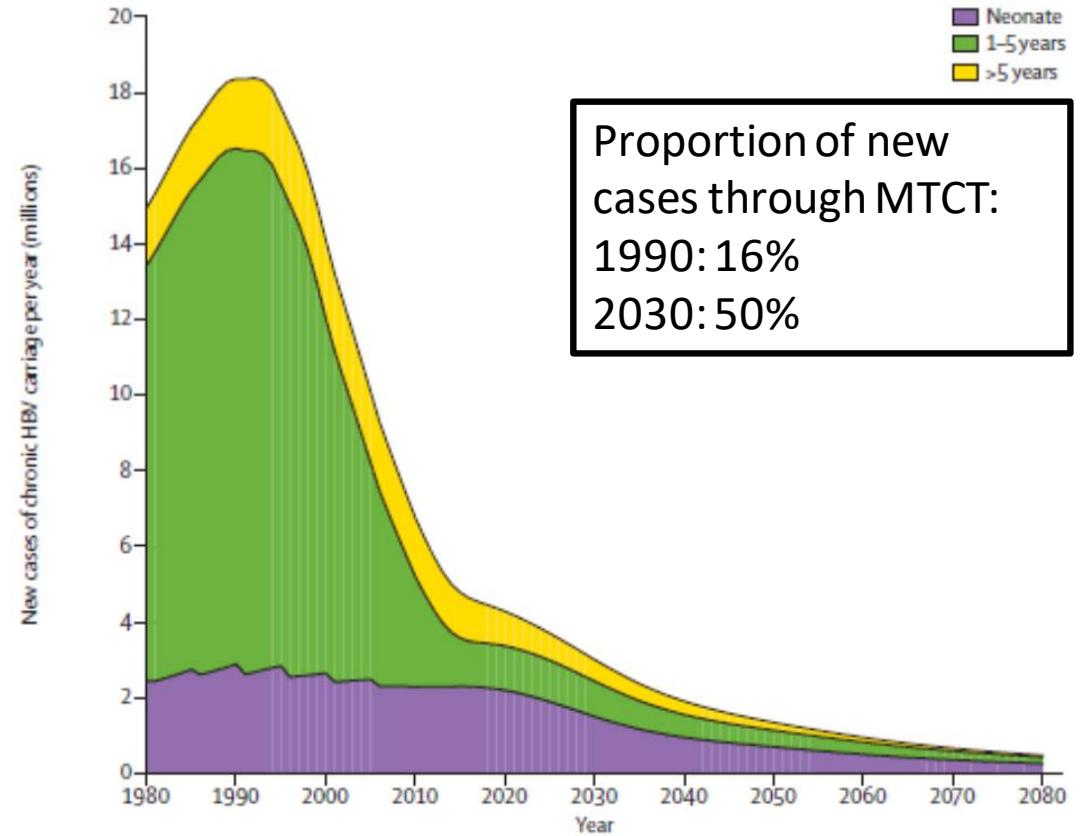
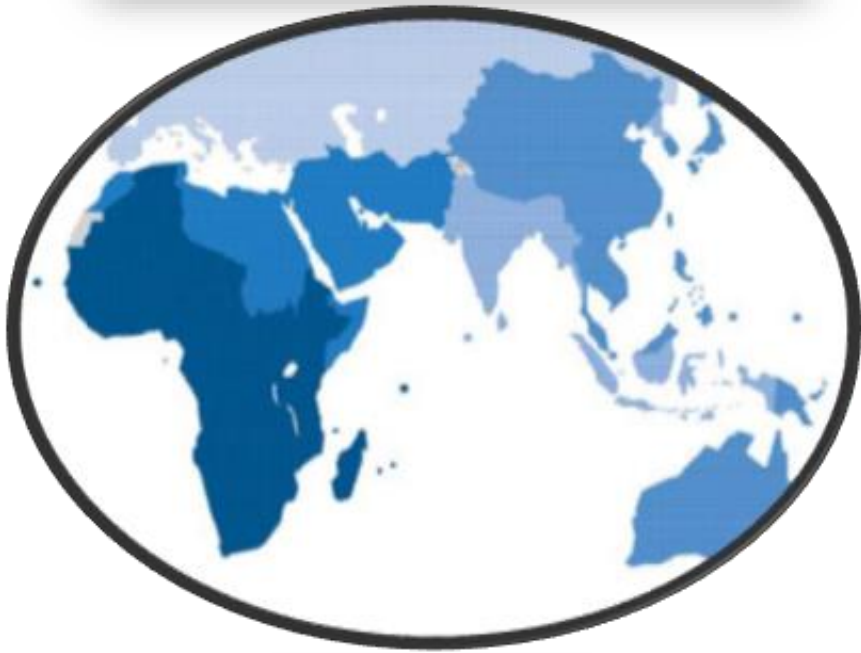
Malawi, n=6,073 (169 HBsAg+)
Vaccine impact
95.9% (95% CI 70.6–99.4)



