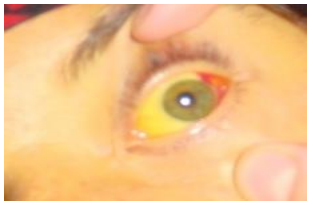
Akut Hepatit B'de Dünden Bugüne Değişenler

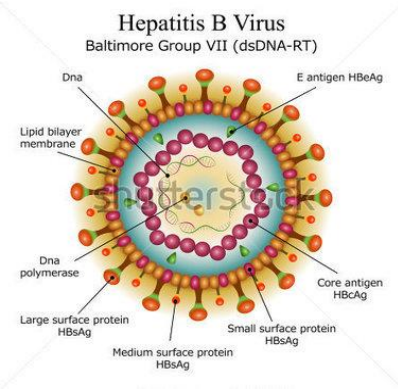
Dr Emel YILMAZ

Akut Viral Hepatit



- Primer olarak karaciğeri tutan, karaciğerde inflamasyon yapan, benzer klinik tablolarla seyreden, farklı prognoza sahip bir grup virüsün yaptığı klinik sendrom
- AST ve ALT normalin üst sınırının **10 katı** yüksek olur
  - ALP 1-2 kat artabilir

Hepatit B Virüsü (HBV)



- Hepadnaviridae ailesi
- Orthohepadnavirus
- Çift zincirli DNA virüsü
- İnkübasyon süresi ~75 gün (30-180 gün)
- Vücut dışında 7 gün yaşıyor
- A-J 10 genotip var

L-HBs Ag/PreS1
Klatrin

Tutunma-Giriş

Çekirdeğe giriş
Translokasyon

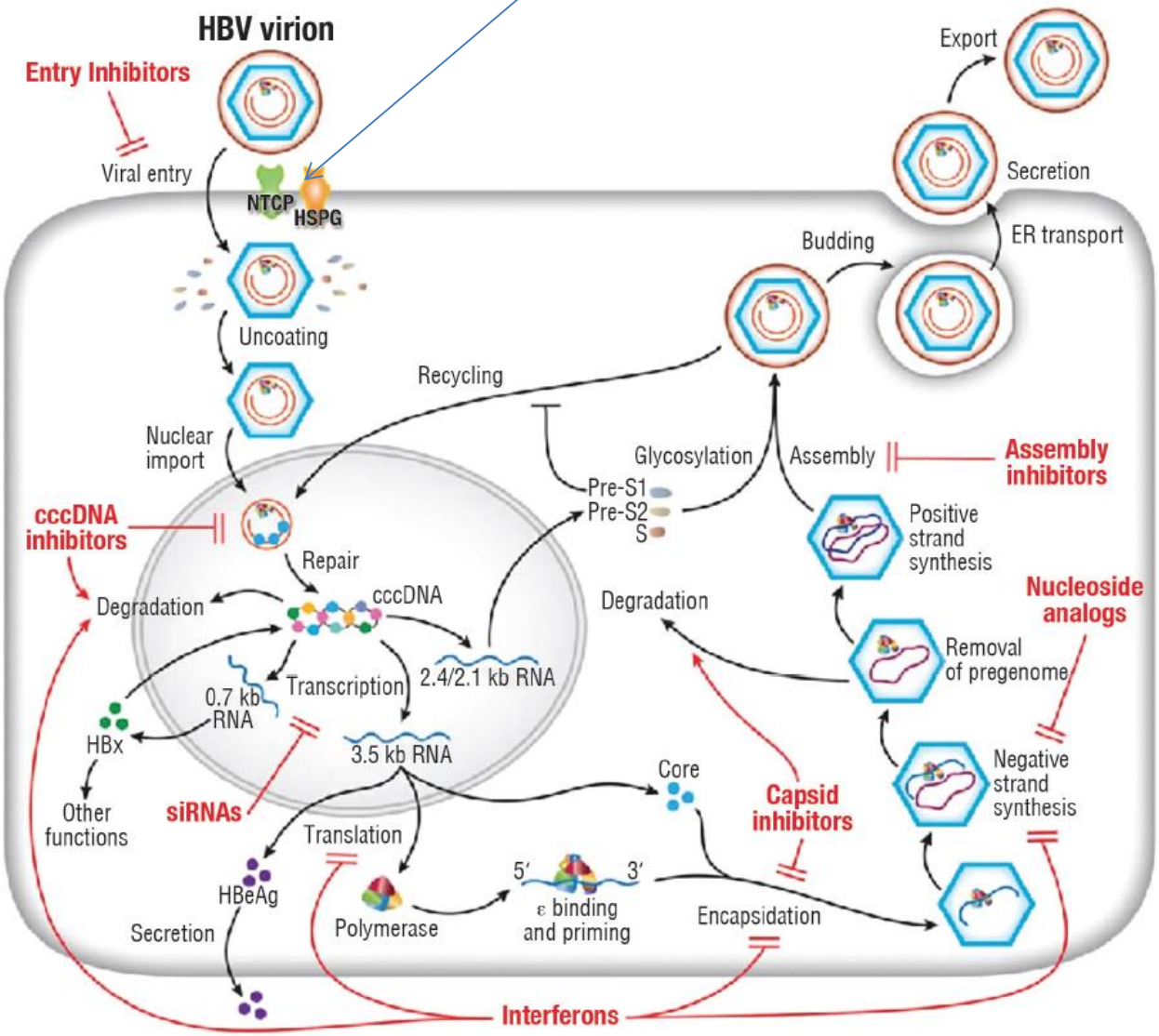
cccDNA
oluşumu

Transkripsiyon

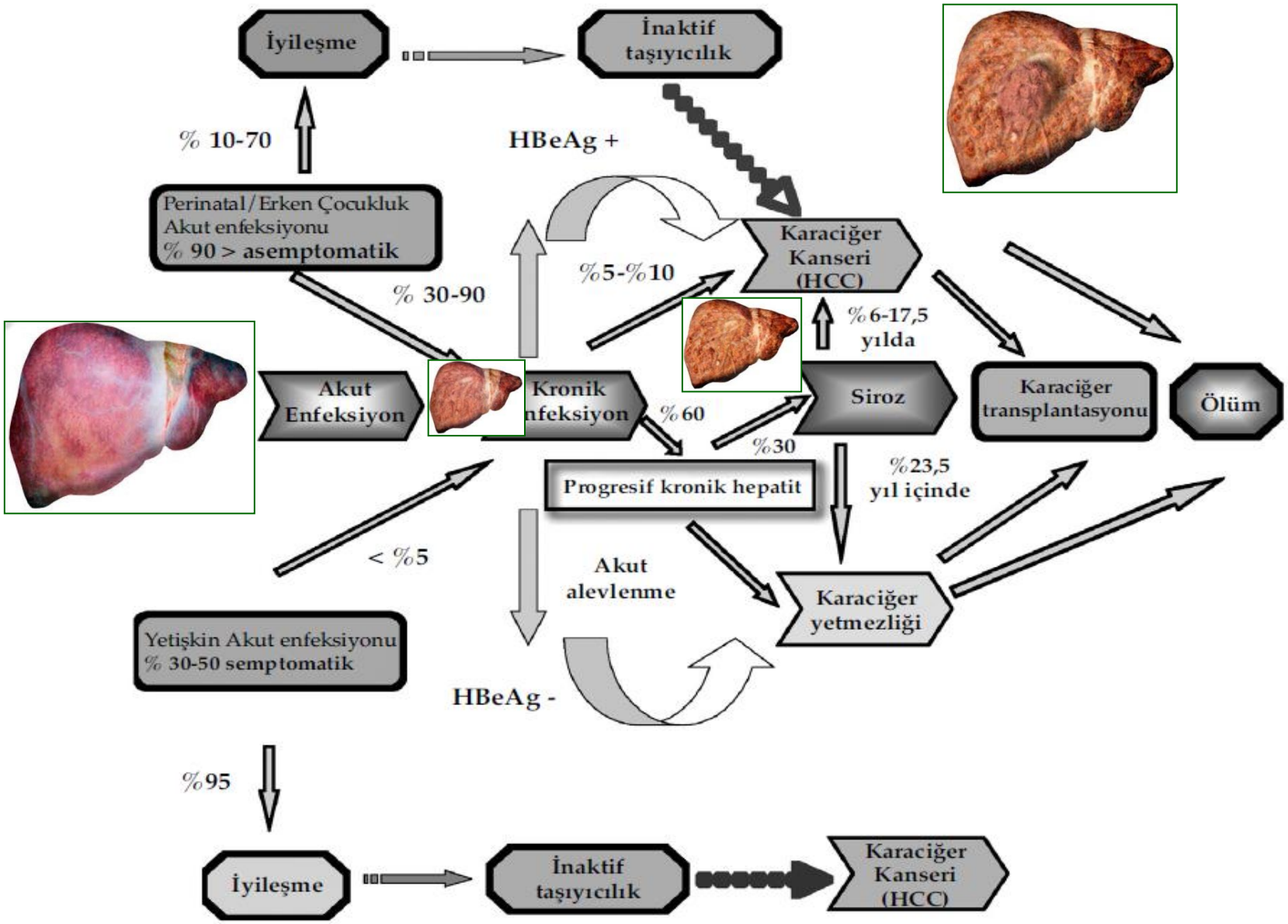
Translasyon

R transkripsiyon
(+) DNA sentezi

Paketlenme ve
hücreden salınım



Şekil 1. HBV rekplikasyon basamakları ve bu basamaklar üzerine etkili ilaçlar

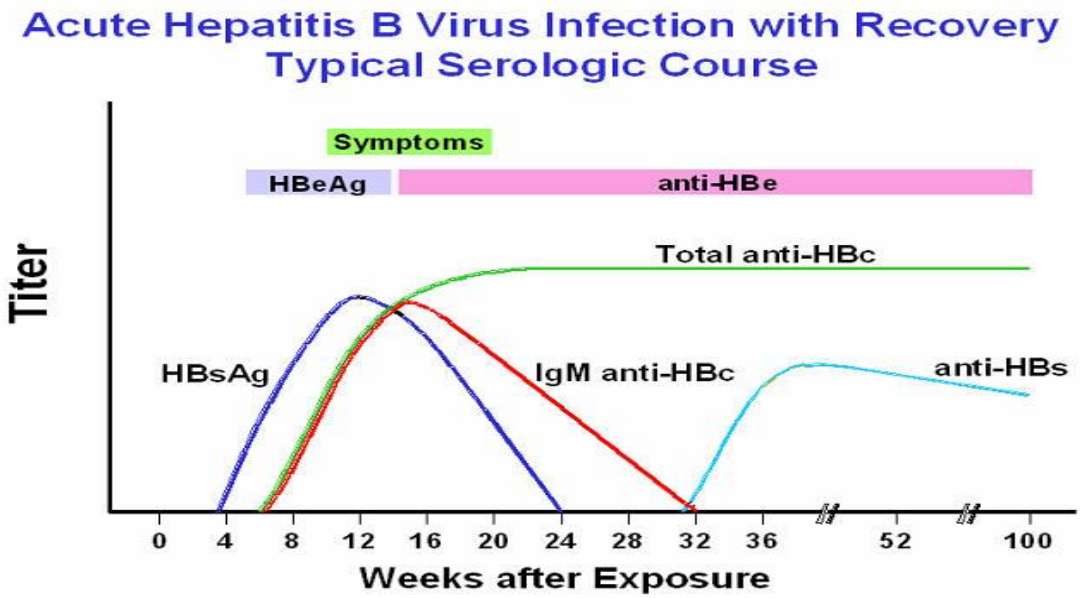


Şekil 1. Hepatit B Virüs Enfeksiyonunda Doğal Seyir (15,37,38,66,79).

Akut HBV İnfeksiyonu

HBsAg	Anti-HBs	Anti-HBc Total	Anti-HBc IgM	HbeAg	Anti-HBe	Yorum
+	-	-				Çok erken dönem HBV enfeksiyonu, inkübasyon dönemi (asemptomatik)
+	-	+	+	+		Akut HBV hepatiti
-	-	+	+			Erken dönem HBV hepatiti (core window)
-	+	+	+	-	+	Çok yakın zamanda geçirilmiş iyileşme yolunda
+	-	+	-	-	+	Kronik HBV hepatiti veya taşıyıcılık, muhtemelen replikasyon yok
+	-	+	-	+	-	Kronik HBV hepatiti, replikasyon var
-	+/-	+	-		+/-	Geçmişte HBV ile temas etmiş, iyileşmiş, bağışık
-	+	-	-			Aşılama ile elde edilmiş bağışıklık

Hepatit B virüs enfeksiyonunda serolojik parametrelerin yorumu.



Akut Viral Hepatit

- İnkübasyon dönemi
- Prodromal dönem (preikterik)
- İkterik dönem
- Konvalesan dönem

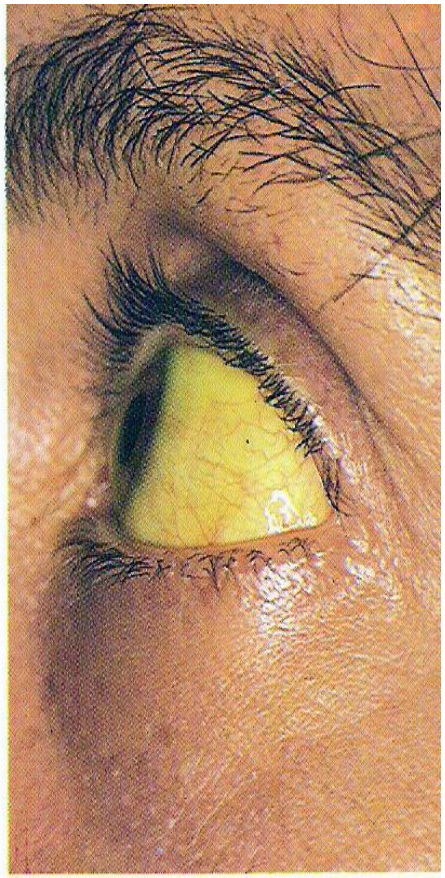
- Kişinin immün durumu ve yaşı kliniği etkileyen en önemli iki faktördür

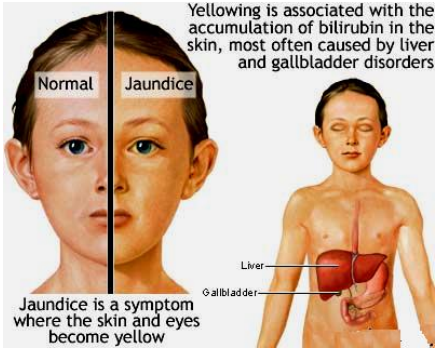
<2 yaş genelde semptom yok

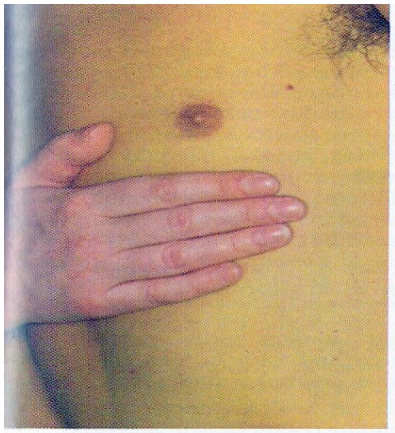
İkterik/anikterik 1/20

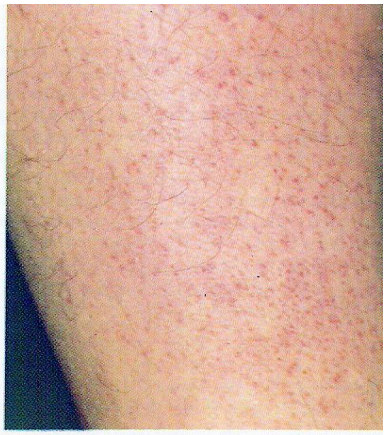
İkterik/anikterik 1/1

Hepatit

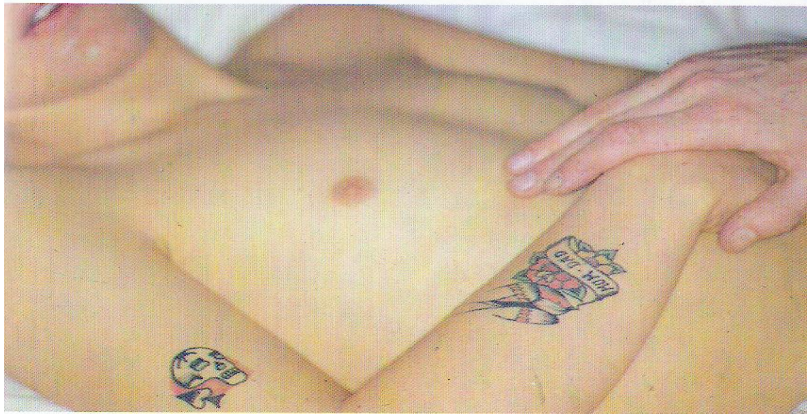



Yellowing is associated with the accumulation of bilirubin in the skin, most often caused by liver and gallbladder disorders
Normal
Jaundice
Liver
Gallbladder
Jaundice is a symptom where the skin and eyes become yellow





319



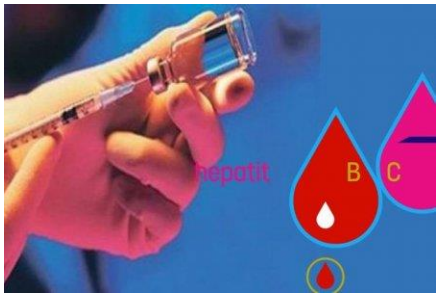
Bulaş Yolları

- Parenteral
- Horizontal
- Cinsel temas
- Perinatal

Bulaş

Parenteral Bulaş

- Kan ve vücut sıvıları
- Daha az dışkı, ter, süt, idrar, safra….
- Kan transfüzyonları ve perkütan yaralanma
- Düşük-orta endemisite



Cinsel Temas

- Tükrük, semen, vajinal sekresyonlar ..
- Heteroseksüel (çok partnerli)
- Homoseksüeller (MSM)
- Düşük endemisite bölgelerinde sorun

Perinatal bulaş

- Kronikleşme riski en yüksek bulaş yolu
- HBeAg (+) anneden doğanlar
  - İnfeksiyon riski %70-90; kronikleşme %90
- Hbe Ag (-) anneden doğanlar
  - İnfeksiyon riski %10-40; kronikleşme %40-70
- İntrauterin, perinatal**, emzirme
  - Aşı+HBIG
- Yüksek endemisite bölgelerinde sorun

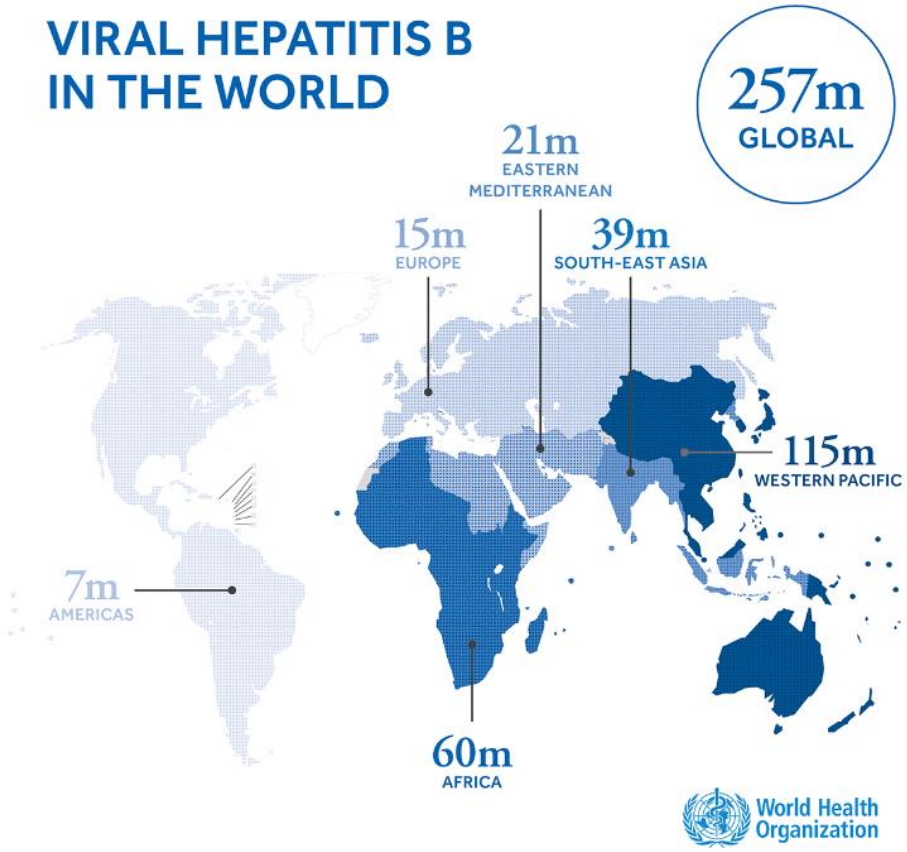
Horizontal bulaş

- Aile içi yakın temas
- Kontamine kişisel eşyalar
  - Havlu, diş fırçası, traş makinası….
- Dış ortamda dayanıklı, cansız yüzeylerde bulunabilme
- Yüksek endemisite bölgelerinde sorun
- Ülkemizde

