



Epidemiology and Burden of Disease of Hepatitis Delta

Data from Germany

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Data sources

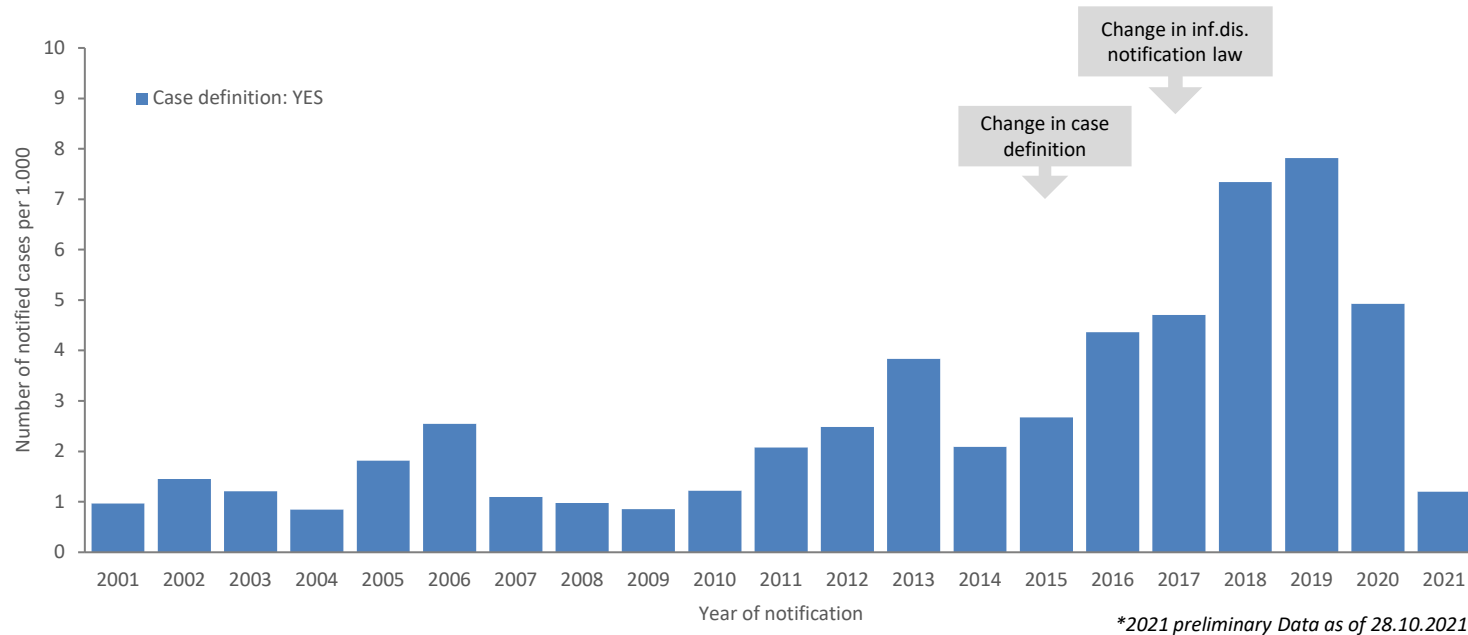
- Surveillance data

- Epidemiology of hepatitis B, D and C in Germany - the systematic review
 - *Steffen G, Sperle I, Leendertz SA, Sarma N, Beermann S, Thamm R, Bremer V, Zimmermann R, Dudareva S. The epidemiology of Hepatitis B, C and D in Germany: A scoping review. PLoS One. 2020 Mar 9;15(3):e0229166.*
 - *Sperle I, Steffen G, Leendertz SA, Sarma N, Beermann S, Thamm R, Simeonova Y, Cornberg M, Wedemeyer H, Bremer V, Zimmermann R and Dudareva S (2020) Prevalence of Hepatitis B, C, and D in Germany: Results From a Scoping Review. Front. Public Health 8:424.*
 - *Steffen G, Sperle I, Harder T, Sarma N, Beermann S, Thamm R, Bremer V, Zimmermann R, **Dudareva S.** Hepatitis B vaccination coverage in Germany: systematic review. BMC Infect Dis. 2021 Aug 14;21(1):817*