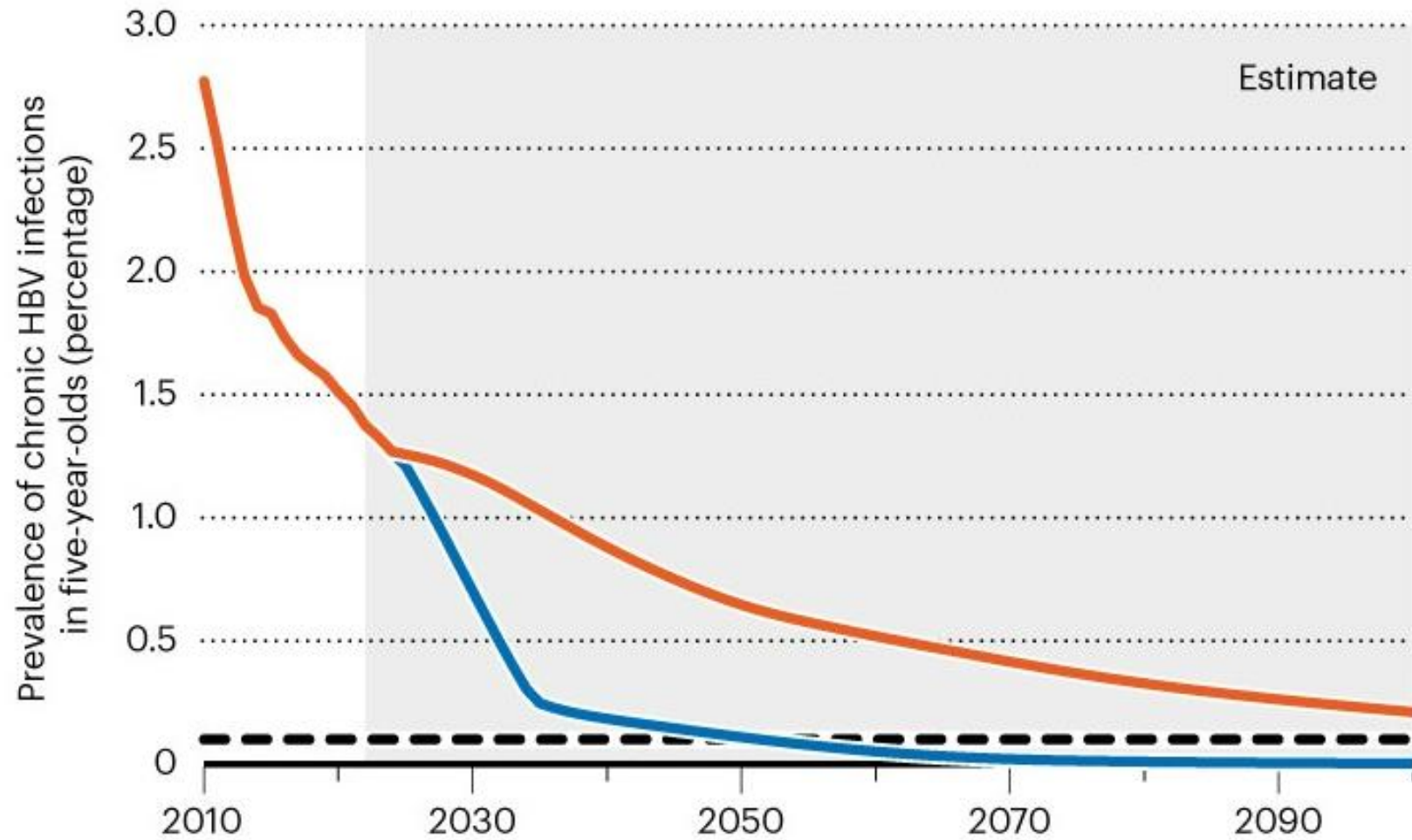
HBV vaccination starting at 6 weeks: enough?

Prevalence of HBsAg in children <5 years

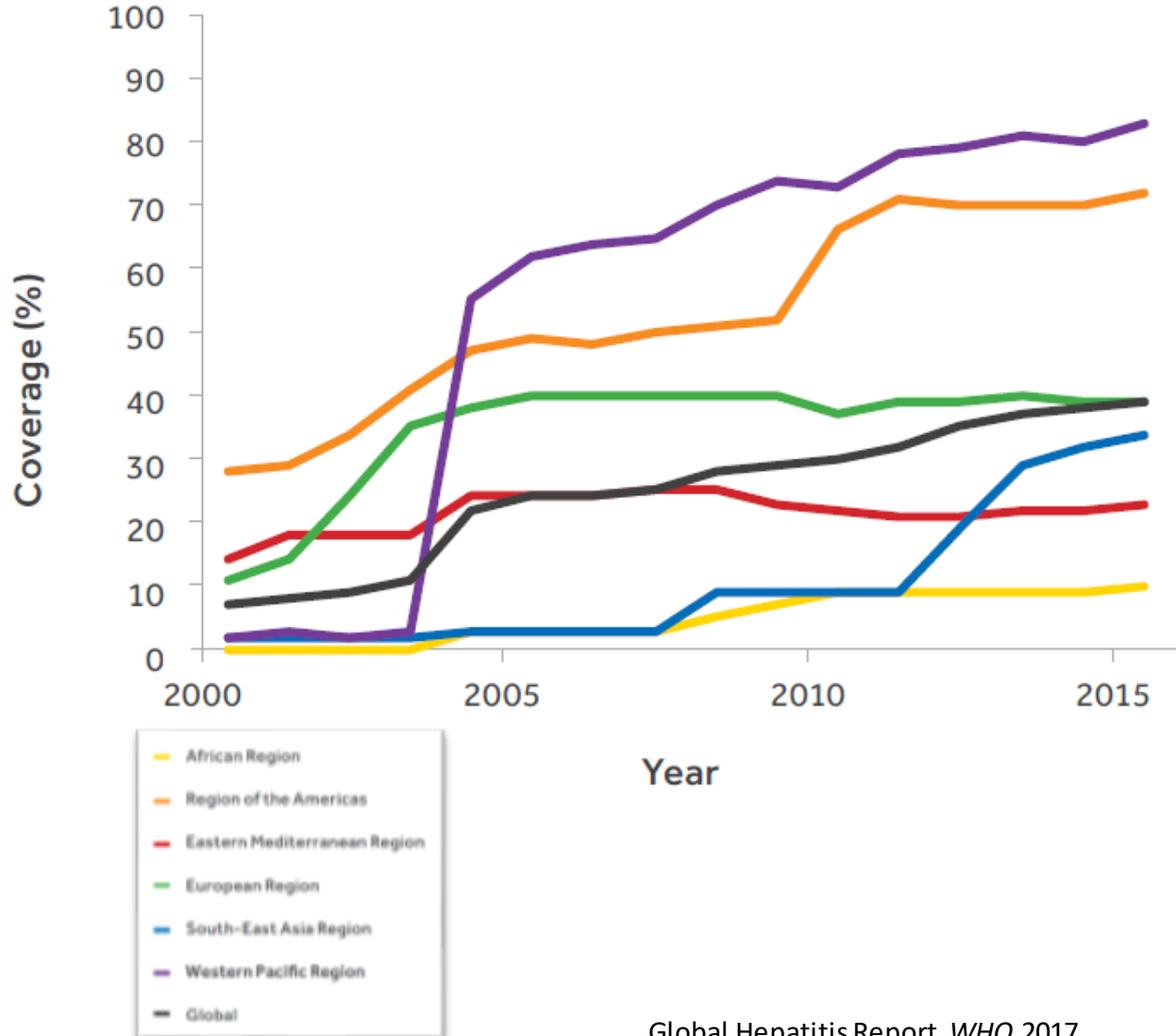
WHO region	Map key	Best
African Region		3.0
Region of the Americas		0.2
Eastern Mediterranean Region		1.6
European Region		0.4



HBV birth dose vaccination is key for HBV elimination



Coverage of HBV birth-dose vaccination is unacceptably low: WHY?