Risk Grupları

- Sık kan nakli yapılanlar
- Hemodiyaliz hastaları
- Uyuşturucu bağımlıları
- Dövme yaptıranlar
- Kulak deldirme
- Çok eşlilik, hayat kadınları
- Homoseksüeller (MSM)
- Bakımevinde yaşamak/çalışmak
- Mahkumlar
- HBV taşıyıcı annelerin çocukları
- HBV taşıyıcısı olan ailede yaşamak

Bulaş eşiği düşük (0,0001 mL)



Dünyada 257 milyon KHB hastası var
KHB'ye bağlı siroz, HCC ile ölüm 600-700 bin/yıl

Aşı etkili
HBs Ag (+)'liğinde azalma
1990- %4,2
2005 -%3,7

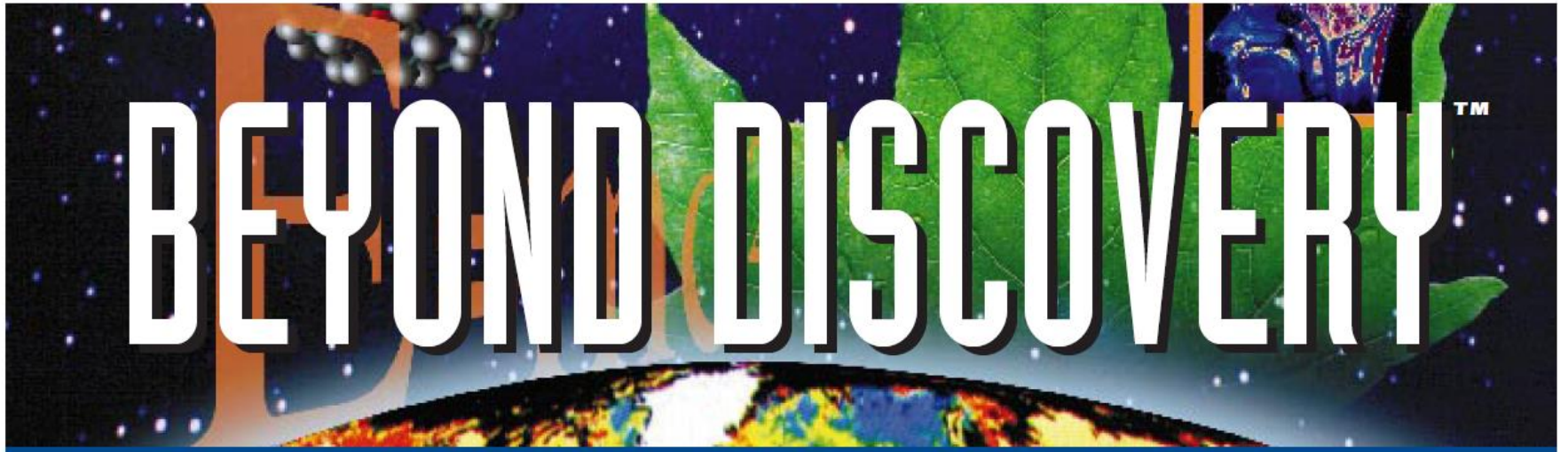
DSÖ, 2018

Figure 1. Global prevalence of hepatitis B virus infection. (From the Centers for Disease Control 2012.)

Akut Hepatit B İnfeksiyonu

- Dün
- Bugün
- Yarın

This article was published in 2000 and has not been updated or revised.



THE PATH FROM RESEARCH TO HUMAN BENEFIT

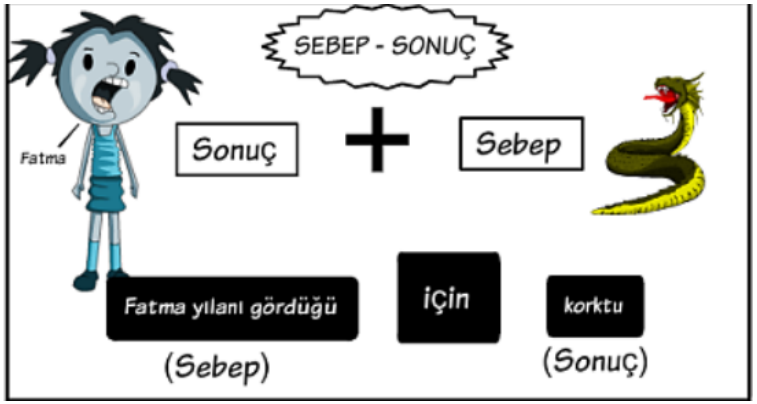
THE HEPATITIS B STORY

Debilitating and deadly, hepatitis has plagued humankind since the beginning of recorded history. But the course of this disease was irrevocably changed with the accidental convergence of a medical researcher curious about why some people are especially

Hepatitis B: A Debilitating Disease

Çok uzun bir geçmişi var

- Bulaşıcı sarılık
- Kamp ve asker sarılığı
- Kataral sarılık
- İnfektif sarılık
- Epidemik sarılık
- Postvaksinal sarılık
- Transfüzyon sarılığı
- Uzun inkübasyonlu sarılık
- Hepatit B/A/NonA nonB ….



Hepatit B virüsü keşiften çok cevaplanması amaçlanan çalışmaların eseri

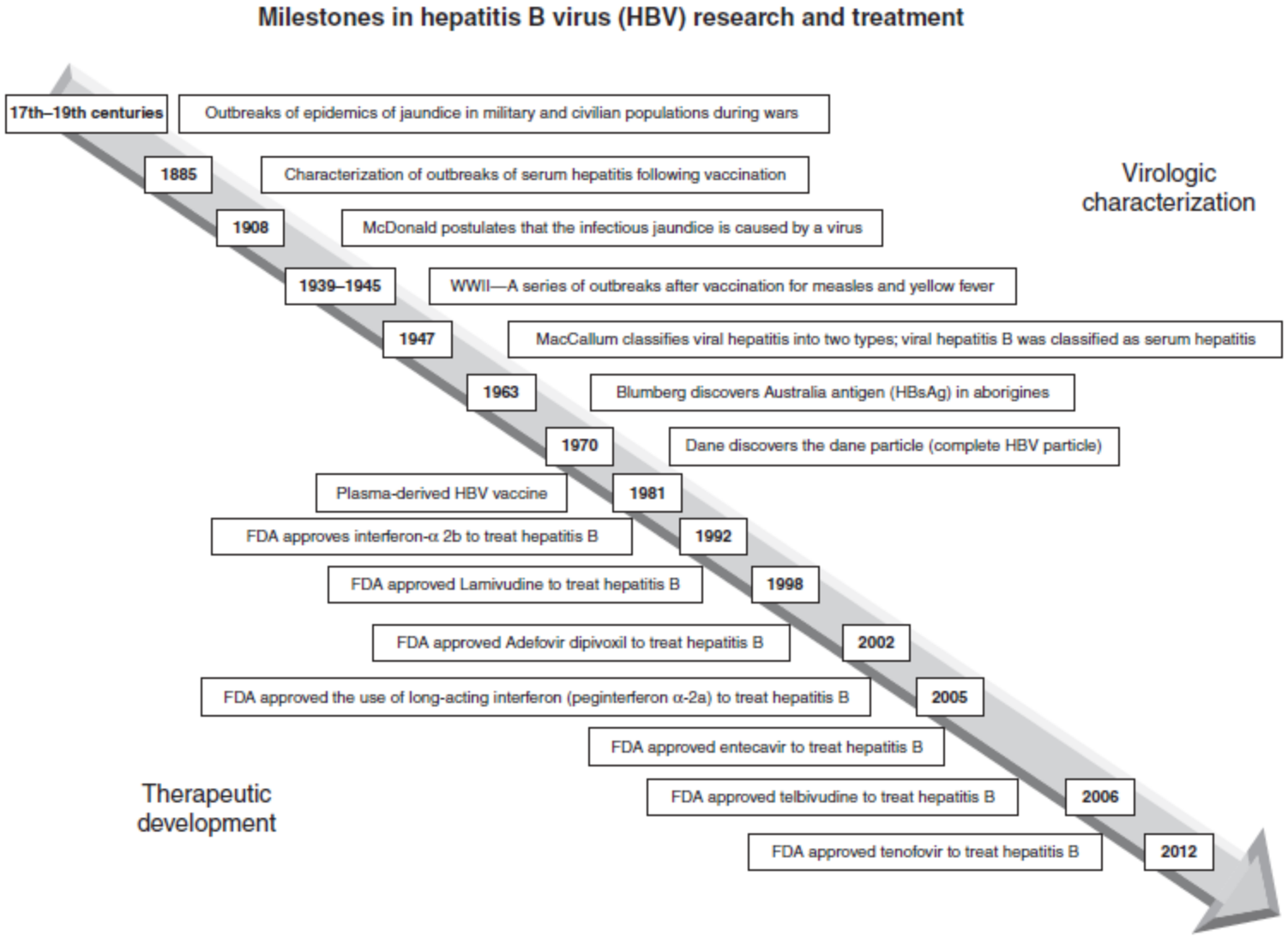


Figure 1. Timeline for milestones in HBV research and treatment.

Viral Hepatitler-Dört Dönem

1. Cehalet Dönemi

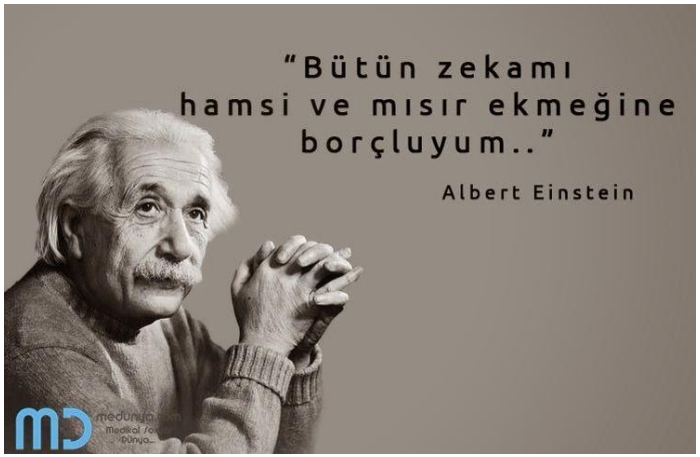
2. Şaşkınlık Dönemi

3.Uyanış Dönemi

4. Bilgi patlaması dönemi

Big Bang

Cehalet Dönemi



- En uzun ve karanlık dönem
- MÖ 460-377 Hipokrat bulaşıcı olabileceğini düşünerek sarılığı olan hastalara ‘’karantina’’ uygulatmış
  - İkteros/kirros
- İtalya’dan Papa Zachanas (741-52) sarılıklı hasta toplumdan tecrit edilmeli demiş
- 14. yy Celalüddin Hızır **Müntahab-ı Şifa** kitabında ‘’yarekan’’

nature COMMUNICATIONS

ARTICLE

Received 21 Sep 2012 | Accepted 26 Mar 2013 | Published 30 Apr 2013

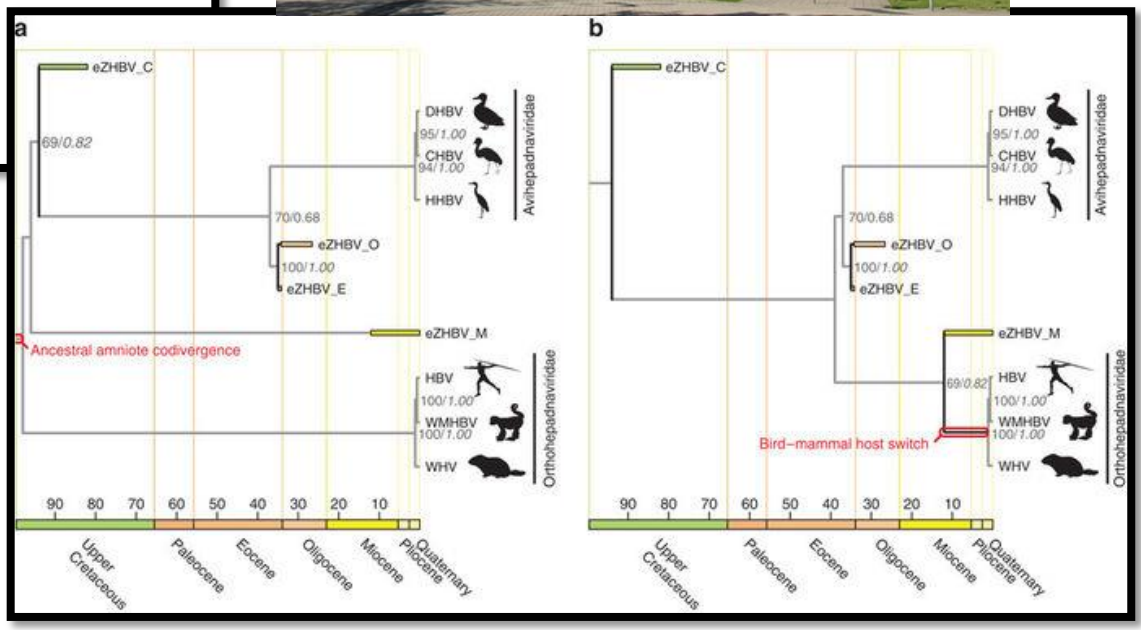
DOI: 10.1038/ncomms2798

The genome of a Mesozoic paleovirus reveals the evolution of hepatitis B viruses

Alexander Suh[1,†], Jürgen Brosius[1], Jürgen Schmitz[1,*] & Jan Ole Kriegs[1,2,*]

Paleovirology involves the identification of ancient endogenous viral elements within eukaryotic genomes. The evolutionary origins of the reverse-transcribing hepatitis B viruses, however, remain elusive, due to the small number of endogenized sequences present in host genomes. Here we report a comprehensively dated genomic record of hepatitis B virus endogenizations that spans bird evolution from >82 to <12.1 million years ago. The oldest virus relic extends over a 99% complete hepatitis B virus genome sequence and constitutes the first discovery of a Mesozoic paleovirus genome. We show that Hepadnaviridae are >63 million years older than previously known and provide direct evidence for coexistence of hepatitis B viruses and birds during the Mesozoic and Cenozoic Eras. Finally, phylogenetic analyses and distribution of hepatitis B virus relics suggest that birds potentially are the ancestral hosts of Hepadnaviridae and mammalian hepatitis B viruses probably emerged after a bird–mammal host switch. Our study reveals previously undiscovered and multi-faceted insights into prehistoric hepatitis B virus evolution and provides valuable resources for future studies, such as *in-vitro* resurrection of Mesozoic hepadnaviruses.

[LWL-Museum für Kunst und Kultur](#)
(Doğa Tarihi Müzesi)



>63 milyon yıldan daha fazla bir geçmiş

Tek kaynak insan !!!

PLOS | PATHOGENS

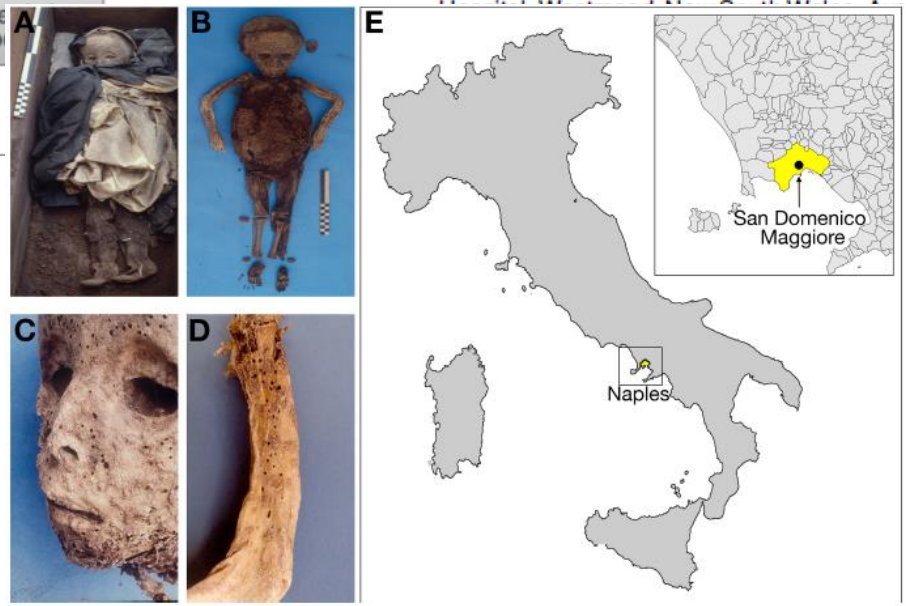
RESEARCH ARTICLE

The paradox of HBV evolution as revealed from a 16th century mummy

Zoe Patterson Ross[1], Jennifer Klunk[2], Gino Fornaciari[3], Valentina Giuffra[3], Sebastian Duchêne[4], Ana T. Duggan[2], Debi Poinar[2], Mark W. Douglas[5], John-Sebastian Eden[1], Edward C. Holmes[1]*, Hendrik N. Poinar[2,6,7]*

1 Marie Bashir Institute for Infectious Diseases and Biosecurity, Charles Perkins Centre, School of Life and Environmental Sciences and Sydney Medical School, The University of Sydney, Sydney, New South Wales, Australia, **2** McMaster Ancient DNA Centre, Department of Anthropology, McMaster University, Hamilton, ON, Canada, **3** Division of Paleopathology, Department of Translational Research on New Technologies in Medicine and Surgery, University of Pisa, Pisa, Italy, **4** Department of Biochemistry and Molecular Biology, Bio21 Molecular Science and Biotechnology Institute, University of Melbourne, Parkville, Victoria, Australia, **5** Storr Liver Centre, The Westmead Institute for Medical Research, The University of Sydney and Westmead [illegible]tralia, **6** Michael G. DeGroote Institute for Infectious Disease [illegible]y, McMaster University, Hamilton, ON, Canada, **7** Humans and [illegible] for Advanced Research, Toronto, ON, Canada

[illegible]oinarh@mcmaster.ca (HNP)



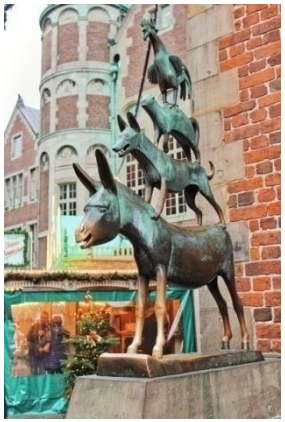
2. Şaşkınlık Dönemi

- 1855-1940 yılları arasında

- 1865’te Virchow ilk bilimsel olarak sarılığı ‘’kataral sarılık’’

- 1883, Bremen/Almanya
- Çiçek salgını
- Farklı vezikül sıvılarından aşılama
- 1289 tersane çalışanı, 191 sarılıklı olgu (aynı aşı formundan)

Postvaksinal sarılık




EXTRA The Greenpoint Herald EXTRA

SMALLPOX HITS GREENPOINT

Local Schools Closed Pending Investigation

CROP REPORTS SHOW LARGE INCREASE IN LOCAL PRODUCTION

BOARD OF ALDERMEN TO HEAR REPORT ON NEW STREET WORK

Navy Gun Plant On Coast Urged

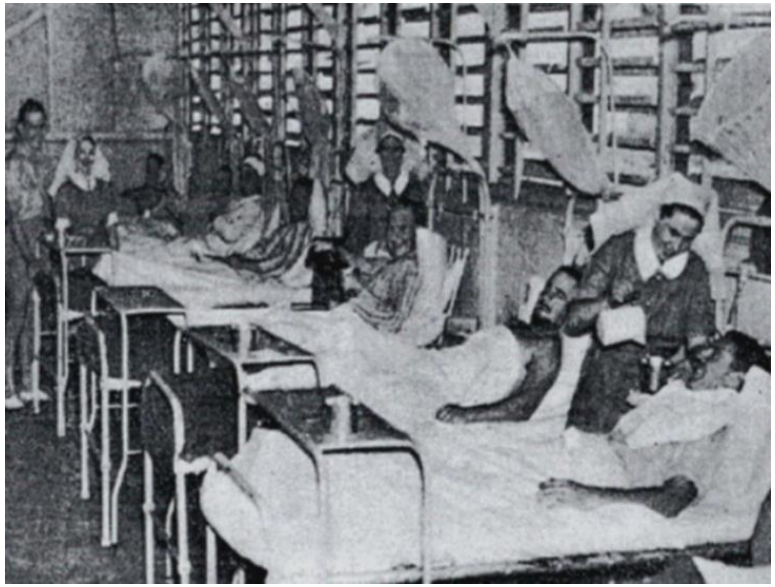
SURPRISE RAID HITS POPULAR DRINK SPOT

U. S. CONSIDERS FULLBULLOVER FOREIGN TRADE

Lurman A. Berl Klin Woschenschr (In German) 1885; 22: 20-3.