Méta-analyse (n>200,000 enfants)
Couverture de la vaccination à la naissance: 1.3% (95% CI: 0.0-4.5%)

Many factors make the large-scale roll-out of birth-dose vaccination challenging:

- Structural: *Supply chain*, 50% home births, education
- Political will: 15/47 countries in Africa endorsed policy, 11/47 have nationwide programs
- Socio-cultural: acceptability

WHO Africa

Cabo Verde sets the bar for ending mother-to-child transmission of viral hepatitis

- Couverture nationale vaccination à la naissance en 2019: 99%
- 4 nouveaux-nés ont attendu >24h pour recevoir le vaccin en 2018

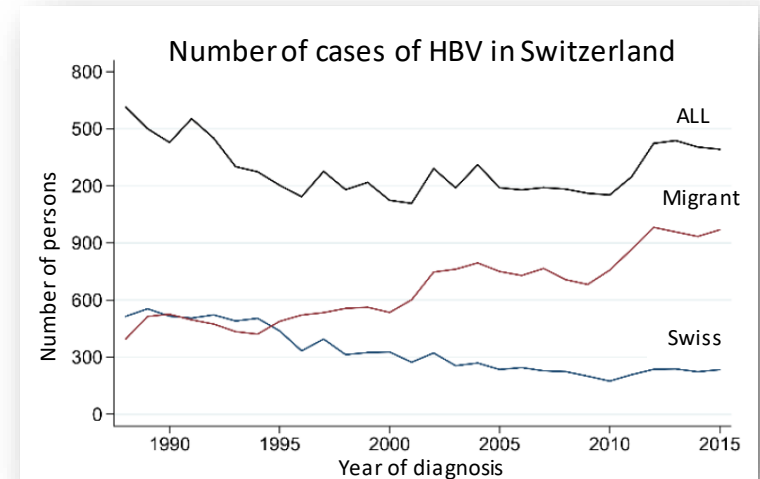
28 July 2019

HBV Testing strategies should be adapted to each context

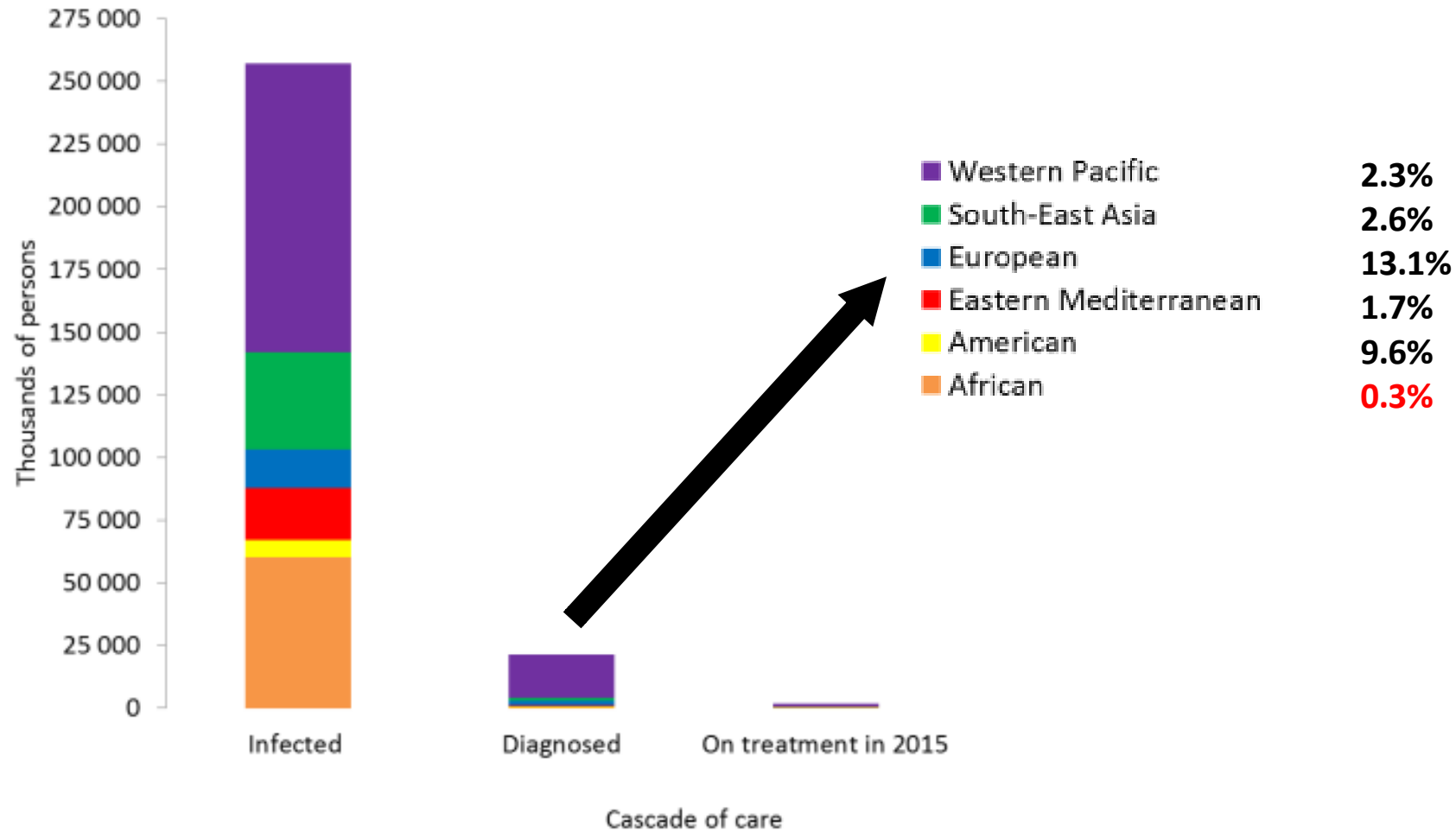
HBV Prevalence >2% is the rule in Africa/Asia: General testing!

WHO region	Estimates of the prevalence of HBV infection (%)		
	Uncertainty interval (95%)		
	Best	Lower	Higher
African Region	6.1	4.6	8.5
Region of the Americas	0.7	0.4	1.6
Eastern Mediterranean Region	3.3	2.6	4.3
European Region	1.6	1.2	2.6
South-East Asia Region	2.0	1.5	4.0
Western Pacific Region	6.2	5.1	7.6
Total	3.5	2.7	5.0

HBV Prevalence <2%: Targetted testing



HBV Testing uptake is catastrophic...



HCV testing strategies

Focused testing: *All countries*

In most affected populations

Test: anti-HCV (or HCV RNA)

Birth cohort HCV testing: *Cameroon*

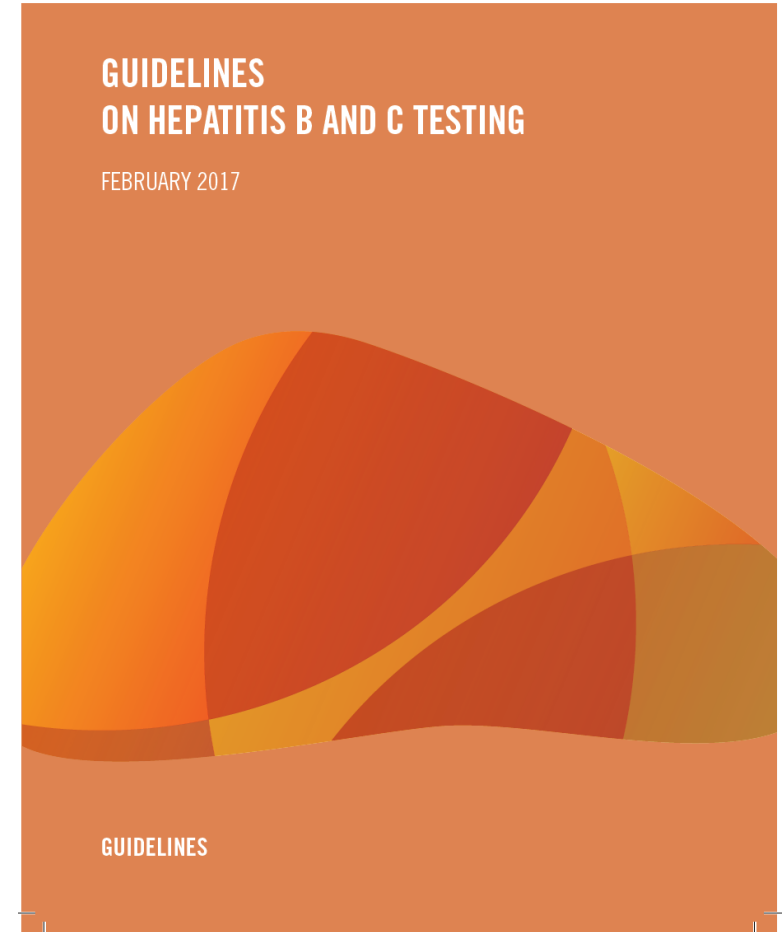
If prevalence is high in specific age groups

Test: anti-HCV

General population testing: *Egypt*

If prevalence >2% in the general population

Test: anti-HCV



HCV risk factors vary widely in Africa!