- 1908’de Mr Donald bakteriden küçük etken
- 1909 yılında
  - Sifiliz tedavisinde salvarsan kullanımı
  - Ortak enjektör kullanımı

Toksik hepatit



- 1937-1939 Findlay ve Mac Callum
  - İnfektif hepatit terimi kullanılıyor
  - Sarı humma aşısı sonrası sarılık salgını

3. Uyanış Dönemi

- 1940-1970 yılları arasında
- Eppingen-Klemperer (1939) sorun safra yollarında değil, karaciğerde ‘’serum hepatiti’’
- 1940-1945 II. Dünya Savaşı
  - Sarı humma ve kızamık aşısı sonrası sarılık
- 1947 yılı MacCallum
  - Etken bir virüs

MacCallum FO. ‘’Homologous serum hepatitis‘ Lancet 1947; 2: 691-2

- 1950 karaciğer biyopsisi ile patogenez anlaşılıyor
- 1955 Ritis karaciğer hasarının göstergesi biyokimyasal testlerin belirlenmesi
  - Türkiye'de ilk Prof. Dr Kaya Kılıçturgay tarafından çalışıldı
- 1965 yılı, B Blumberg
  - Avustralya Ag (HBsAg)

Alter HJ.Blood 1966; 27: 297-309

Fig. 1. Baruch S. (Barry) Blumberg on a 1958 field trip to Alaska, where he collected blood samples from an isolated group of Inuit people. Blumberg's collection of frozen sera from populations around the world made possible the discovery of the Australia antigen, and was invaluable in defining the vast extent of human infection by the hepatitis B virus. From (Blumberg, 2002), with permission.

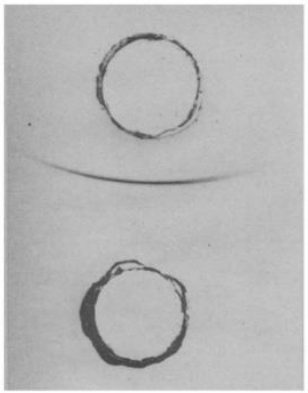
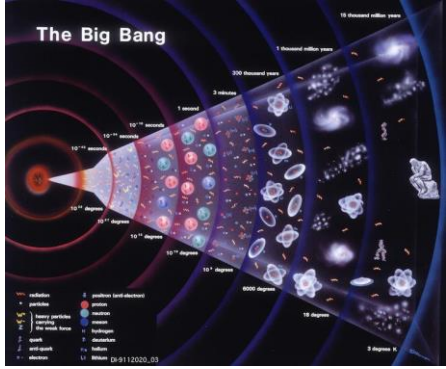
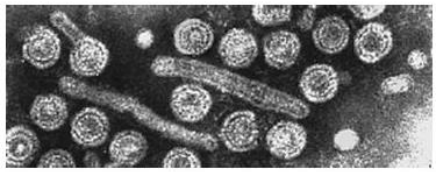


Fig. 2. Detection of the Australia antigen by double immunodiffusion in an agarose gel (the Ouchterlony technique), in the initial report by Blumberg, Alter and Visnich. The upper well contains serum from a leukemia patient, the lower well serum from a patient with hemophilia. From (Blumberg et al., 1965), with permission.

4. Bilgi Patlaması



- 1970 yılı, DS Dane
  - Dane partikülü, EM



Hepatitis B or Dane Particle

Dane DS Lancet 1970; 7649: 695-8

- 1981 plazma derivesi HBV aşısı (HIV!!!)
- 1986 rekombinant DNA teknolojisi ile HBV aşısı
- 1989 Kerry Mullis PCR'ın keşfi
- …tedavi

1970'lerde ilk deneme Afrikalı çocuklar ve New York'ta homoseksüeller

Published by Oxford University Press 2005
Advance Access publication 25 October 2005

International Journal of Epidemiology 2005;**34**:1329–1339
doi:10.1093/ije/dyi206

INFECTIOUS DISEASES

A mathematical model to estimate global hepatitis B disease burden and vaccination impact

Susan T Goldstein,[1]* Fangjun Zhou,[2] Stephen C Hadler,[2] Beth P Bell,[1] Eric E Mast[1] and Harold S Margolis[1]

Accepted 19 September 2005

Background Limited data are available regarding global hepatitis B virus (HBV)-related morbidity and mortality and potential reduction in disease burden from hepatitis B

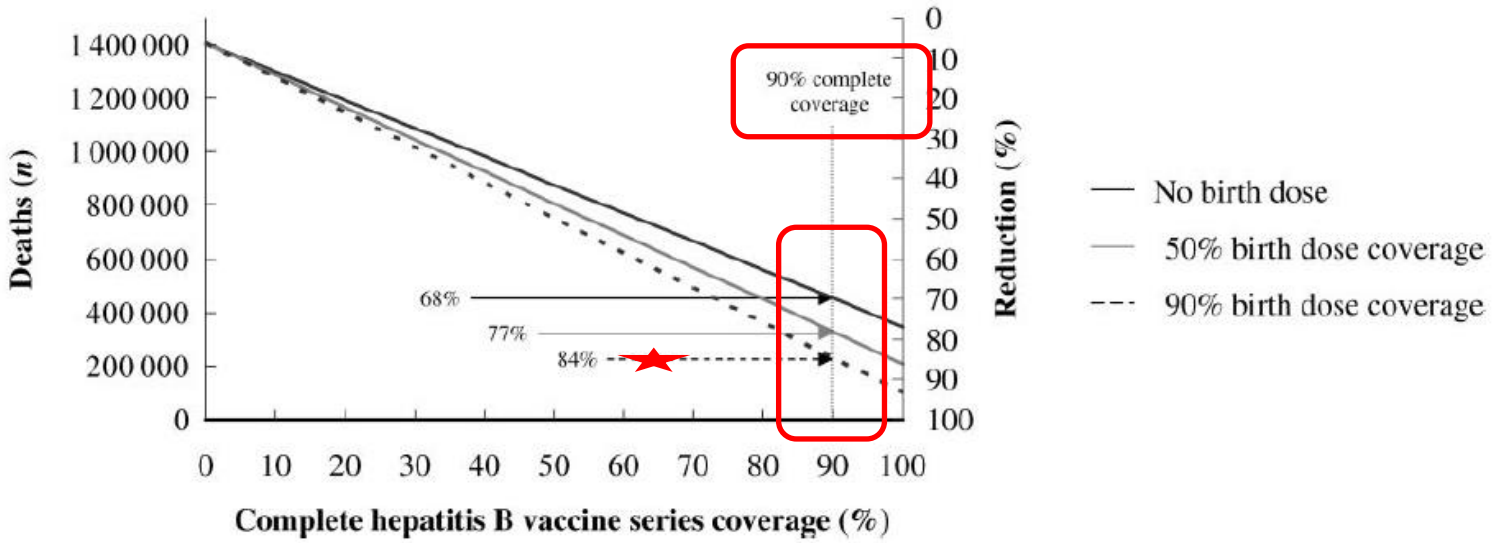


Figure 3 Reduction in future hepatitis B virus-related deaths with increasing hepatitis B vaccination and birth dose coverage, 2000 Global Birth Cohort

Bugün….

- Aşılama
- Güvenli kan transfüzyonu
- Güvenli enjeksiyon
- Kronik hepatit B’de viral yükü azaltan tedavi…

- Hepatit B aşılarının olguların %80-95'inde bulaşı engellediği ve güvenli aşılar olduğu bildirilmiştir

Chen DS et al. J Hepatol 2009; 50: 805-16
del Canho R et al. Vaccine 1997; 15: 1624-30

- 1991 yılı HBs Ag (+) ‘liği >%8’den fazla olan ülkelerde HBV aşısı uygulanması
- 1997 yılından itibaren tüm ülkelerde doğum itibaren HBV aşı uygulaması
- ACIP 2008 yılı önerisi ‘’HBV infeksiyonundan korunmak isteyen herkes aşılanmalı’’

EPI kapsamında HBV aşılaması

1990	20 ülke
1996	80 ülke
2000	116 ülke
2001	126 ülke
2005	125 ülke

Günümüzde 193 ülkenin 171’i

NIH Public Access
Author Manuscript
Hepatology. Author manuscript; available in PMC 2012 March 1.

Published in final edited form as:
Hepatology. 2009 May ; 49(5 Suppl): S28–S34. doi:10.1002/hep.22975.

Epidemiology of Hepatitis B in the United States

W. Ray Kim, MD
Associate Professor of Medicine, Division of Gastroente
College of Medicine, Rochester, MN

Abstract

Hepatitis B virus (HBV) remains an important cause of a
and in the United States. An encouraging trend is that the
United States declined as much as 80% between 1987 an
vaccination programs as well as universal precautions in
While encouraging, these decreases in acute infections h
prevalence or burden of chronic HBV infection. The prev
been estimated to be approximately 0.4%. However, thes
conducted in samples in which population groups with h
foreign-born minorities, were underrepresented. Volunta

NIH-PA Author Manuscript
NIH-P

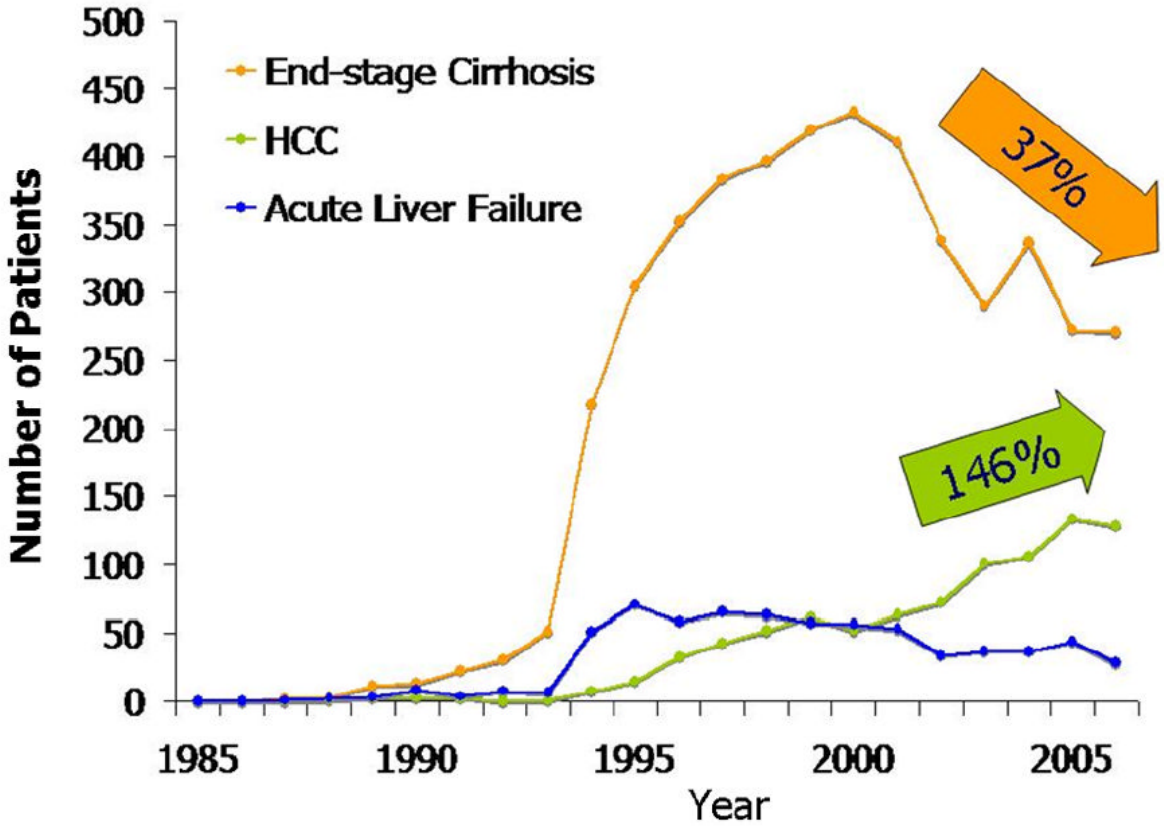


Figure 6.
Number of patients placed on the liver transplantation waitlist by year for hepatitis B-related indications in the United States. Registrants for end-stage cirrhosis have been declining (−37%) while those for hepatocellular carcinoma (HCC) have been rising (+146%). Data from reference 25.

Kim WR Hepatol 2009; 49 (Suppll 5): S28-34

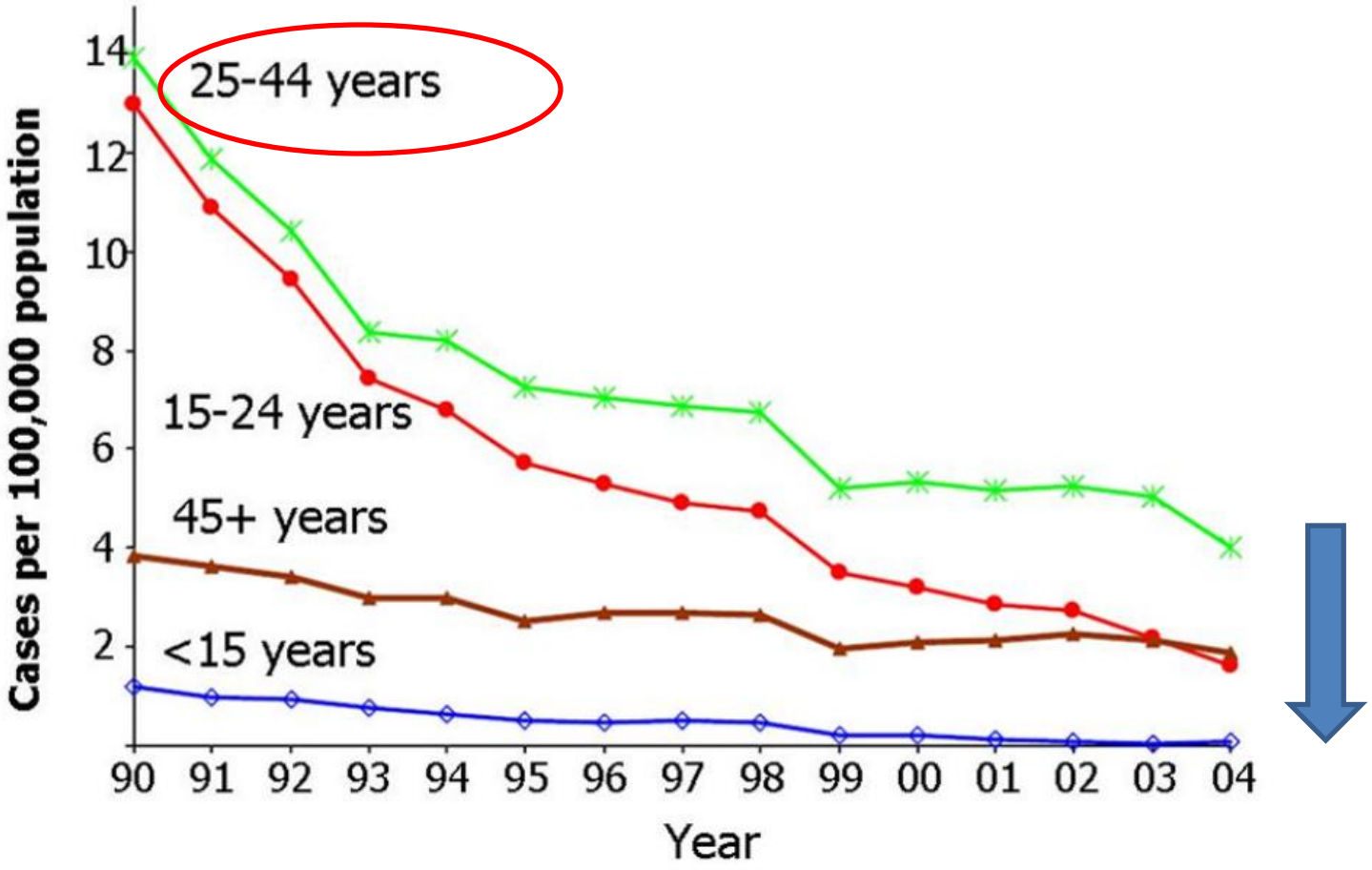


Figure 1.
Incidence of acute hepatitis B per 100,000 population in the United States by year (1990–2004) and age group. (Reproduced from reference 7, permission waived by CDC).

Kim WR Hepatol 2009; 49 (Suppll 5): S28-34

MAJOR ARTICLE

Epidemiology of Acute Hepatitis B in the United States From Population-Based Surveillance, 2006–2011

Kashif Iqbal,[1] R. Monina Klevens,[1] Marion A. Kainer,[2] Jennifer Baumgartner,[3] Kristin Gerard,[4] Tasha Poissant,[5] Kristin Sweet,[6] Candace Vonderwahl,[7] Tracey Knickerbocker,[8] Yury Khudyakov,[1] Guo-liang Xia,[1] Henry Roberts,[1] and Eyasu Teshale[1]

[1]Division of Viral Hepatitis, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention, Atlanta, Georgia; [2]Tennessee Department of Health, Nashville; [3]New York Department of Health and Mental Hygiene, Queens; [4]Connecticut Department of Public Health, Hartford; [5]Oregon Health Authority, Portland; [6]Minnesota Department of Health, Minneapolis; [7]Colorado Department of Public Health and Environment, Denver; and [8]New York State Department of Public Health, Albany

Background. An estimated 20 000 new hepatitis B virus (HBV) infections occur each year in the United States. We describe the results of enhanced surveillance for acute hepatitis B at 7 federally funded sites over a 6-year period.

Methods. Health departments in Colorado, Connecticut, Minnesota, Oregon, Tennessee, 34 counties in New York state, and New York City were supported to conduct enhanced, population-based surveillance for acute HBV from 2006 through 2011. Demographic and risk factor data were collected on symptomatic cases using a standardized form. Serum samples from a subset of cases were also obtained for molecular analysis.

Results. In the 6-year period, 2220 acute hepatitis B cases were reported from the 7 sites. For all sites combined, the incidence rate of HBV infection declined by 19%, but in Tennessee incidence increased by 90%, mainly among

Iqbal K et al. CID 2015; 61: 584-92

Table 1. Percentage of Acute Hepatitis B Cases by Site and Characteristics

	CO (n = 186)	MN (n = 157)	NYS (n = 163)	OR (n = 290)	TN (n = 677)	CT (n = 179)	NYC (n = 568)	Total (N = 2220)	
Characteristic	Col. %	Col. %	Col. %	Col. %	Col. %	Col. %	Col. %	No.	Col. %
Age									
10–19	2.2	3.8	1.8	0.3	0.9	0.6	0.9	26	1.2
20–29	11.8	19.1	8.0	10.7	21.0	11.7	13.7	337	15.2
30–39	23.1	20.4	25.2	24.5	33.7	24.6	28.9	623	28.1
40–49	33.3	26.1	39.3	22.2	28.8	35.2	28.0	673	30.3
50–59	17.2	16.6	14.7	20.0	10.6	18.4	16.0	336	15.1
60–69	8.1	10.2	8.0	11.7	3.7	5.6	7.0	153	6.9
≥70	4.3	3.8	3.1	2.1	1.2	3.9	5.5	71	3.2
Missing	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1	0.0
Sex									
Female	31.2	31.2	28.2	31.0	38.7	32.4	32.9	750	33.8
Male	68.8	68.8	71.8	69.0	61.3	67.6	66.7	1468	66.1
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2	0.1
Race									
AI/AN	1.6							14	0.6
API	4.8							94	4.2
Black	6.5							383	17.3
White	50.5							1268	57.1
Hispanic	17.2							250	11.3
Other	0.0							10	0.5
Missing	19.4							201	9.1
Birth country									
United States	73.7	17.8	85.9	62.8	83.3	26.3	41.7	1335	60.1
Foreign born	17.2	14.0	14.1	6.6	16.7	14.0	43.3	480	21.6
Unknown	9.1	68.2	0.0	30.7	0.0	59.8	15.0	405	18.2

Abbreviations: AI/AN, American Indian/Alaska Native; API, Asian or Pacific Islander; CO, Colorado; CT, Connecticut; MN, Minnesota; NYC, New York City; NYS, New York state; OR, Oregon; TN, Tennessee.