150 barbers: 5% anti-VHC+

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

Cahiers Santé 2004 ; 14 : 211-6



506 PWID: 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>



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



18,111 in general pop.: 14% anti-VHC+

Research Article



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



70 hemophiliacs: 50% anti-VHC+



Available online at www.sciencedirect.com



TRANSFUSION
CLINIQUE ET BIOLOGIQUE

Transfusion Clinique et Biologique 12 (2005) 301-305

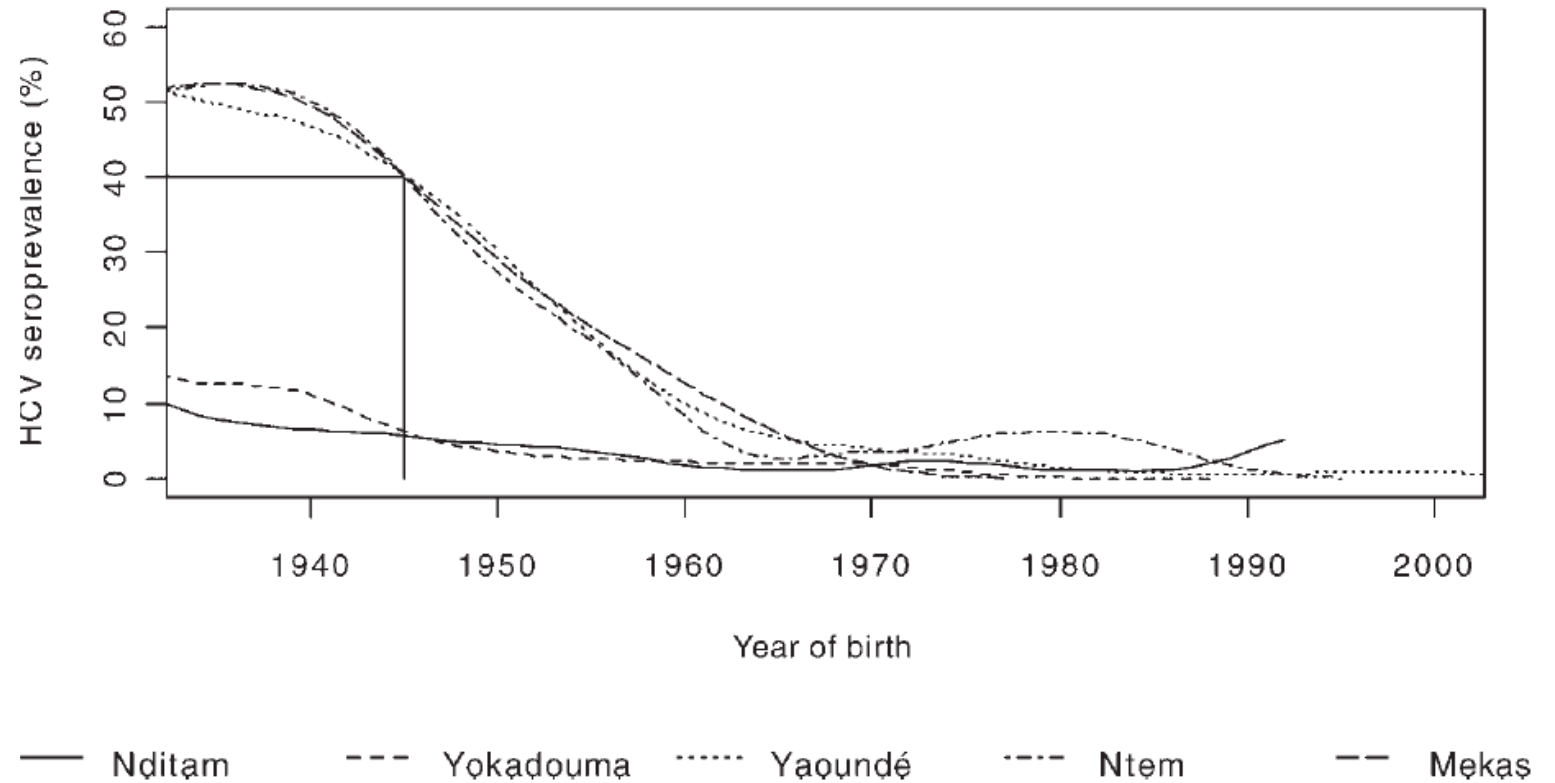
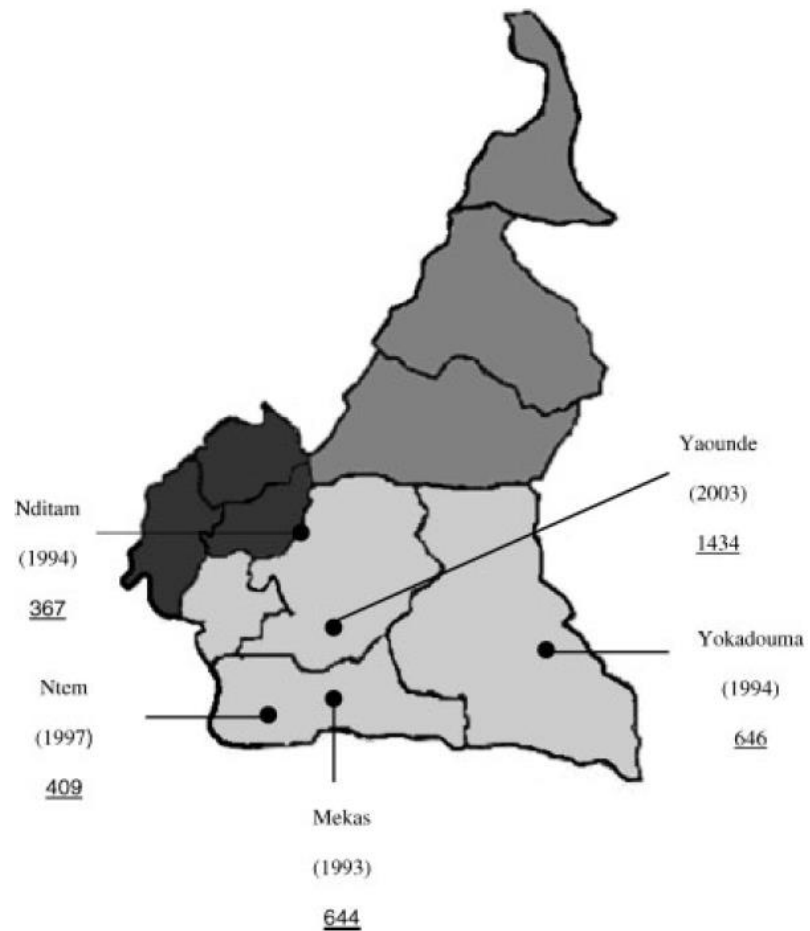
<http://france.elsevier.com/direct/TRACLIV>

Article original

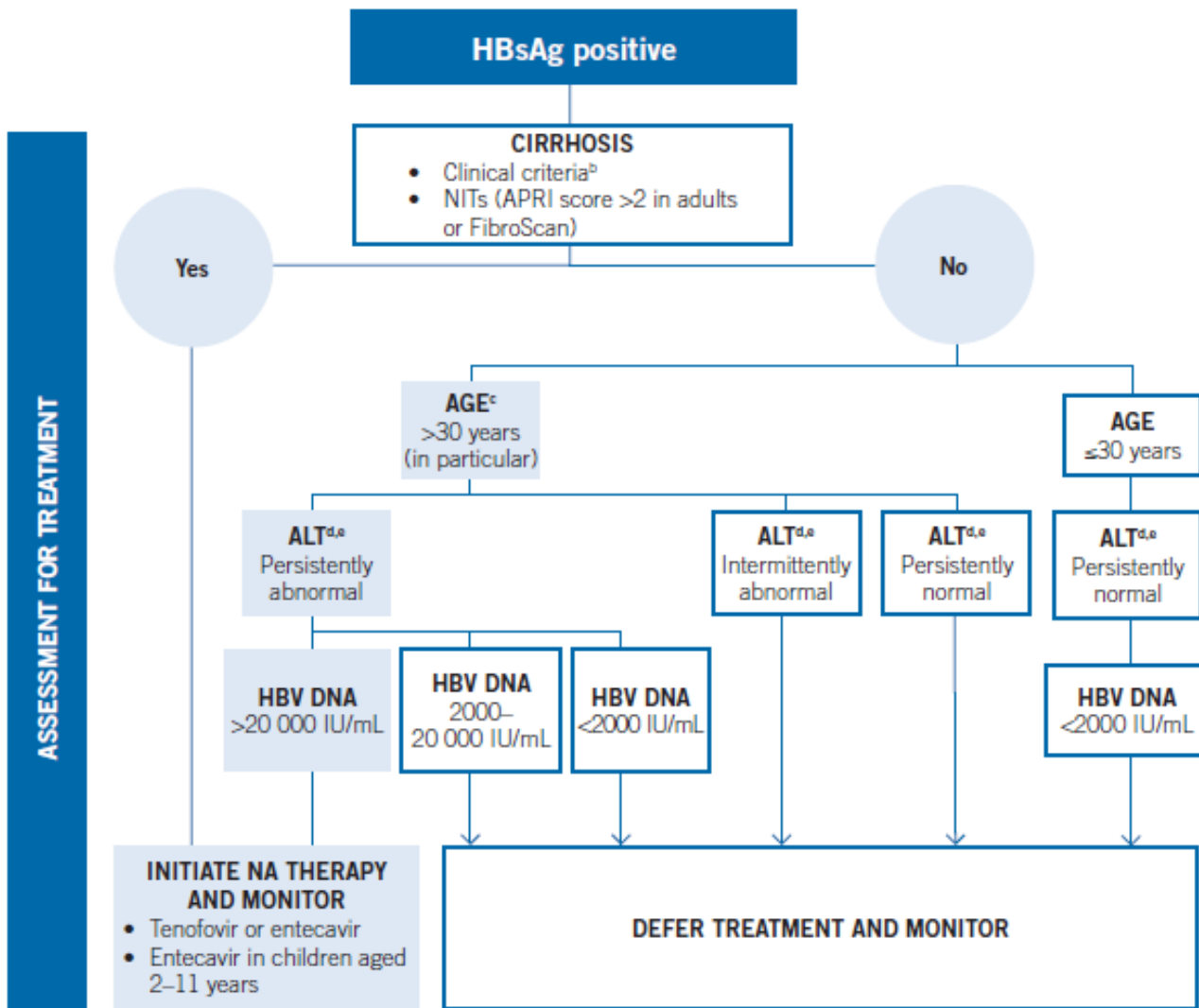
Infections par des virus transmissibles par le sang chez des hémophiles en Tunisie



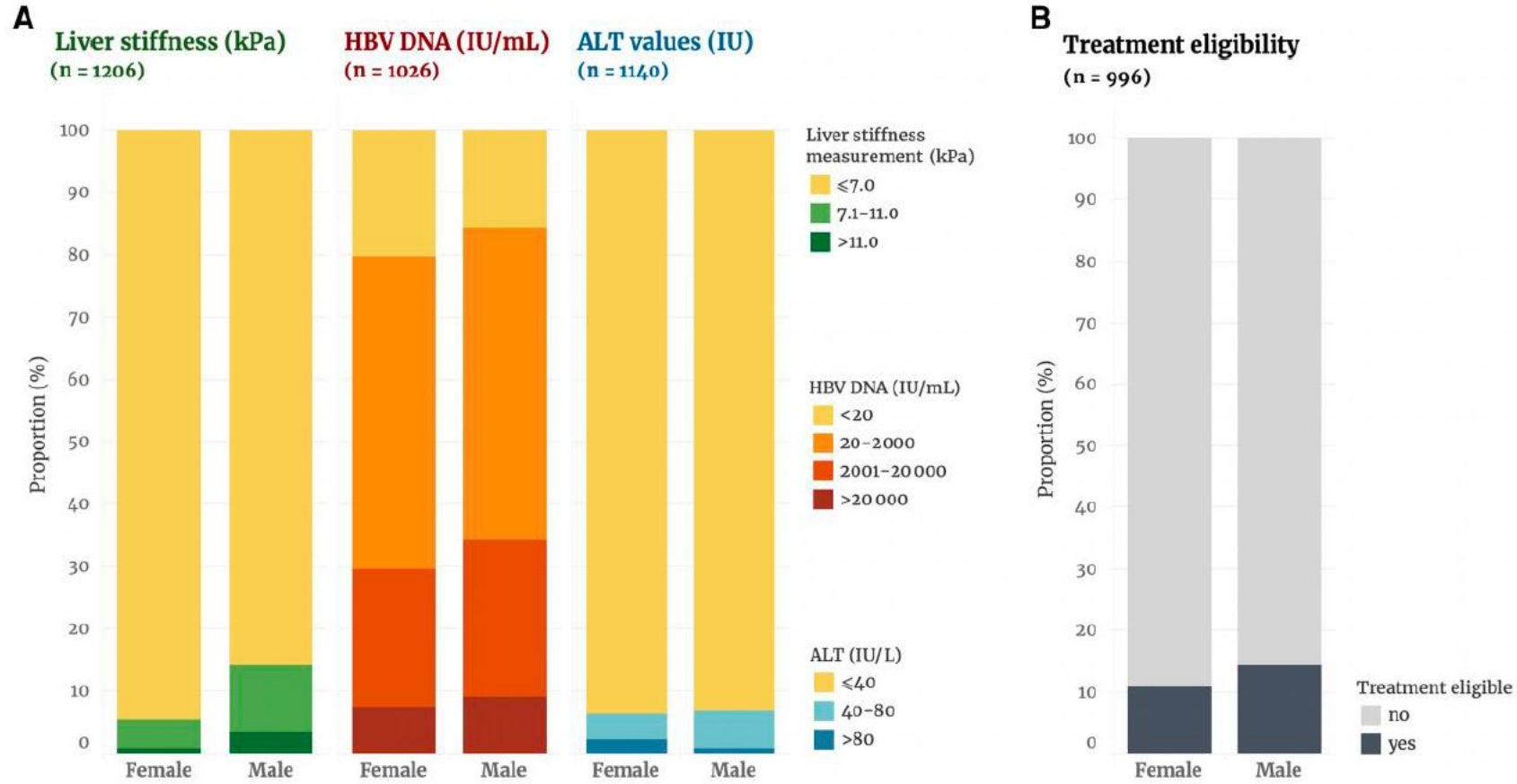
An HCV birth cohort in Cameroon?



Tenofovir is available and cheap, but who needs it?