AVH erkeklerde ve
30-49 yaş aralığında daha fazla

Iqbal K et al. CID 2015; 61: 584-92

Table 1 Univariate and multivariate analyses of the risk factors exposed within 6 months before onset of acute hepatitis B: a community-based study

Potential risk factor	Cases	Controls	OR (95% CI)	AOR (95% CI)
Household contact with HBV carriers	101 (34.35)	89 (15.14)	2.93 (2.11 to 4.08)	3.05 (2.11 to 4.41)*
Spouse with HBV infection	21 (7.14)	25 (4.25)	1.73 (0.92 to 3.27)	
Mother with HBV infection	12 (4.08)	5 (0.85)	4.96 (1.73 to 14.22)	4.25 (1.11 to 16.22)†
Other members with HBV infection	45 (15.31)	24 (4.08)	4.23 (2.53 to 7.13)	3.64 (1.97 to 6.75)†
Family member with liver cirrhosis	18 (6.12)	5 (0.85)	7.60 (2.68 to 26.41)	4.04 (1.28 to 12.78)†
Family member with HCC	11 (3.74)	8 (1.36)	2.82 (1.04 to 7.76)	
Sharing razor	8 (2.72)	6 (1.02)	2.71 (0.82 to 9.57)	
Sharing towels	30 (10.20)	38 (6.46)	1.64 (0.97 to 2.79)	
Invasive medical procedure	103 (35.03)	77 (13.10)	3.56 (2.55 to 5.02)	3.72 (2.55 to 5.42)*
Surgery	12 (4.08)	9 (1.53)	2.74 (1.06 to 7.14)	
Endoscopy	10 (3.40)	7 (1.19)	2.92 (1.01 to 8.60)	
Intravenous injection or infusion	78 (26.53)	56 (9.52)	3.43 (2.31 to 5.10)	2.53 (1.52 to 4.21)†
Intramuscular injection	61 (20.75)	40 (6.80)	3.59 (2.29 to 5.62)	2.17 (1.22 to 3.84)†
Body care and beauty treatments in public places	130 (44.22)	155 (26.36)	2.21 (1.65 to 2.97)	1.52 (1.09 to 2.12)*
Barber shop shaving (≥4 times)	58 (19.73)	76 (12.93)	1.66 (1.12 to 2.45)	
Receiving pedicure in the bath centre	103 (35.03)	102 (17.35)	2.55 (1.85 to 3.51)	1.98 (1.36 to 2.87)†
No	191	486		
Once	31	50	1.58 (0.95 to 2.61)	
Two to three times	21	28	1.91 (1.02 to 3.57)	
Four times or more	51	24	5.41 (3.15 to 9.33)	
Eating out (twice or more/week)	93 (31.63)	69 (11.73)	3.48 (2.41 to 5.02)	3.20 (2.14 to 4.77)*
Lack of HBV vaccination	285 (96.94)	484 (82.31)	6.80 (3.28 to 14.62)	7.78 (3.76 to 16.11)*

Data are expressed as number (%).
*Variables in the multivariate model included household contact with HBV carriers, invasive medical procedure, body care/beauty treatments in public places, eating out and lack of HBV vaccination.
†Variables in the multivariate model included mother with HBV infection, other members with HBV infection, family members with liver cirrhosis, intravenous injection or infusion, intramuscular injection, receiving pedicure in the bath centre, eating out, and absent HBV vaccination.
AOR, adjusted odds ratio; CI, confidence interval; HBV, hepatitis B virus; HCC, hepatocellular carcinoma; OR, odds ratio.

IV uyuşturucu
Cinsel yolla bulaş
Sağlık bakımıyla ilişkili bulaş

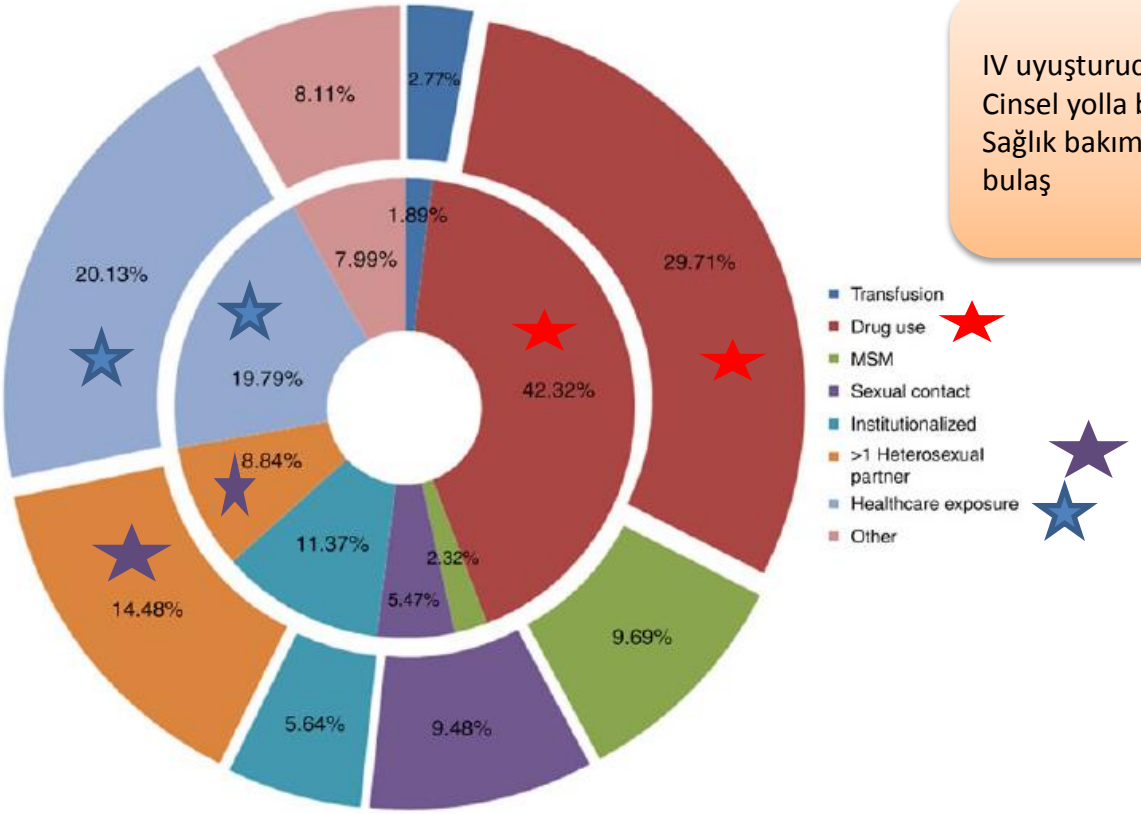


Figure 3. Risk hierarchy of potential sources of acute hepatitis B virus infection (mutually exclusive categories). Tennessee is represented by the inner circle and the other 6 sites are represented by the outer circle. Abbreviation: MSM, men who have sex with men.

Iqbal K et al. CID 2015; 61: 584-92

ANALYSIS CMAJ

POPULATION AND PUBLIC HEALTH

Hepatitis B immunization strategies: timing is everything

Christopher O. Mackie MD MHSc, Jane A. Buxton MBBS MHSc, Sayali Tadwalkar MD BHSc, David M. Patrick MD MHSc

Since the launch of the first universal vaccination program against hepatitis B virus (HBV) in Taiwan in 1984, there has been ongoing research and debate about the most appropriate vaccination schedule. Vaccine advisory bodies continue to examine universal immunization strategies to determine which are most appropriate to protect against HBV.[1,2] In this article, we review the evidence for long-term effectiveness of vaccination programs for infants and adolescents. The search strategy used is available in Appendix 1 (available online at www.cmaj.ca/cgi/content/full/180/2/196/DC1).

Chronic HBV infection, with the attendant risk of cirrhosis and hepatocellular carcinoma, occurs in 1%–5% of adults and up to 90% of infants who are infected with HBV.[3–5] Providing

Key points

- All countries should offer universal HBV vaccination for infants.
- Targeting universal immunization programs at infants helps to maximize population-level protection.
- Booster doses for healthy adolescents who were immunized as infants are not necessary.
- Universal immunization in adolescents can reduce the burden of HBV-related illness in adolescents.
- Adequate data are needed to evaluate immunization programs.
- A national immunization registry is a key component of any evaluation strategy.

Mackie CO et al. CMAJ 2009;180: 196-201

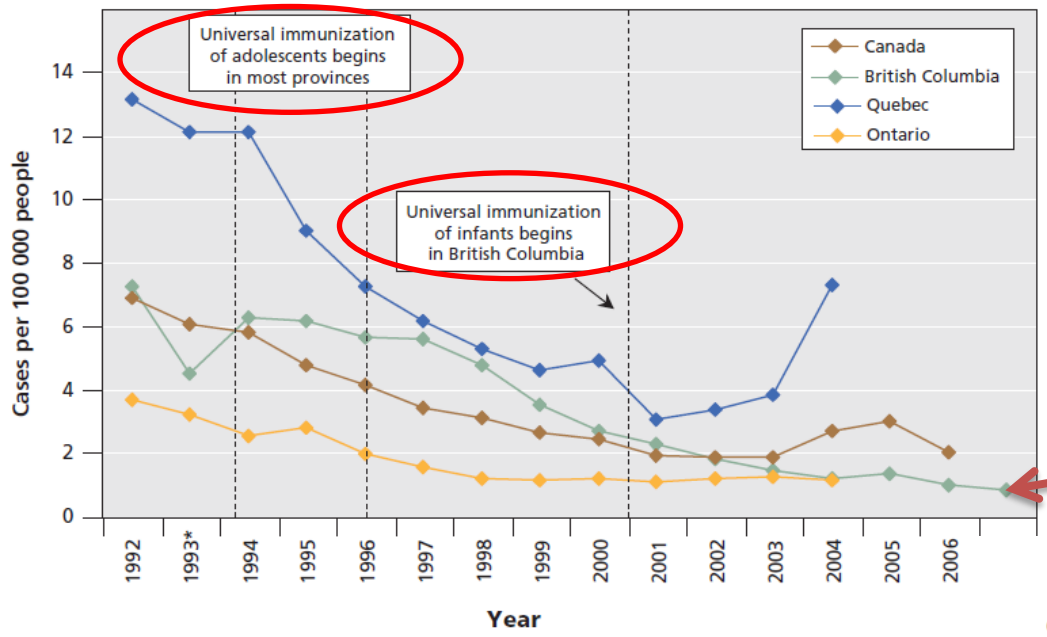


Figure 1: Reported incidence of acute hepatitis B infections among people of all ag Canada, 1992–2007. Data were compiled from the 2007 annual report of the BC Ce for Disease Control[34] and the 2005 release of the Canadian Notifiable Diseases repor system.[35] *There was a change in the electronic surveillance system in British Columb 1993 that resulted in some underreporting that year.[32]

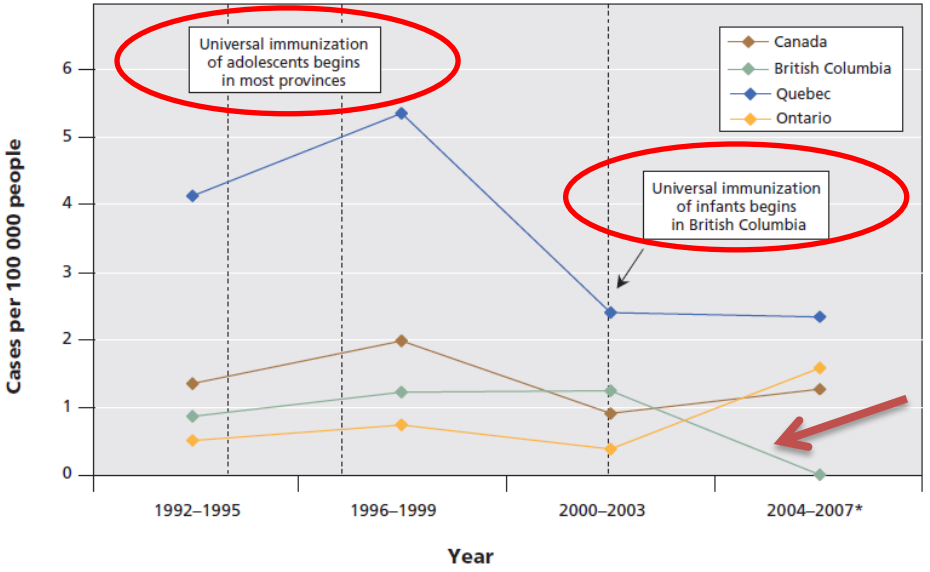


Figure 2: Reported incidence of acute hepatitis B infections among infants in Canada, 1992–2007. Data were compiled from the 2007 annual report of the BC Centre for Disease Control,[34] the 2005 release of the Canadian Notifiable Diseases reporting system,[35] the British Columbia Integrated Public Health Information System (iPHIS), and the Rapport sur l'ensemble des maladies des dix dernières années, Province du Quebec.[36] *Rates for this period in British Columbia and Quebec are based on complete data from 2004–2007, while rates in Ontario and Canada are based on 2004 data. Note: Infant infections tend to be asymptomatic, and are thus underreported. Data are presented here in 4-year intervals because of the instability of small numbers.

Mackie CO et al. CMAJ 2009;180: 196-201

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Risk factors for acute hepatitis B and its progression to chronic hepatitis in Shanghai, China

H W Zhang,[1] J H Yin,[1] Y T Li,[2] C Z Li,[3] H Ren,[2] C Y Gu,[1] H Y Wu,[2] X S Liang,[3] P Zhang,[1] J F Zhao,[1] X J Tan,[1] W Lu,[1] S Schaefer,[4] G W Cao[1]

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H-W Z and J-H Y contributed equally to this work.

ABSTRACT

Background and aims: The major risk factors for acute hepatitis B (AHB) in China and the viral factors determining the progression from acute to chronic hepatitis B remain largely unknown.

Methods: Epidemiological studies within a population-based surveillance for AHB in adults were performed in Shanghai, China, including 294 patients, 588 matched controls and 572 family members of the patients.

Results: Invasive r
with hepatitis B vir
beauty treatments,
independently asso
pedicure in bath ce
patients with AHB
B2 and 35 with HB
patients, including
($p = 0.013$), progre
analysis showed th
associated with ch

nationwide survey in 2006 showed that the prevalence of hepatitis B surface antigen (HBsAg) was around 1.5% in children under the age of 8 years, and 7.18% in the nationwide population at an age between 1 and 59 years (unpublished data). In Shanghai, the annual incidence of AHB has been documented since 1993 (fig 1). Although an overall decrease is evident, the incidence of AHB remains high.

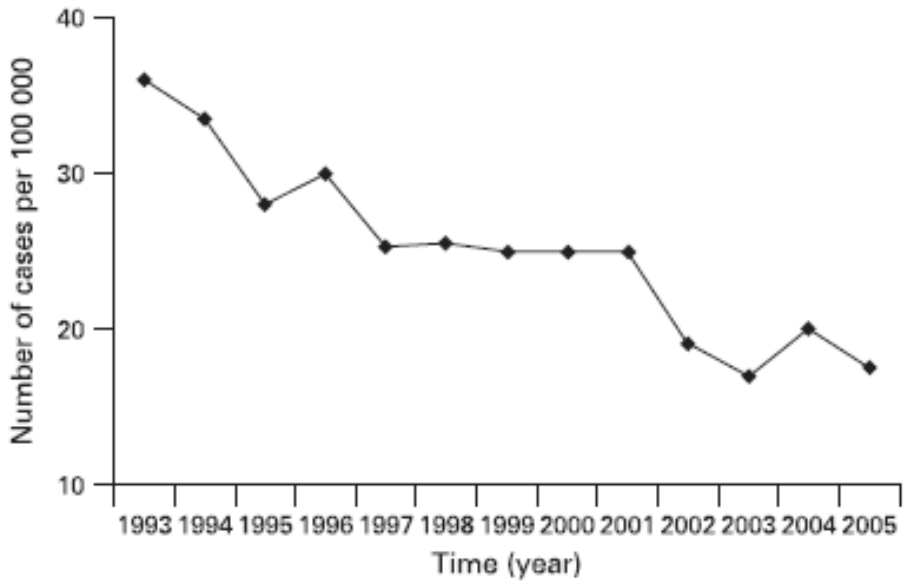


Figure 1 Annual incidence of reported cases of acute hepatitis B in Shanghai, China from 1993 to 2005. Approximately 17.78 million people were surveyed.

PLOS ONE

RESEARCH ARTICLE

Trends of Acute Hepatitis B Notification Rates in Eastern China from 2005 to 2013

Zhifang Wang*, Yaping Chen, Jinren Pan

Department of Immunization Programme, Zhejiang Provincial Center for Disease Control and Prevention, Hangzhou, Zhejiang Province, China

*zfwang@cdc.zj.cn

Abstract

Zhejiang Province
number of measu
hepatitis B. In 19
vaccine was inclu
Between 2007 and

1992 aşılama başlamış
1994 gebelerin taranması
2002 genişlemiş aşı programı
2005 tüm YD aşılaması
2010 tüm riskli grup aşılaması

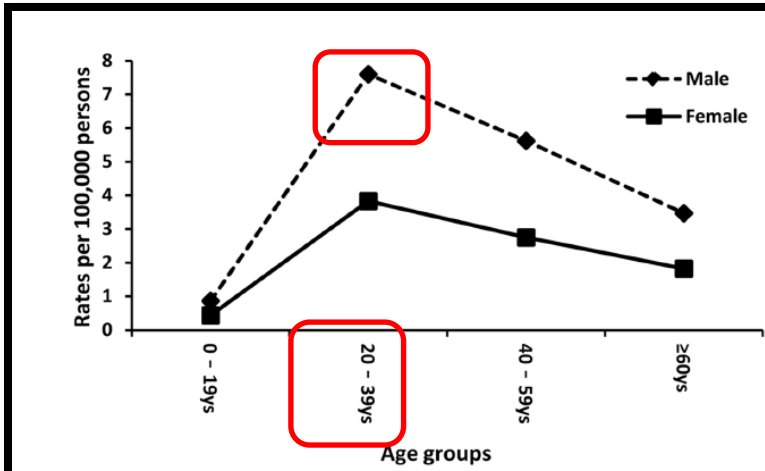


Fig. 3. Reported rates of acute hepatitis B cases by gender and age group in 2013.

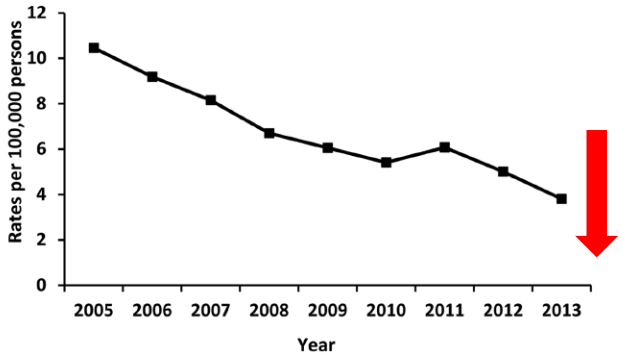


Fig. 1. Reported rates of acute hepatitis B cases, 2005–2013.

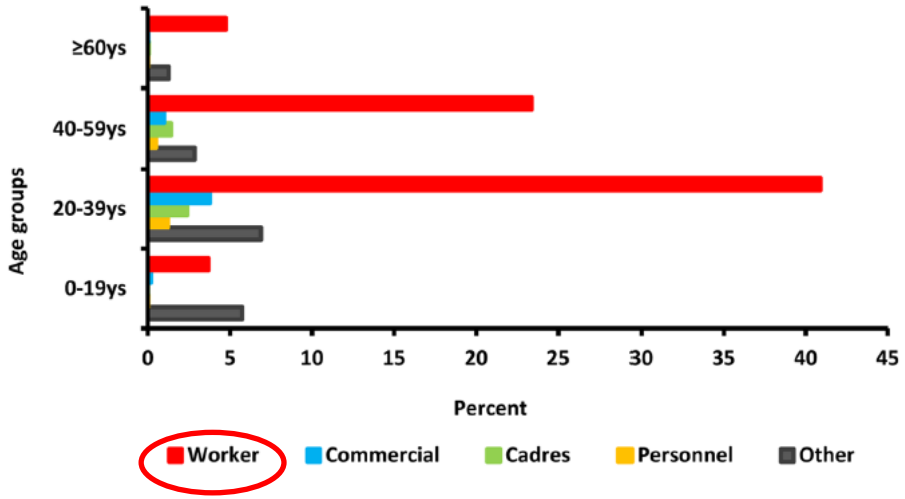


Fig. 4. Cumulative ratios of reported acute hepatitis B cases by occupation and age group, 2005–2013.