Only a minority of people with HBV are eligible for antiviral therapy sub-Saharan Africa



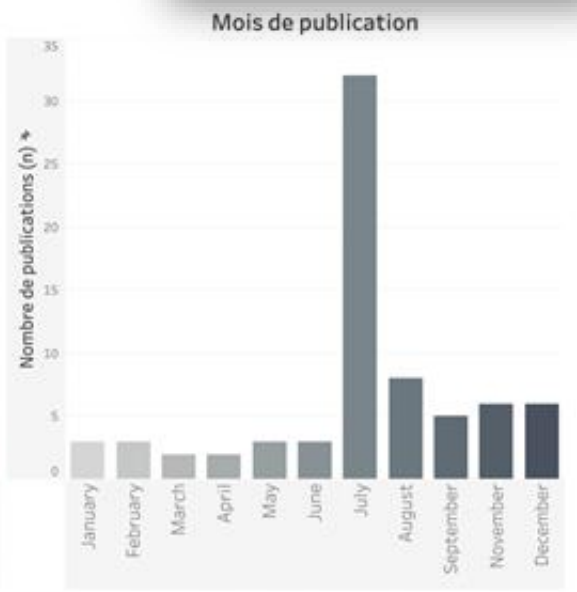
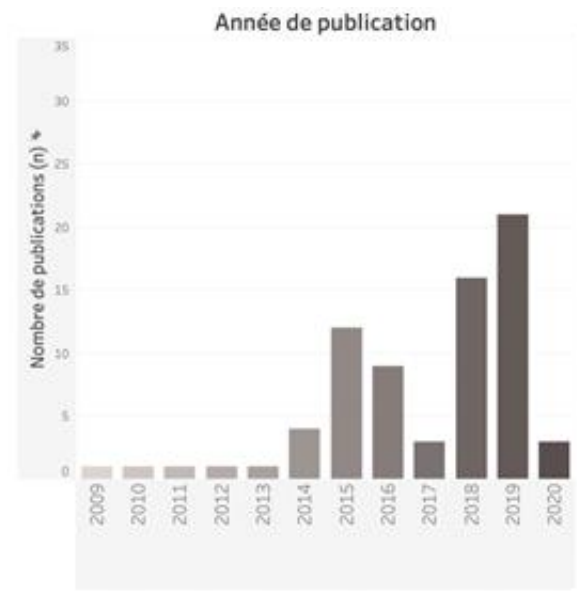


Au Sénégal, l'information et la communication sur l'hépatite B à l'épreuve des médias en ligne

Auteur

Albert Gautier Ndione
 Socioanthropologist, enseignant-chercheur, Université Cheikh Anta Diop de Dakar, Agence Universitaire de la Francophonie (AUF)

Ces auteurs ont également contribué à la conception de cet article : Diédhiou Mariama, Diop Fatou, Ramirez Mena Adrià, Tine Judicael, Ndiaye Amady, Fortes-Déguénoye Louise, Seydi Moussa, Wändeler Gilles et le SEN-B study group.



Communication: lessons from a press review



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L'Hépatite au Sénégal : Les chiffres qui font peur



De raux témoignages pour tromper les maiaoes

Du fait de cette absence de retour, d'autres lecteurs vont profiter de ces espaces d'échange pour proposer des « traitements », le plus souvent à base de plantes et de prières. Parfois des interventions à distance sont proposées, via un contact téléphonique, WhatsApp ou e-mail :

« Guérir hépatites B et C sur WhatsApp numéro 0022997XXXXXX tous nos produits sont fabriqués à la base des plantes très efficaces sans effets secondaires. »

Am. J. Trop. Med. Hyg., 97(2), 2017, pp. 389–395
 doi:10.4269/ajtmh.17-0065
 Copyright © 2017 by The American Society of Tropical Medicine and Hygiene

Prevention and Care of Hepatitis B in Senegal; Awareness and Attitudes of Medical Practitioners

Knowledge toward Hepatitis B in general practitioners compared with specialists (N = 127), Senegal 2015

	General practitioners (N = 45)	Specialists (N = 82)
HBV vaccination		
The hepatitis B vaccine can be safely administered to pregnant women		
Yes	6 (13.3)	8 (9.8)
No/unknown	39 (86.7)	74 (90.2)
The hepatitis B vaccine can be safely administered to Newborn		
Yes	21 (46.7)	44 (53.6)
No/unknown	24 (53.3)	38 (46.4)
The hepatitis B vaccine can lead to infertility		
Yes/unknown	27 (60.0)	34 (41.5)
No	18 (40.0)	48 (58.5)
The hepatitis B vaccine can lead to neurological disorders		
Yes/unknown	32 (71.1)	47 (57.3)
No	13 (28.9)	35 (42.7)

WHO Regional Strategy for Africa

FRAMEWORK FOR ACTION IN THE WHO AFRICAN REGION 2016 - 2020

6

Regional Targets: 2016 - 2020

The targets of the viral hepatitis in the African Region: Framework for action 2016 - 2020 are:

Impact targets by 2020:

- 30% reduction of new cases of chronic viral hepatitis B and C infections
- 10% reduction of viral hepatitis B and C related deaths.

Service coverage targets by 2020:

- All 47 countries have developed national action plans for the prevention, care and treatment of viral hepatitis
- Hepatitis B virus vaccine coverage among infants at 90% region-wide
- Hepatitis B virus vaccine coverage among health workers at 90% region-wide
- At least 25 countries have introduced a birth dose of hepatitis B vaccine
- All countries routinely test all blood donations for transfusion-transmissible infections
- 50% of injections administered with safe devices in and out of health facilities
- At least 200 sterile needles and syringes provided per person who injects drugs per year
- 20% of people with chronic hepatitis infections diagnosed
- 1 million people will be receiving hepatitis B virus treatment
- 300 000 people will be receiving hepatitis C virus treatment.

END HEPATITIS BY 2030

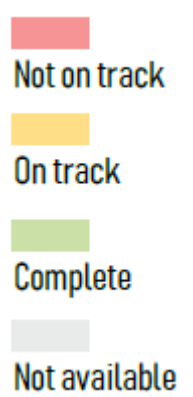
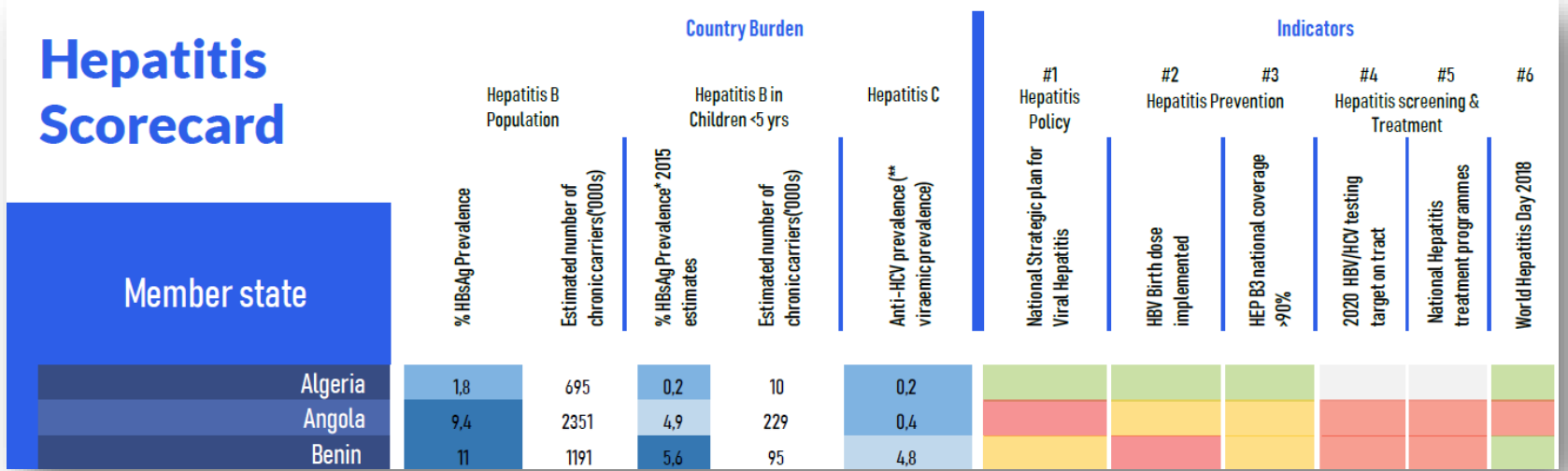


PREVENTION, CARE AND TREATMENT OF VIRAL HEPATITIS IN
THE AFRICAN REGION: FRAMEWORK FOR ACTION, 2016 - 2020

WHO Regional Strategy for Africa

Hepatitis Scorecard

Member state	Country burden				Indicators					
	Hepatitis B Population	Hepatitis B in Children <5 yrs	Hepatitis C	#1 Hepatitis Policy	#2 Hepatitis Prevention	#3 Hepatitis screening & treatment	#4 Hepatitis screening & treatment	#5 National Hepatitis treatment programmes	#6 World Hepatitis Day 2018	
Algeria	1.8	695	0.2	10	0.2					
Angola	9.4	2351	4.9	229	0.4					
Benin	1.1	1191	5.6	95	4.8					
Botswana	1.3	38	0.2	1	0.1					
Burkina Faso	10.7	1020	4.3	125	1.2*					
Burundi	6.4	770	2.6	53	1.0*					
Cabo Verde	0.6	27	0.3	0	0.1					
Cameroon	6.6	1034	3.9	71	0.7*					
Central African Republic	10.2	489	3.6	47	0.2**					
Chad	4.9	484	3.1	81	1.1**					
Comoros	4.3	36	2.0	2	1.4					
Congo	9.3	439	4.1	31	1.8					
Cote-d'Ivoire	4.1	1077	3.0	111	1.7					
Democratic Republic of the Congo	3.2	2425	1.6	190	1.9					
Equatorial Guinea	9.3	79	0.7	11	NR					
Eritrea	1.9	96	0.7	6	0.8					
Eswatini	2.1	26	0.9	1	0.8					
Ethiopia	5.7	5647	2.6	381	0.6**					
Gabon	9.1	187	4.2	10	1.0*					
The Gambia	5.8	105	1.2	4	0.9*					
Ghana	8.6	2265	3.6	146	1.4*					
Guinea	9	1639	2.6	153	1.8					
Guinea-Bissau	6.1	94	2.6	4	0.7					
Kenya	2.2	1000	0.8	42	0.2**					
Lesotho	4.5	96	1.6	5	0.7					
Liberia	14.9	471	7.8	54	NR					
Madagascar	0.2	1977	4.4	164	0.2**					
Malawi	4.9	1188	3.0	89	1.1					
Mali	8.5	1053	4.9	160	3.1					
Mauritania	10.2	416	4.3	26	0.8					
Mauritius	1.9	23	0.6	0	0.3					
Mozambique	7.2	2025	3.7	177	0.5					
Namibia	2.2	54	0.7	2	0.1					
Niger	16.6	2290	6.8	249	1.5					
Nigeria	10.6	9966	2.6	812	2.1					
Rwanda	4.5	514	1.7	30	1.6					
Sao Tome and Principe	1.5	4	1.6	0	0.3					
Senegal	0.2	1037	3.5	91	0.2					
Seychelles	0.4	0	0.2	0	NR					
Sierra Leone	10.4	1003	0.2	62	1.2					
South Africa*	3.5	1024	1.7	93	0.7**					
South Sudan	22.2	2734	21.1	413	4.3					
Tanzania	4	2255	1.7	159	0.8					
Togo	0.4	107	2.4	39	1.1					
Uganda	6.9	2456	3.2	230	1.8					
Zambia	4.1	487	1.8	52	1.8					
Zimbabwe	10.1	1070	4.4	110	0.8					



The analysis shows that 28 countries have developed a national hepatitis strategic plan for viral hepatitis; however, most are still in draft form with only 13 officially published and disseminated. WHO has been a major partner in

Take home messages

- 1% of the population has a chronic HCV infection (key populations!) and 5-15% a chronic HBV infection (general population!) in SSA
- Priority for prevention: HBV vaccination, including birth dose
- Priority for testing: Finding strategies to test the whole population for HBV, and identifying the groups most at risk for HCV
- Priority for treatment: Cheaper HCV treatment, simpler and more inclusive HBV treatment guidelines
- Information, information, and more information
- Every step of the cascade needs massive improvements for elimination goals to be reached
- Need for more research to inform policy!

Thank you for your attention