Genç erişkinler
Nozokomiyal bulaş,
Cinsel bulaş halen sorun

AVHB erkeklerde daha fazla
20-39 yaş aralığında fazla

Wang Z et al. PLOSone 2014; 1-13

SURVEILLANCE REPORT

Annual Epidemiological Report for 2015

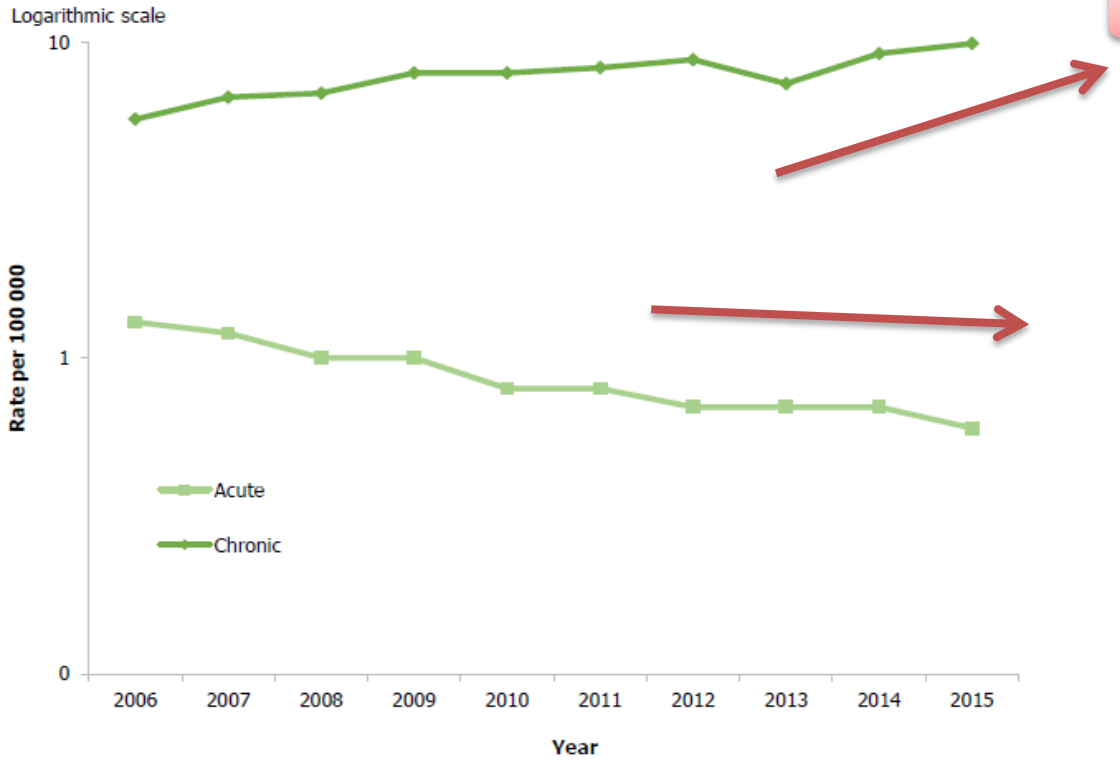
Hepatitis B

Key facts

- In 2015, 30 EU/EEA Member States reported 24 5
  rate of 4.7 cases per 100 000 population.
- Of these cases, 10.2% were reported as acute, 6
  not be classified.
- The most affected age group for both acute and
  accounting for 32.0% of cases; the overall male-
- There continues to be a downward trend in the r
  trends and reflects the impact of national vaccina
  diagnosed chronic cases continues to rise over ti
  changes in local testing and reporting practices.
- Data on transmission were complete for only 9.6
  information, heterosexual transmission was most
  transmission (16.3%), transmission among men
  through injecting drug use (11.3%). Mother-to-c
  route (65.3%) for those categorised as chronic c
- Prevention and control programmes should be m
  continue. These programmes need further scalin

Figure 2. Rates of acute and chronic hepatitis B per 100 000 population, EU/EEA countries, 2006–2015

Farkındalık??



Source: Country reports from: Austria, Bulgaria, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

Figure 3. Acute and chronic hepatitis B cases, rate per 100 000 population, by age group, EU/EEA, 2015

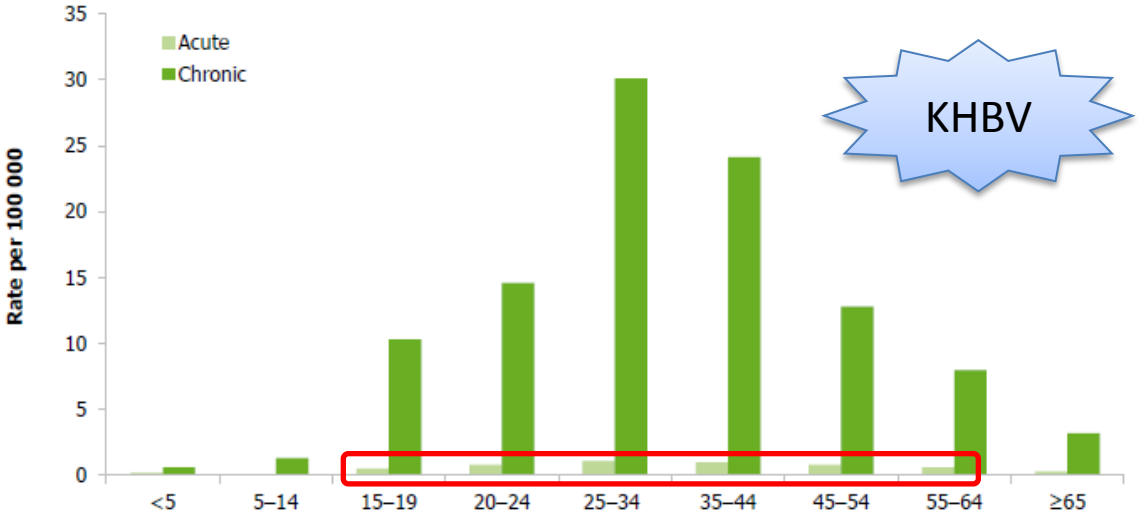
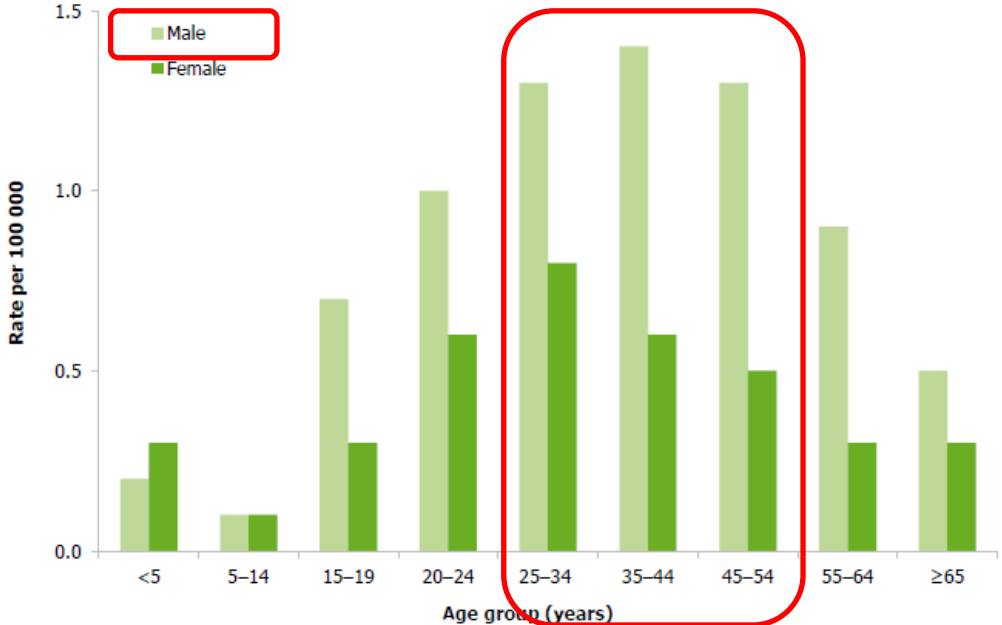


Figure 4. Reported acute hepatitis B cases, rate per 100 000 population, by age group and gender, EU/EEA, 2015



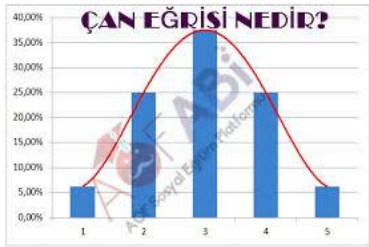
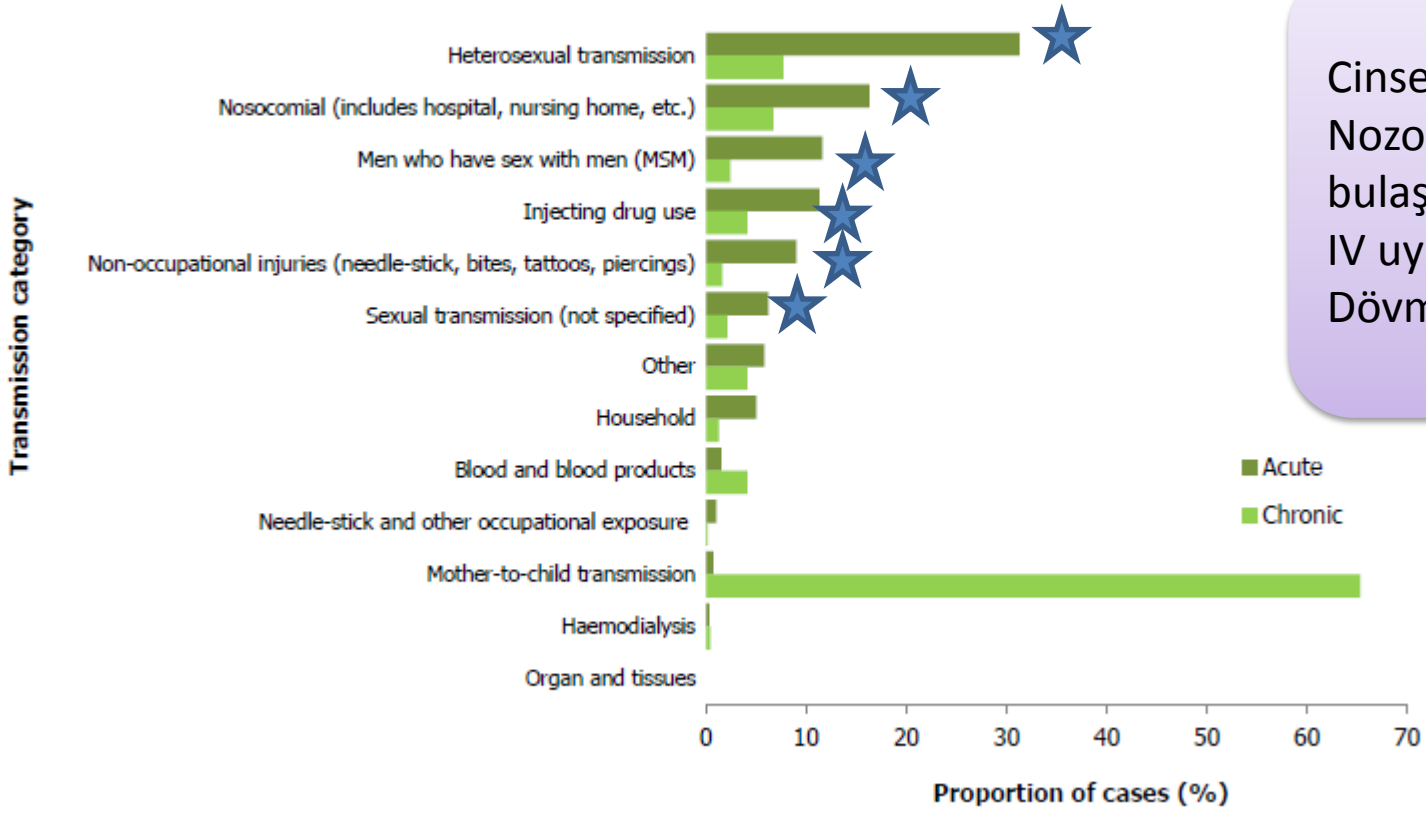


Figure 5. Transmission category of hepatitis B cases by acute and chronic disease status, EU/EEA, 2015



Cinsel temas
Nozokomiyal bulaş
IV uyuşturucu
Dövme vs

Table 3 Transmission category of hepatitis B cases by disease status, in EU/EEA countries, 2012*

Transmission category	Acute (n = 1120) %	Chronic (n = 1827) %	Unknown (n = 65) %	Total (n = 3012) %
Heterosexual transmission	31.1	6.7	11.9	15.9
Nosocomial (includes hospital, nursing home, etc.)	20.7	2.2	0.0	9.0
Men who have sex with men (MSM)	11.1	2.5		
Nonoccupational injuries (needle stick, bites, tattoos, piercings)	9.3	1.0		
Injecting drug use	8.7	3.9		
Other†	6.6	9.0		
Sexual transmission (not specified)	5.1	1.7		
Household	4.7	3.3		
Blood and blood products	1.1	2.4		
Mother-to-child transmission	0.7	66.9		
Haemodialysis	0.5	0.1		
Needle stick and other occupational exposure	0.4	0.3		
Organ and tissues	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0

AVHB
Cinsel temas
Nozokomiyal bulaş

KVHB
Kan ve kan ürünü
Transplasental bulaş

Source: Country reports: Czech Republic, Denmark, Estonia, Finland, France‡, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Romania, Slovakia and Sweden.

*Analyses undertaken by disease status category for all cases where the transmission category was not classified as 'unknown'.

†The route of transmission is known, but cannot be attributed to any of the specified transmission categories.

‡Underreporting was estimated to be 85% for acute hepatitis B cases in France in 2010.

Fransa'da 11 Aşı Zorunlu Hale Gelecek

Fransa Sağlık Bakanı Agnes Buzyn, bebek ve okul çağındaki çocuklara 2018'den itibaren 11 farklı aşının zorunlu hale getirileceğini belirtti.

31 Ağustos 2017 Perşembe 17:39

Fransa Sağlık Bakanı Agnes Buzyn, bebek ve okul çağındaki çocuklara 2018'den itibaren 11 farklı aşının zorunlu hale getirileceğini belirtti.

Buzyn, CNEWS televizyonunda katıldığı programda, okulların açılması dolayısıyla sağlık konusunda

Fransa'da bebek ve okul çağındaki çocuklara mevcut durumda çocuk felci, tetanos ve difteriye karşı aşıların zorunlu olduğunu anımsatan Bakan Buzyn, "2018'den itibaren tüm çocuklara kızamık, boğmaca, kabakulak ve hepatit B gibi hastalıklarla savaşı artıracak 11 farklı aşı zorunlu hale getirilecek." ifadesini kullandı.

1990-1997 arası MS artışı?? Fransa verileri sıkıntılı

Buzyn, tepkiler üzerine, tasarıda belirtilen zorunlu aşılara karşı çıkan ebeveynlere yönelik 6 ay hapis ve 3 bin 750 avro para cezası uygulamasının gözden geçirileceğini kaydetmişti.

Rimšelienė *et al. BMC Infectious Diseases* 2011, **11**:153
http://www.biomedcentral.com/1471-2334/11/153

BMC Infectious Diseases

RESEARCH ARTICLE Open Access

Epidemiology of acute and chronic hepatitis B virus infection in Norway, 1992-2009

Gražina Rimšelienė[1,2*], Øivind Nilsen[2], Hilde Kløvstad[2], Hans Blystad[2] and Preben Aavitsland[2]

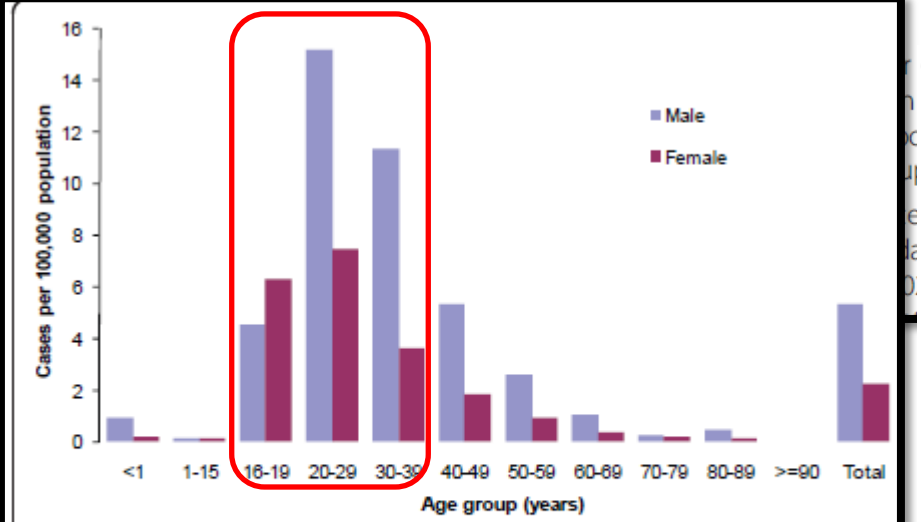


Figure 2 Mean annual incidence of acute hepatitis B by age and sex, Norway, 1992-2009. Blue bars represent number of males with acute hepatitis B per 100,000 population; purple bars represent females with acute hepatitis B per 100,000 population.

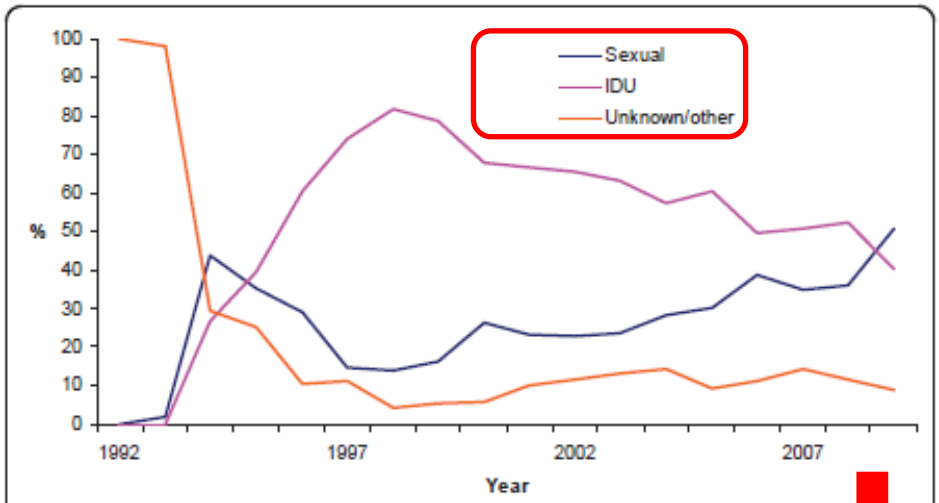
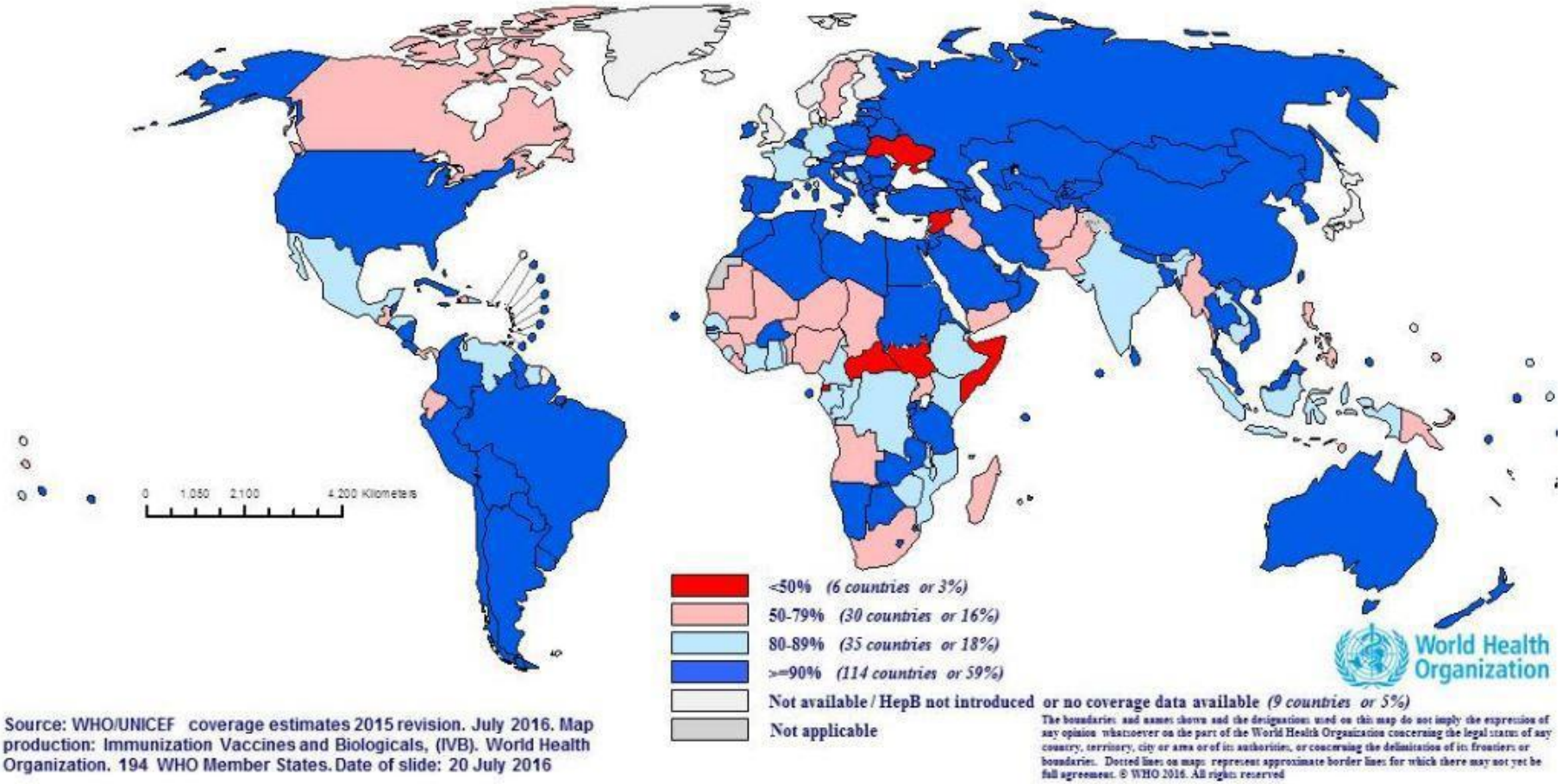


Figure 3 Proportion of registered routes of transmission for acute hepatitis B, Norway, 1992-2009 (n = 3053). Proportion of routes of transmission for acute hepatitis B are presented with three colours: sexual route of transmission is presented with a dark blue line; a pink line represents injecting drug use and unknown and/or other routes of transmission are presented in orange colour.

Hepatit B Aşısının Üçüncü Dozunu Alan Süt çocuklarının Oranı*

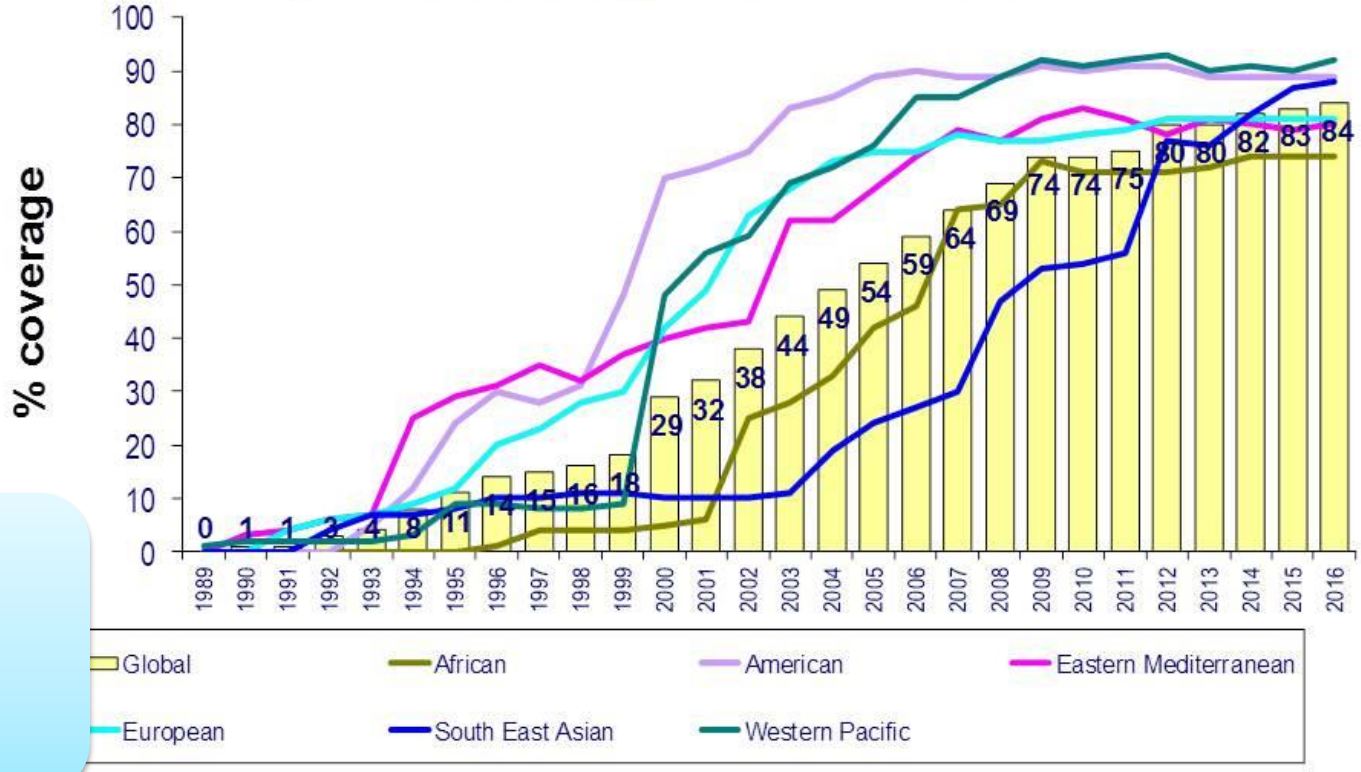


*2015

Region	2009
Africa	70 %
Americas	86 %
Eastern Mediterranean	84 %
Europe	77 %
South-East Asia	41 %
Western Pacific	90 %
Global	70 %
Total number of countries	154

Source: WHO vaccine-prevental system, 2010 global summary [11

Global Immunization 1989-2016, 3rd dose of Hepatitis B (HepB3) coverage in infants global coverage at 84% in 2016



<15 yaş
AVHB %9,8'den %0,5'e düştü
AntiHBc prevalansı %20,6'dan %2,9'a düştü

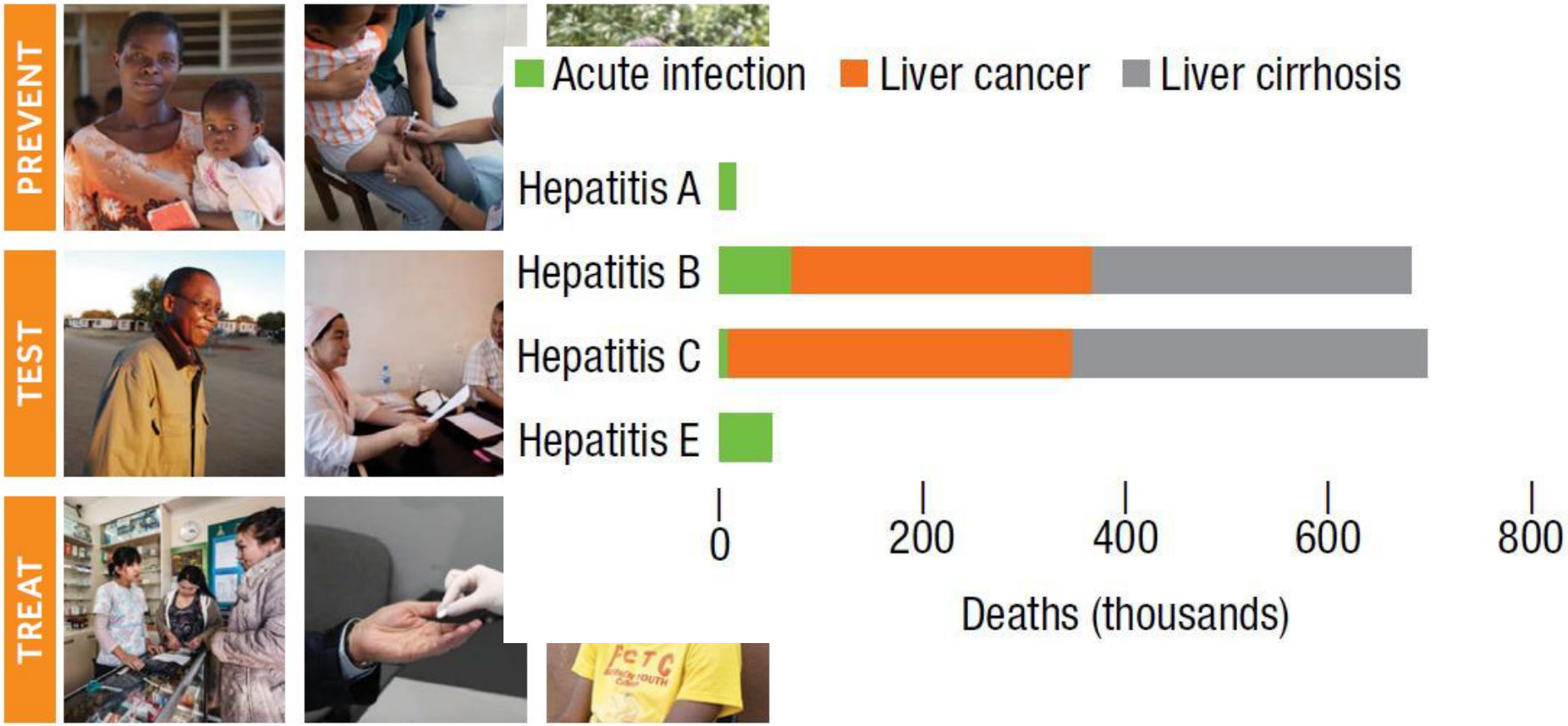
Source: WHO/UNICEF coverage estimates 2016 revision, July 2017.
Immunization Vaccines and Biologicals, (IVB), World Health Organization.
194 WHO Member States. Date of slide: 26 July 2017.

WHO

World Health Organization

Viral Hepatitlere Bağlı Ölümler ve Sekelleri

GLOBAL HEPATITIS REPORT, 2017



Ülkemizde


Kırklareli
Edirne
Tekirdağ
İstanbul
Bartın
Kastamonu
Sinop
Zonguldak
Karabük
Samsun
Artvin
Ardahan
Rize
Trabzon
Kocaeli
Düzce
Çankırı
Amasya
Ordu
Giresun
Gümüşhane
Yalova
Sakarya
Bolu
Çorum
Tokat
Kars
Çanakkale
Bursa
Bilecik
ANKARA
Bayburt
Iğdır
Erzurum
Balıkesir
Eskişehir
Kırıkkale
Yozgat
Sivas
Erzincan
Ağrı
Kütahya
Kırşehir
Tunceli
Bingöl
Muş
Manisa
Afyon
Nevşehir
Elazığ
Uşak
Kayseri
Van
İzmir
Aksaray
Malatya
Bitlis
Denizli
Konya
Diyarbakır
Siirt
Aydın
Isparta
Niğde
K.Maraş
Batman
Hakkari
Adıyaman
Burdur
Şırnak
Adana
Osmaniye
Mardin
Muğla
Karaman
Ş.Urfa
Antalya
G.Antep
Mersin
Hatay
Kilis

- Ülkemizde 1998’den beri yenidoğan ve risk grubundakilere aşı uygulanmakta
- 2006 yılında bir genelge ile hiç aşılanmamış çocukları aşılama uygulaması başlamış (ilköğretimde ‘’catch-up’’)
- Bağışıklama danışma kurulu kararı ile 2009 lise öğrencilerine aşı uygulaması

T.C.
SAĞLIK BAKANLIĞI
Temel Sağlık Hizmetleri Genel Müdürlüğü

Sayı : B100TSH0110005
Konu : Genişletilmiş Bağışıklama Programı Genelgesi 13.03.2009/7941

GENELGE
2009/17

Bağışıklama hizmetlerinde temel amaç; toplumda, özellikle bebek ve çocuklard korunulabilir hastalıkların ortaya çıkışını engellemek, dolayısıyla bu hastalıklardan kayn ölümlerin ve sakatlıkların önüne geçmektir. Temel hedefin aşısız çocuk bırakmamak unutulmamalıdır.

Sağlık Bakanlığının Teşkilat ve Görevleri Hakkında 181 sayılı Kanun Hük Kararname ile Ülkemizde yürütülecek bağışıklama hizmetlerini düzenleme yetkisi Bakanl verilmiştir. Bu düzenlemeler yapılırken dünyadaki çeşitli gelişmeler takip edilme akademisyenlerden oluşan Bağışıklama Danışma Kurulu'nun tavsiyeleri dikkate alınmakt

Genişletilmiş Bağışıklama Programı (GBP) kapsamında Boğmaca, Difteri, T Kızamık, Kızamıkçık, Kabakulak, Tüberküloz, Poliomyelit, Hepatit-B, Hemofilus influ b'ye bağlı hastalıklar ile streptokokus pnömoniya'ya bağlı invaziv pnömokokal hastalık bu hastalıklardan kaynaklanan bebek ve çocuk ölümlerinin ve sakatlıkların engel hedeflenmektedir.

Ülkemizde yürütülen Genişletilmiş Bağışıklama Programı'nda son dönemde gelişmeler kaydedilmiştir. 2006 yılından itibaren aşı takvimine üç yeni antijen (Kıza Kabakulak ve Hemofilus influenza tip b) eklenmiş, 2008 yılı başından itibaren DaBT-İ beşli aşısının ve 2008 yılı Kasım ayından itibaren de Konjuge Pnömokok aşısının kı

- İlköğretim 8. sınıfta Td

Çocukluk Dönemi Aşılama Takvimi

	Doğumda	1.ayın sonu	2.ayın sonu	4.ayın sonu	6.ayın sonu	12. ay	18–24 ay	İlköğretim 1.sınıf	İlköğretim 8.sınıf
Hep B	I	II			III				
BCG			I						
DaBT-İPA-Hib			I	II	III		R		
KPA			I	II	III	R			
KKK						I		R	
OPA					√		√	√	
Td								√	√

Hep B: Hepatit B Aşısı
BCG: Bacille Calmette-Guerin Aşısı
DaBT-İPA-Hib: Difteri, aselüler Boğmaca, Tetanoz, İnaktif Polio, Hemofilus influenza tip b Aşısı (Beşli Karma Aşı)
KKK: Kızamık, Kızamıkçık, Kabakulak Aşısı
OPA: Oral Polio Aşısı
Td: Erişkin Tipi Difteri-Tetanoz Aşısı
KPA: Konjuge Pnömokok Aşısı
R: Rapel (Pekiştirme)

T.C. SAĞLIK BAKANLIĞI
Temel Sağlık Hizmetleri Genel Müdürlüğü
DAİMİ GENELGE
Sayı : B100TSH0110005
Konu : Genişletilmiş Bağışıklama Programı Genelgesi
25.02.2008 6111 /14
HEPATİT B KONTROL PROGRAMI

Bu genelgeye eklenen son madde " Bu risk gruplarının dışında, hekimin yüksek risk nedeniyle aşı yapılmasını uygun bulduğu kişilere sağlık kuruluşlarında ücretsiz aşı uygulaması yapılmalıdır" denmekte

"GBP kapsamındaki aşıların kayıt ve bildirimlerini almak şartıyla özel sağlık kuruluşları, hastaneler ve özel hekimlere ücretsiz olarak verilmesi, başvuranlara ücretsiz uygulanması……."

Toy et al. BMC Infectious Diseases 2011, 11:337
http://www.biomedcentral.com/1471-2334/11/337

BMC Infectious Diseases

RESEARCH ARTICLE Open Access

Age- and region-specific hepatitis B prevalence in Turkey estimated using generalized linear mixed models: a systematic review

Mehlika Toy[1,2*], Fatih Oguz Önder[3], Tanja Wörmann[4], A Mithat Bozdayi[5], Solko W Schalm[2,6], Gerard J Borsboom[1], Joost van Rosmalen[1], Jan Hendrik Richardus[1] and Cihan Yurdaydin[5,7]

Abstract

Background: To provide a clear picture of the current hepatitis B situation, the authors performed a systematic review to estimate the age- and region-specific prevalence of chronic hepatitis B (CHB) in Turkey.

Methods: A total of 339 studies with original data on the prevalence of hepatitis B surface antigen (HBsAg) in Turkey and published between 1999 and 2009 were identified through a search of electronic databases, by reviewing citations, and by writing to authors. After a critical assessment, the authors included 129 studies, divided into categories: 'age-specific'; 'region-specific'; and 'specific population group'. To account for the differences among the studies, a generalized linear mixed model was used to estimate the overall prevalence across all age groups and regions. For specific population groups, the authors calculated the weighted mean prevalence.

Results: The estimated overall population prevalence was 4.57, 95% confidence interval (CI): 3.58, 5.76, and the estimated total number of CHB cases was about 3.3 million. The outcomes of the age-specific groups varied from 2.84, (95% CI: 2.60, 3.10) for the 0-14-yearolds to 6.36 (95% CI: 5.83, 6.90) in the 25-34-year-old group.

Conclusion: There are large age-group and regional differences in CHB prevalence in Turkey, where CHB remains a serious health problem.

Ülkemiz orta endemisite bölgesinde %2-7

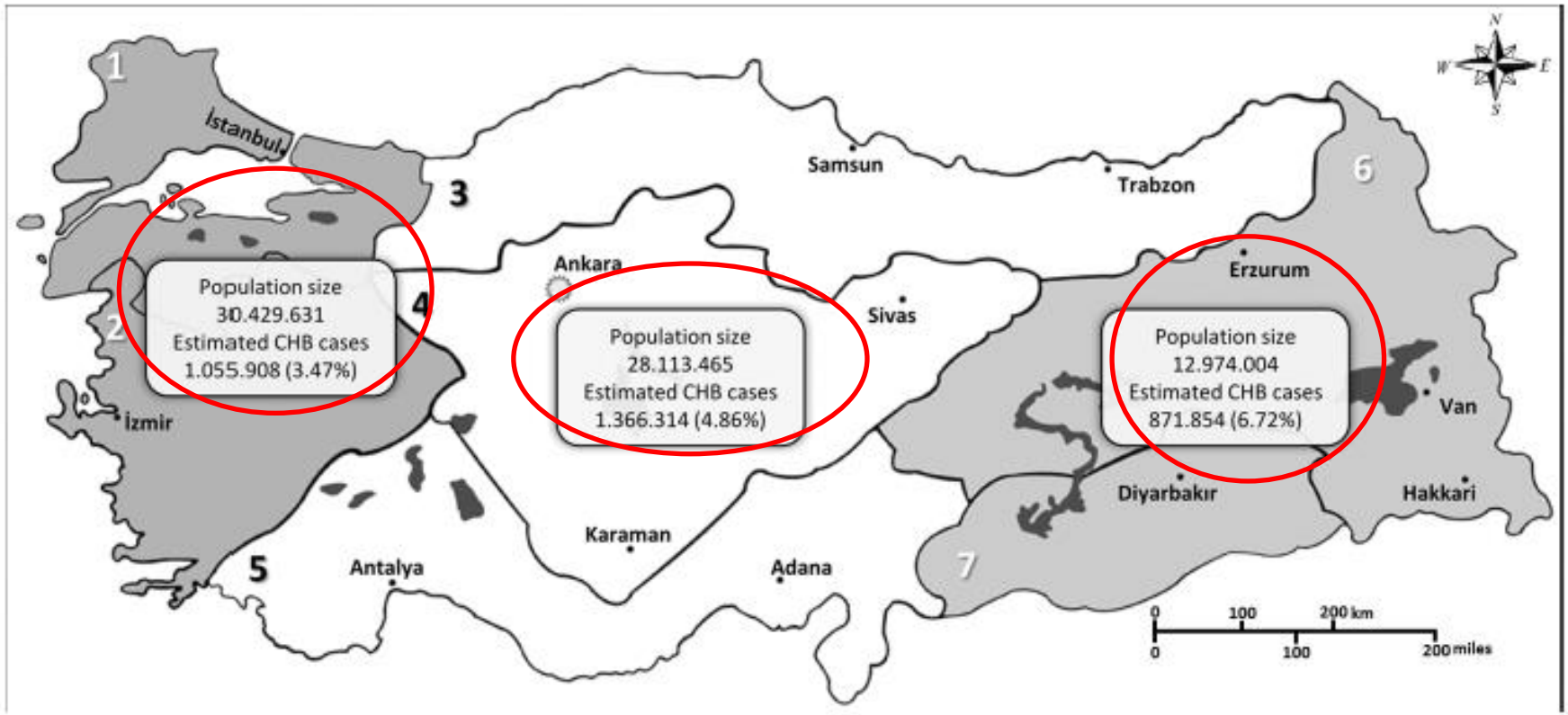


Figure 1 Map of Turkey according to regions, population size per region and the number of estimated CHB cases. Map of Turkey according to regions; 1: Marmara region, 2: Aegean region, 3: Black Sea region, 4: Inner Anatolia region, 5: Mediterranean region, 6: Eastern Anatolia region, 7: south-eastern Anatolia region. Regions with similar socioeconomic status and HBsAg seroprevalence are grouped as A (1 and 2), B (3, 4 and 5) and C (6 and 7).

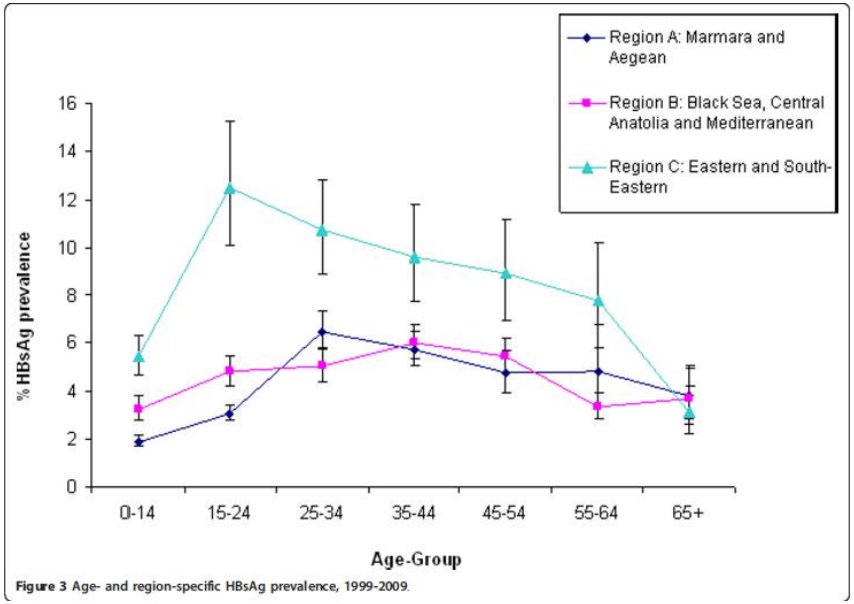
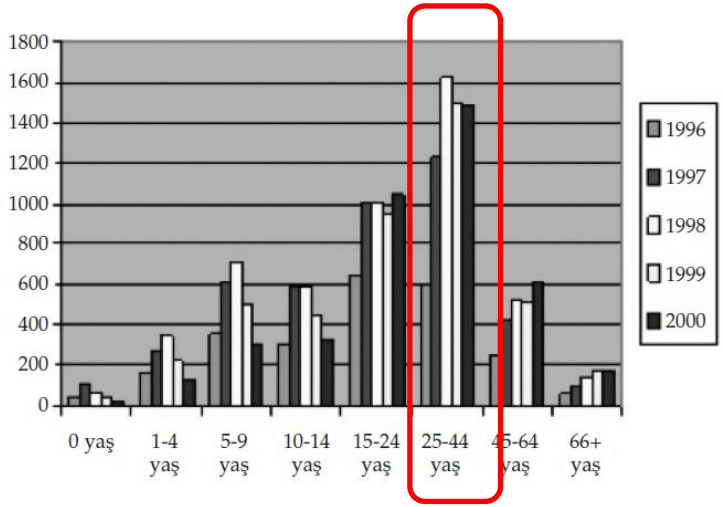


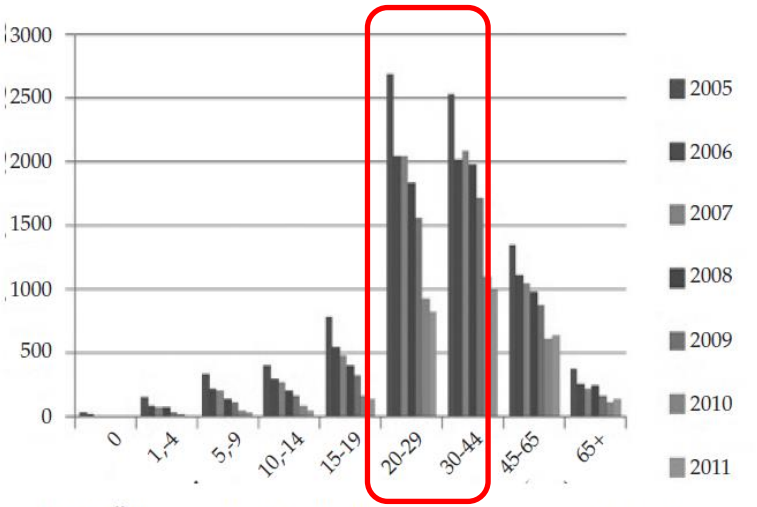
Figure 3 Age- and region-specific HBsAg prevalence, 1999-2009.

- Sağlık çalışanları
  - 1989-1999 %3,86
  - 1999-2009 %2,35
- Donör sorgulaması ile HBsAg (+)
  - 2004 -%2,1
  - 2012-%0,6

Tosun S Viral Hepatit 2013 1. Baskı s27-80



Şekil 1. *1996-2000 yılları arasında T.C. Sağlık Bakanlığına bildirilen akut B tipi hepatitlerin yaş gruplarına göre dağılımı.*



Şekil 2. *Ülke genelinde 2005-2011 yılları arasında bildirilen akut HBV vakalarının yıllara ve yaş gruplarına göre dağılımı.*

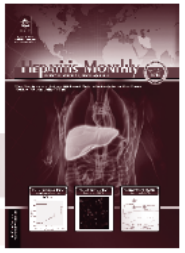
Tosun S ANKEM Derg 2013; 27 (Ek: 2):128-34

KOWSAR

Hepat Mon. 2011;11(4):263-268

Hepatitis Monthly

Journal home page: www.HepatMon.ir



Risk factors of hepatitis B virus infection in Turkey: A population-based, case-control study

Ali Ozer [1], Yusuf Yakupogullari [2*], Ali Beytur [3], Leyla Beytur [4], Mehmet Koroglu [5], Feyza

Table 1. Multivariate analysis of factors potentially associated with acute HBV infection

Factors	Patients No. (%)	Controls No. (%)	Odds ratio	95% CI	p-value
Gender				0.82-2.21	0.245
Female	55 (42.6)	74 (33.8)	1.00		
Male	74 (57.4)	145 (66.2)	1.34		
Hemodialysis				4.17-16.61	< 0.001
Positive	39 (30.2)	14 (6.4)	8.32		
Negative	90 (69.8)	205 (93.6)	1.00		
HBsAg (+) Spouse				2.17-8.53	< 0.001
Positive	29 (22.5)	18 (8.2)	4.30		
Negative	100 (77.5)	201 (91.8)	1.00		
HBsAg (+) Parents				1.73-6.12	< 0.001
Positive	28 (21.7)	26 (11.9)	3.25		
Negative	101 (78.3)	193 (88.1)	1.00		

Trends of hepatitis B notification rates in Turkey, 1990 to 2012

P Ay (npay@marmara.edu.tr)[1], M A Torunoglu[2], S Com[3], Z Çipil[2], S Mollahaliloğlu[4], Y Erkoç[5], U Dilmen[6]
1. Marmara University, School of Medicine, Department of Public Health, Istanbul, Turkey
2. Turkish Public Health Institution, Ministry of Health, Ankara, Turkey
3. Provincial Health Directorate, Ministry of Health, Ankara, Turkey
4. Health Politics Board, Ministry of Health, Ankara, Turkey
5. Ministry of Health, Ankara, Turkey
6. General Directorate of Health Research, Ministry of Health, Ankara, Turkey

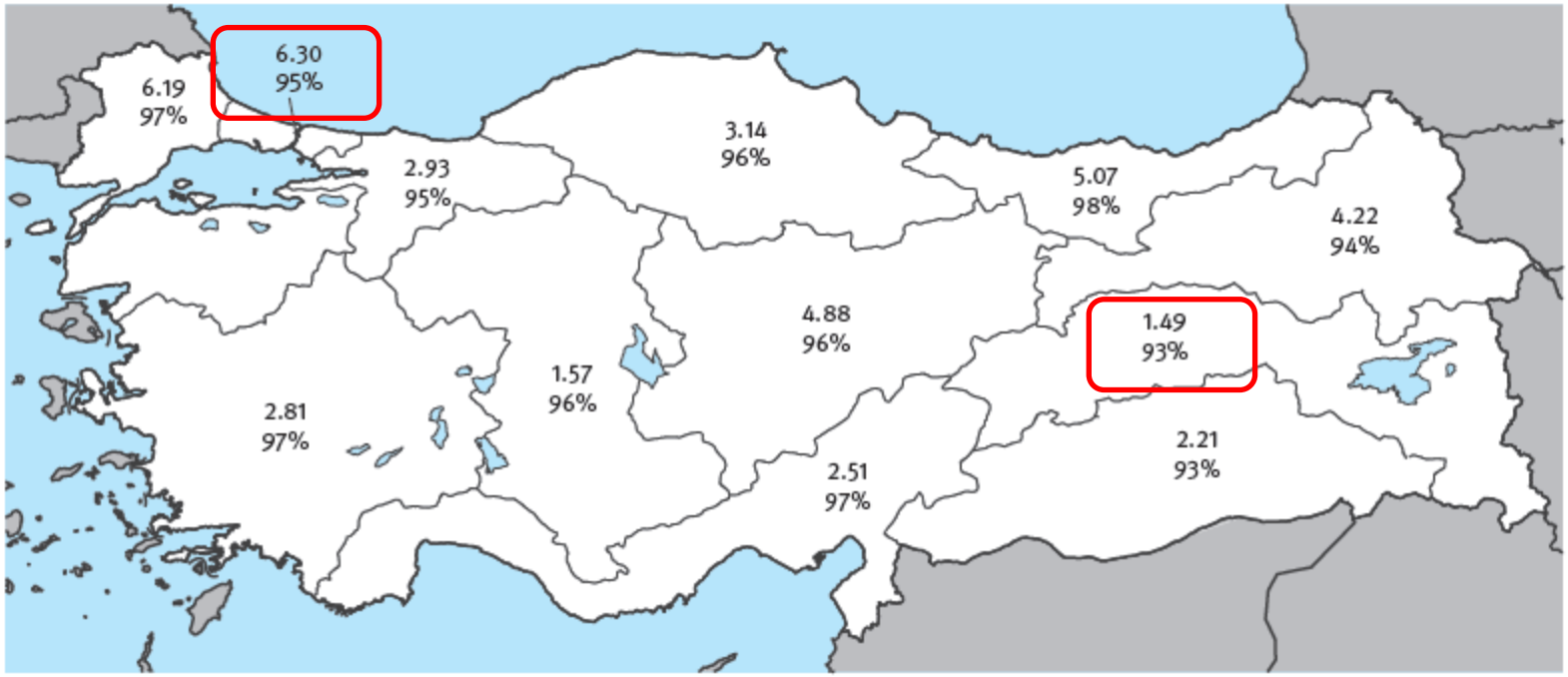
TABLE

Target age groups for catch-up vaccinations by school year, Turkey, 2005–2009

School year	Target group
2005–06	Primary school students at the eighth grade (13 years-old)
2006–07	Primary school students at the sixth, seventh and eighth grades (11, 12 and 13 years-old)
2007–08	Primary school students at the third, fourth, fifth, and sixth grades (8, 9, 10 and 11 years-old)
2008–09	High school students at the fourth grade (17 years-old)

FIGURE 4

Notification rates for acute hepatitis B cases per 100,000 and percentage of infants vaccinated with three doses of hepatitis B virus antigen, by region, Turkey, 2012



Source: Kartenwerkstatt; http://commons.wikimedia.org

Hepatit B aşılama oranı %93-98
AVHB 1.49-6.3/100.000

FIGURE 1

Notification rates for acute hepatitis B (1990–2012) and percentage of infants vaccinated with three doses of hepatitis B virus antigen (1999–2012), Turkey*

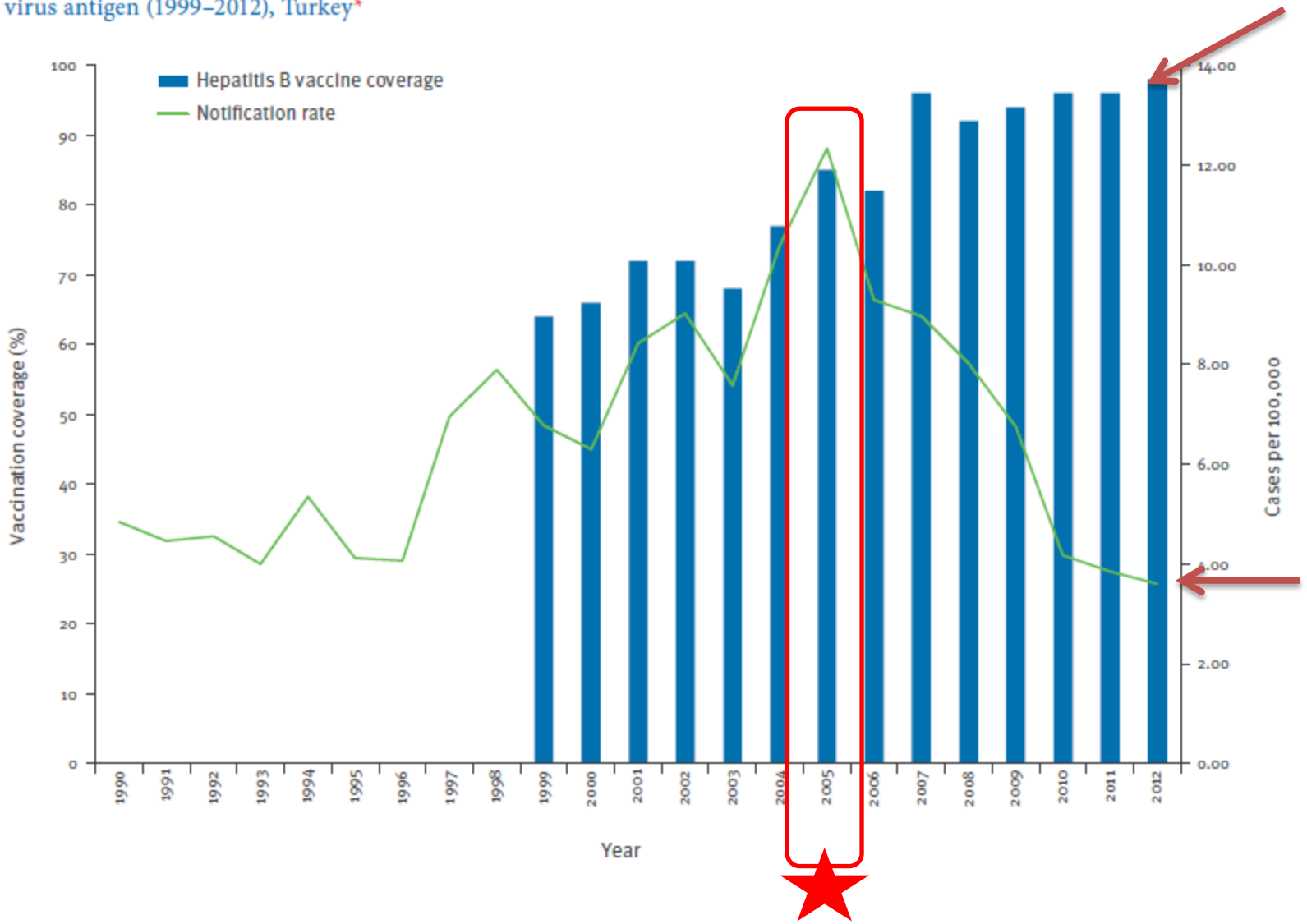


FIGURE 2

Notification rates for acute hepatitis B by age group, Turkey, 1997–2012

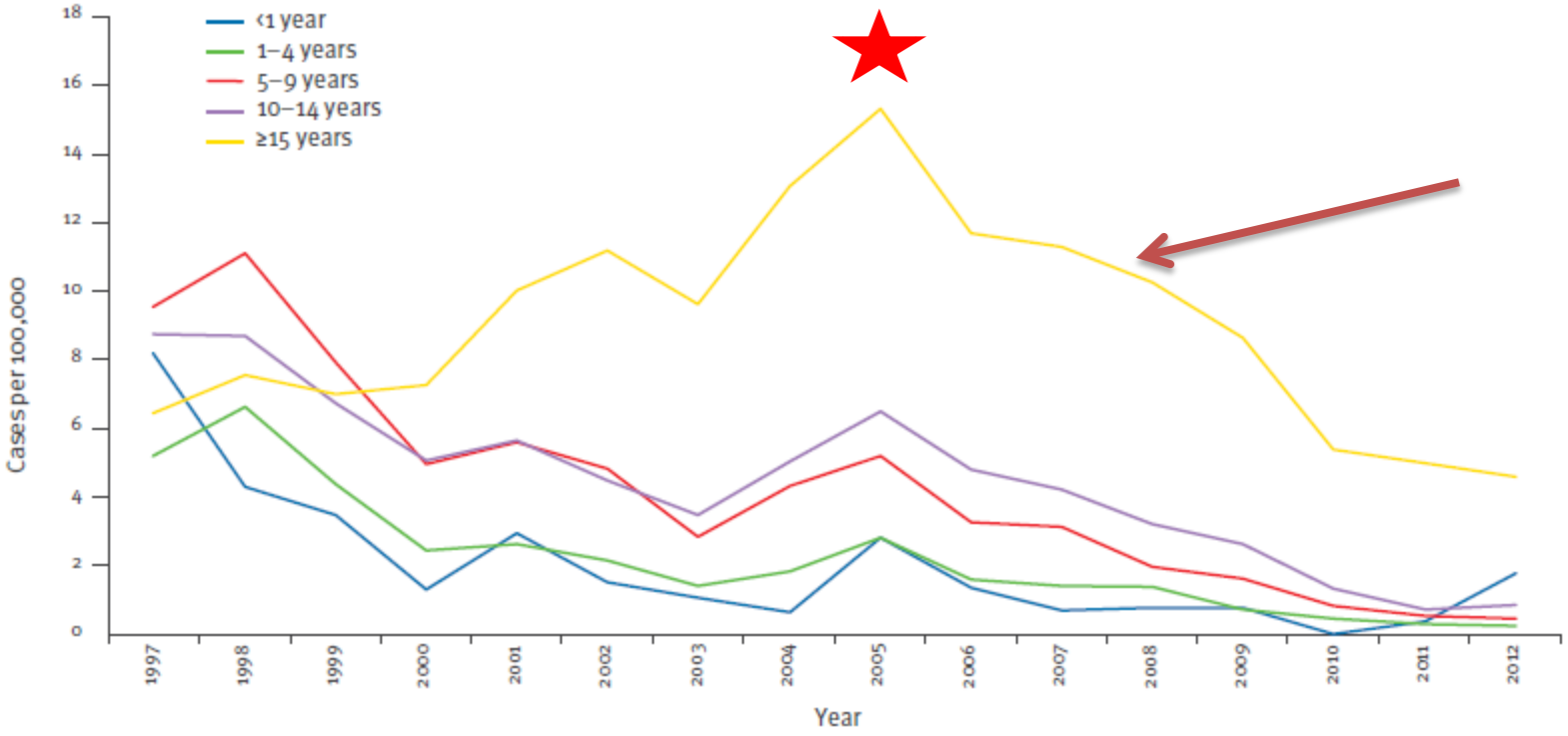
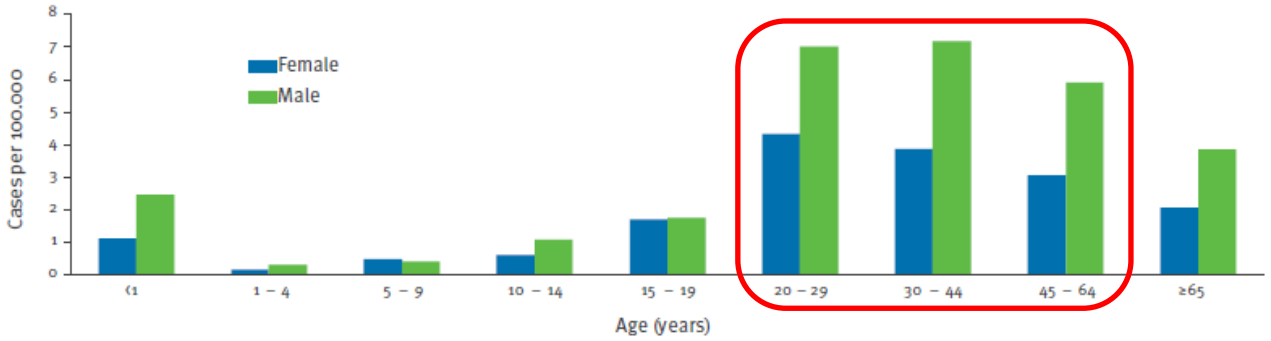


FIGURE 3

Notification rates for acute hepatitis B by sex and age group, Turkey, 2012



SAĞLIK İSTATİSTİKLERİ YILLIĞI 2010 • HEALTH STATISTICS YEARBOOK 2010 • SAĞLIK İSTATİSTİKLERİ YILLIĞI 2010 •

TÜRKİYE CUMHURİYETİ SAĞLIK BAKANLIĞI

SAĞLIK İSTATİSTİKLERİ YILLIĞI 2010

Tablo 3.1. Yıllara Göre Bazı Seçilmiş Enfeksiyon Hastalıklarının İnsidansı, (100.000 Nüfusta), Türkiye

Table 3.1. Incidence of Some Selected Infectious Diseases by Years, (per 100.000 Population), Turkey

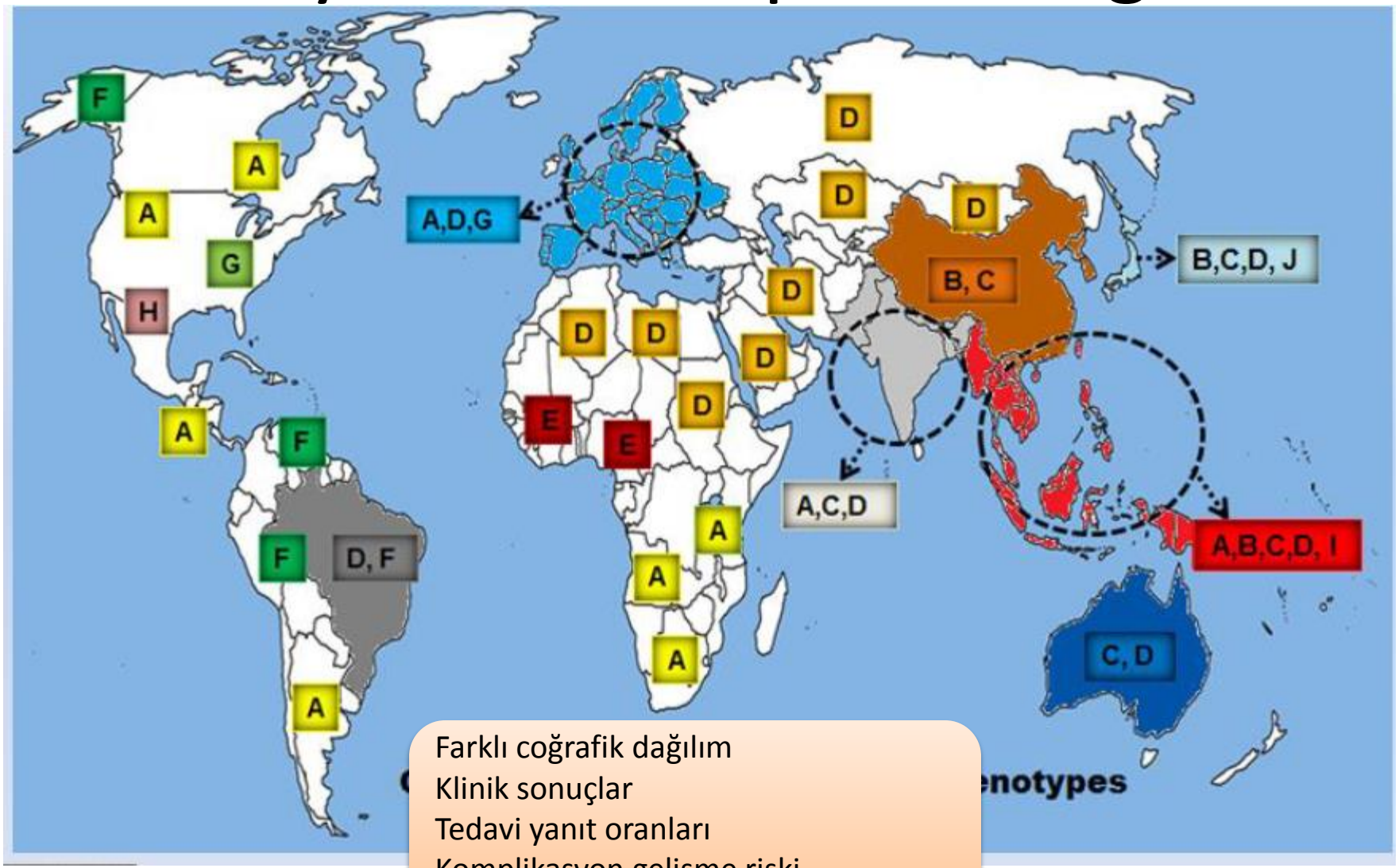
	2002	2006	2007	2008	2009	2010
Kızamık *Measles*	11,09	0,05	0	0,01	0,01	0,009
Tetanoz *Tetanus*	0,02	0,02	0,02	0,02	0,02	0,03
Neonatal Tetanoz *Neonatal Tetanus*	2,35	1,34	0,37	0,53	0	0,16
Boğmaca *Pertussis*	0,27	0,09	0,07	0,03	0,01	0,07
Hepatit B *Hepatitis B*	8,26	10,05	9,14	8,18	6,90	4,2

Tablo 3.13. Onbeş Yaş ve Üzeri Bireylerde Hastalık/Sağlık Sorunu Yaşadıklarını Belirtenlerin Cinsiyet ve Yerleşim Yerine Göre Dağılımı, (%), 2012

Hastalık /Sağlık Sorunu	Kır			Kent			Türkiye		
	Erkek	Kadın	Toplam	Erkek	Kadın	Toplam	Erkek	Kadın	Toplam
Hipertansiyon	10,9	22,1	16,7	7,8	15,4	11,6	8,7	17,6	13,2
Bel Bölgesi Kas İskelet Sistem Problemleri (Bel Ağrısı, Bel Fıtığı vb.)	11,3	20,0	15,8	8,9	13,9	11,4	9,6	15,9	12,8
Romatizmal Eklem Hastalığı (Romatoid Artrit)	7,7	16,9	12,5	4,3	10,7	7,5	5,3	12,7	9,1
Mide Ülseri (Gastrik Ülser)	7,5	11,5	9,6	5,7	8,2	6,9	6,2	9,2	7,7
Şeker Hastalığı	6,3	8,4	7,4	5,3	7,8	6,6	5,6	8,0	6,8
Kireçlenme (Osteoartrit, Artroz, Dejeneratif Eklem Hastalığı)	5,6	12,5	9,2	2,8	7,9	5,3	3,6	9,4	6,5
Boyun Bölgesi Kas İskelet Sistem Problemleri (Boyun Ağrısı, Boyun Fıtığı vb.)	3,1	9,4	6,4	3,1	8,5	5,8	3,1	8,8	6,0
Kansızlık (Demir Eksikliği Anemisi)	1,7	9,6	5,8	1,0	9,9	5,5	1,2	9,8	5,6
Sinüzit (Sinüs Yollarının İltihabı)	4,9	5,7	5,3	4,7	6,0	5,4	4,8	5,9	5,3
Migren ve Benzeri Şiddetli Baş Ağrısı	2,8	7,8	5,4	2,3	7,8	5,0	2,4	7,8	5,1
Astım (Allerjik Astım Dahil)	5,0	8,3	6,7	3,0	5,7	4,4	3,6	6,5	5,1
Koroner Kalp Hastalığı (Anjina, Göğüs Ağrısı, Spazm)	5,6	5,6	5,6	3,7	4,0	3,9	4,3	4,5	4,4
Alerji (Alerjik Rinit, Dermatit, Yiyecek vb. Alerjisi) (Alerjik Astım Hariç)	3,0	4,4	3,7	2,7	4,6	3,6	2,8	4,5	3,7
Tiroid Hastalığı	0,9	5,6	3,4	1,0	6,1	3,5	0,9	5,9	3,5
Kronik Obstrüktif Akciğer Hastalığı, Amfizem	3,7	4,4	4,0	2,3	2,6	2,5	2,7	3,2	3,0
İdrar Kaçırma, İdrarı Tutamama	2,5	5,0	3,8	1,0	2,5	1,8	1,5	3,3	2,4
Kronik Depresyon	1,4	3,5	2,5	0,9	2,9	1,9	1,0	3,1	2,1
Diğer Ruhsal Sağlık Problemleri	1,8	2,6	2,2	1,2	2,0	1,6	1,4	2,2	1,8
Kronik Kalp Yetmezliği	1,2	2,0	1,6	0,8	1,4	1,1	0,9	1,6	1,3
Enfarktüs (Kalp Krizi)	1,4	0,9	1,1	1,2	0,6	0,9	1,2	0,7	1,0
Hepatit	0,9	0,6	0,7	1,2	0,7	1,0	1,1	0,7	0,9
Kaza Sonucu Sürekli Yaralanma veya Sakatlık Durumu	1,5	0,7	1,1	1,0	0,5	0,7	1,1	0,6	0,8
Bağırsak Ülseri (Duedenal Ülser)	0,6	1,5	1,1	0,6	0,8	0,7	0,6	1,0	0,8
Kanser (Malign, Kötü Huylu, Lösemi ve Lenfoma Dahil)	0,7	0,6	0,6	0,5	0,8	0,7	0,6	0,7	0,6
Kronik Kaygı	0,4	0,9	0,7	0,2	0,9	0,6	0,3	0,9	0,6
Karaciğer Sirozu, Karaciğer Yetmezliği	0,6	0,7	0,7	0,3	0,3	0,3	0,4	0,5	0,4

Kaynak: TÜİK, Sağlık Araştırması 2012

Dünyada Genotiplerin Dağılımı



Farklı coğrafik dağılım
Klinik sonuçlar
Tedavi yanıt oranları
Komplikasyon gelişme riski
Prognoz

Journal of Medical Virology 80:1880–1884 (2008)

Change of Hepatitis B Virus Genotypes in Acute and Chronic Infections in Japan

Mariko Kobayashi,[1]* Kenji Ikeda,[2] Yasuji Arase,[2] Fumitaka Suzuki,[2] Norio Akuta,[2] Tetsuya Hosaka,[2] Hitomi Sezaki,[2] Hiromi Yatsuji,[2] Masahiro Kobayashi,[2] Yoshiyuki Suzuki,[2] Sachiyo Watahiki,[1] Rie Mineta,[1] Satomi Iwasaki,[1] Yuzo Miyakawa,[3] and Hiromitsu Kumada[2]

[1]*Research Institute for Hepatology, Toranomon Hospital, Tokyo, Japan*
[2]*Department of Hepatology, Toranomon Hospital, Tokyo, Japan*
[3]*Miyakawa Memorial Research Foundation, Tokyo, Japan*

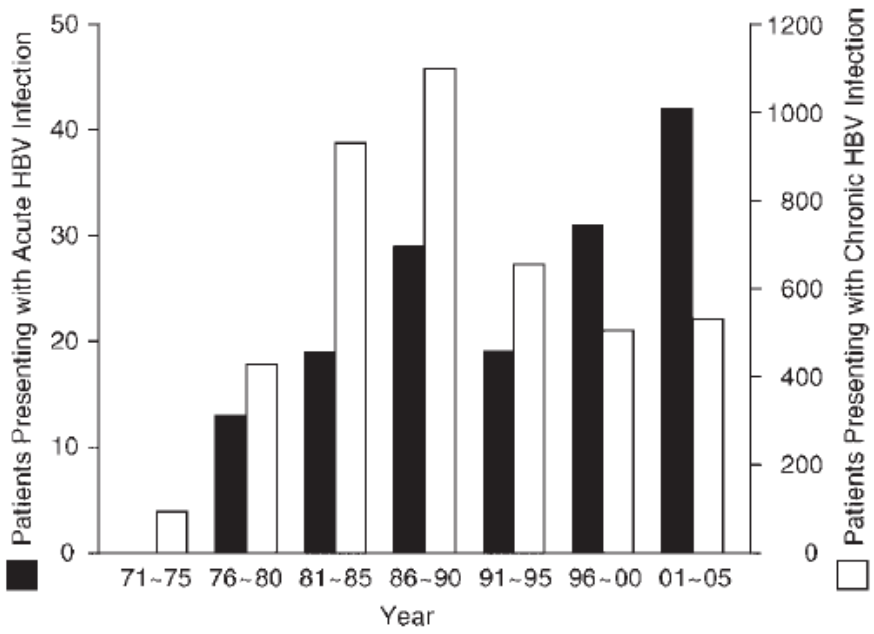
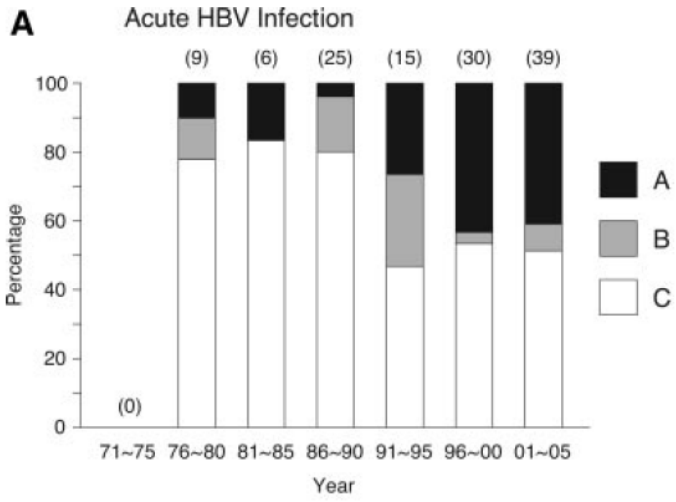


Fig. 1. Patients with acute and chronic HBV Infection who visited Toranomon Hospital during 35 years from 1971 to 2005. Numbers are indicated in different scales for patients with acute and chronic HBV infections for seven 5-year periods.



2012 yılı
D1 %86-88
D2 %9-10
D3 %11/17
D4 %1

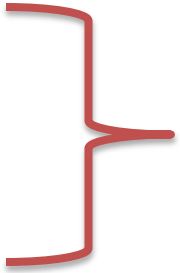
Genotip D: Türkiye'de predominant
Genotip A, G: Kocaeli
Fenotip F: İstanbul
Genotip H: Konya
Genotip E: Manisa

Sayan M et al. Ann Hepatology 2012; 11: 849-54

- Ülkemizde
  - Ulusal Genişletilmiş Aşı Programının etkileri ile akut HBV infeksiyonu azalmış gibi
    - 1990'larda 4,8/100 bin
    - 2005'de 12,3/100 bin !!!!
    - 2011'de 3,9/ 100 bin
    - 2012'de 3,6/100 bin
  - Farkındalığın arttırılmasına ihtiyaç var
  - Kan donörlerini taramaya devam
  - Gebeler taranmalı
  - Bulunduğumuz coğrafya, göçler…

Bugün..

- Dünyada
  - AHBV prevelansında azalma
    - Aşılama
    - Tek kullanımlık enjektör
    - Artan toplum bilinci
    - Donör tarama programlarının iyileştirilmesi
  - Akut HBV infeksiyonu azalıyor, kronik HBV infeksiyonu değişmiyor
  - Yaş grubu ve riskli davranış değişikliği var
    - 30-45 yaş
    - Erkek
    - IV uyuşturucu
    - Yaşam tarzı



Yeni aşı hedefi

HBs Ag a determinantında 145. kodondaki glisin yerine arginin gelmesi ile oluşan mutantlar

- İtalya ve Gana'da bir grup çocukta aşıya rağmen mutant suşla infeksiyon geliştiği bildirilmiş

Romano L et al. Hum Vac Immunother 2015; 11: 53-7.

- HBs Ag (+) anneden doğan ve immünprofilaksi yapılan 161 çocuktan 4'ünde HBV infeksiyonu gelişmiş, 3'ünde gen mutasyonu mevcut
- Klinik ve epidemiyolojik önemi belli değil

Lee le Y et al. Med Virol 2015; 87: 1344-50

ELSEVIER

Journal of Clinical Virology 35 (2006) 201–202

JOURNAL OF CLINICAL VIROLOGY

www.elsevier.com/locate/jcv

Letter to the Editor

The first identified hepatitis B virus vaccine escape mutation in Turkey

Dear Editor

The most important strategy in prevention of hepatitis B virus (HBV) infections is the vaccination of newborns. Vaccine for the immunization against HBV infections was added to National Vaccination Programme in Turkey in 1998. Since then, it is estimated that 6 million newborns have been vaccinated. An important and well known result of popula-

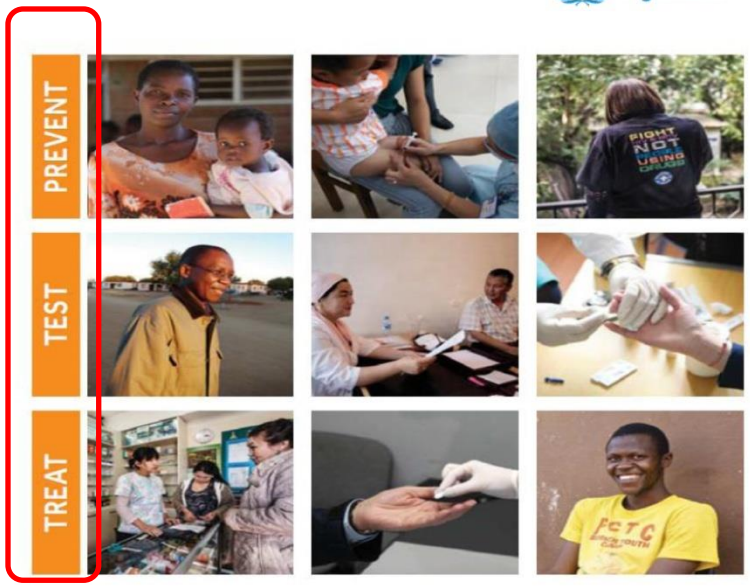
Four months after the start of lamivudine treatment, HbsAg and HbeAg disappeared and anti-HbeAg became positive in addition to anti-HBs positivity in the serum of the patient. During this period, the patient was in remission and received no medication for ALL. The serum obtained just before the start of anti-viral treatment was extracted for HBV DNA and Pre-S1, Pre-S2 and S genes were amplified by PCR and the PCR product was cloned into a TA vector (TOPO Cloning kit, Invitrogen, USA). Ten clones were sequenced by using cycle sequencing on an automatic analyzer (ABI, USA). The sequences of eight clones yielded the most common vaccine

Yarın….

- Kaçak aşı mutantları yaygınlaşacak mı?
  - Sorun olacak mı?
- DNA aşıları tedavide kullanıma girecek mi?
- Tam kür imkanı olacak mı?
- DSÖ'nün 2030 hedefi tutacak mı?

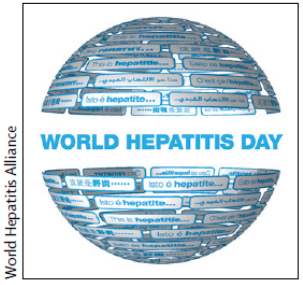
HCV GLOBAL HEPATITIS REPORT, 2017

World Health Organization



2020 'de Hepatit B ve C 'de hasta sayısının %30, ölümlerin %10 azalması
2030 'da %90 tanı, %80 tedaviye erişim

Towards elimination of viral hepatitis by 2030



World Hepatitis Alliance

Viral hepatitis—particularly hepatitis B and C—has been regarded as the silent killer for decades. However, with some vital progress now made, 2016 could be a turning point for the global prevention and control of viral hepatitis infection.

First, during the World Health Assembly held in May, WHO's first-ever Global Strategy for Viral Hepatitis was approved, which elevates hepatitis to a higher priority and sets the goal of eliminating viral hepatitis

of deaths and disability-adjusted life-years attributable to viral hepatitis in 2013 was seen in China. Although the knowledge and approaches required to eliminate hepatitis such as vaccines and antiviral treatment are already in existence, accessibility and affordability of effective treatment and care services for viral hepatitis are a major concern in most countries. In China, access to treatment is very poor, due to the high price of drugs, complex and slow national drug registration and


Teşekkürler