- Selected more recent publications from Germany

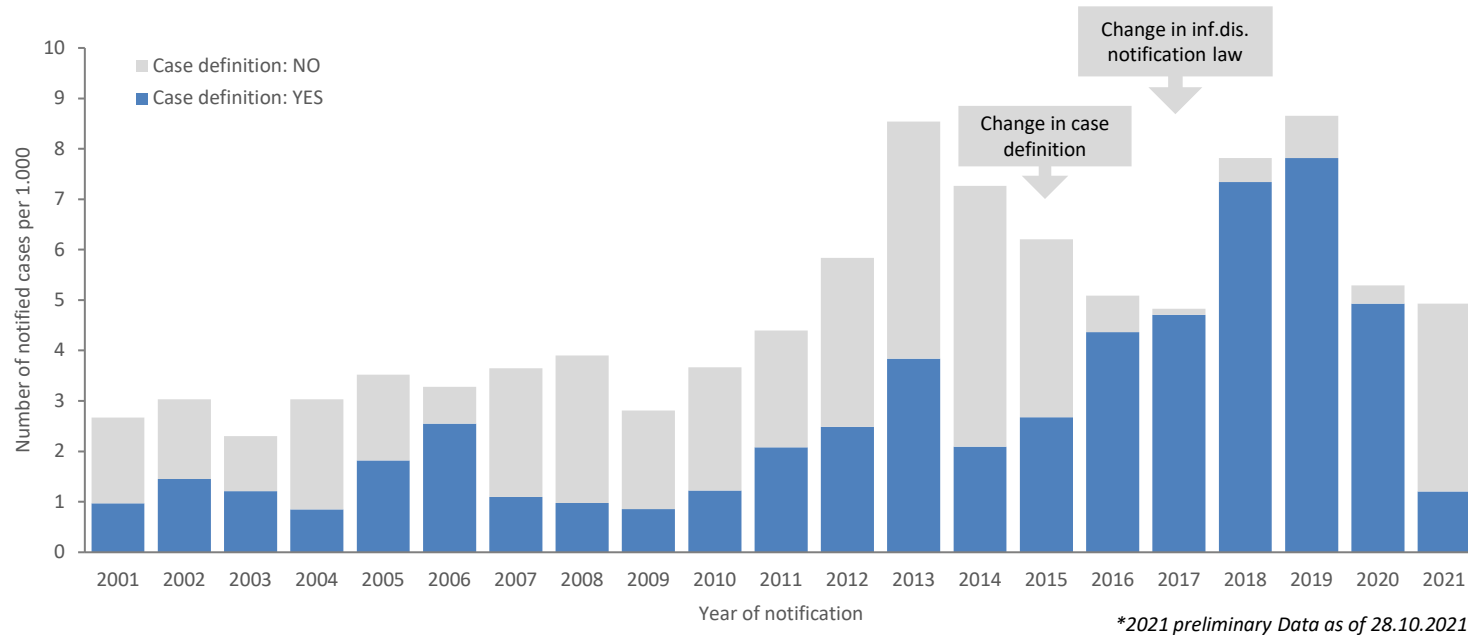


Number of notified hepatitis D cases per 1.000 population in Germany, 2001-2021*



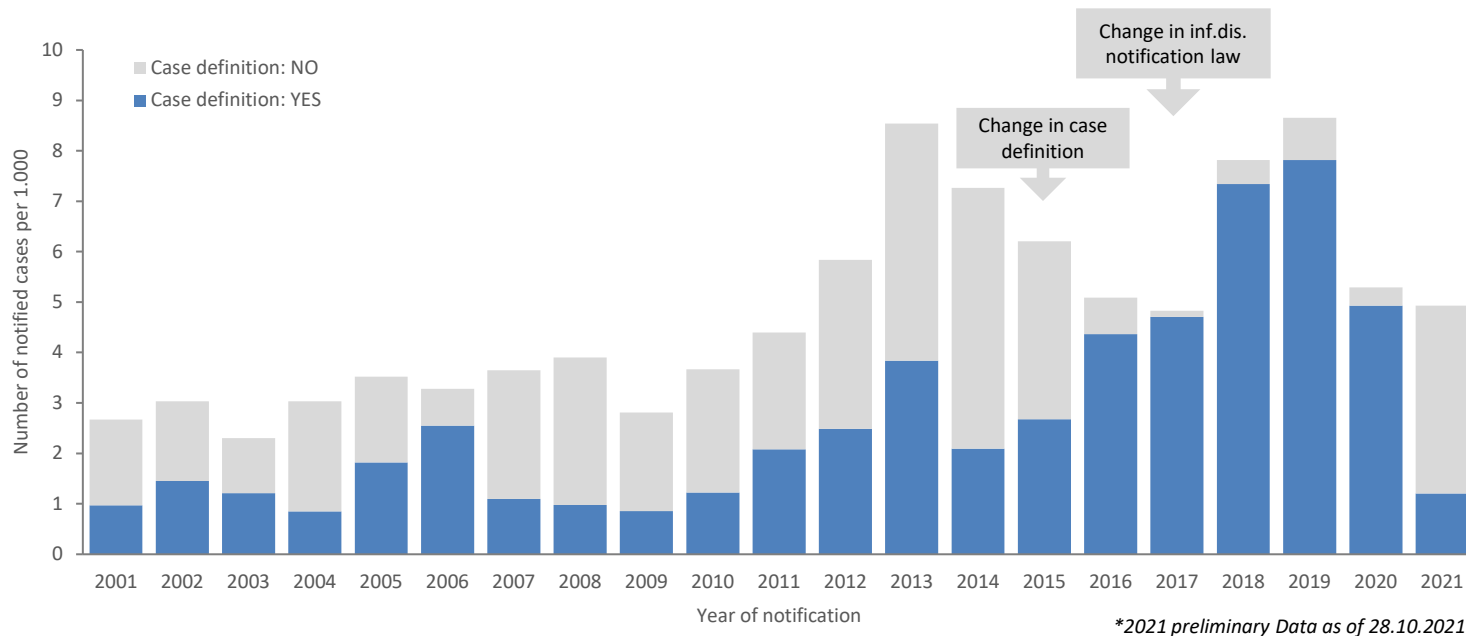


Number of notified hepatitis D cases per 1.000 population in Germany, 2001-2021*





Number of notified hepatitis D cases per 1.000 population in Germany, 2001-2021*



Mean 2018-2020
Case def: yes

Men: 8.5
Women: 5.3

Age groups:

<5: 0,0

5..19: 0,3

20..39: 12,6

40..59: 12,1

60..79: 3,0

80+: 0,6



Epidemiology of hepatitis B, D and C in Germany - the systematic review

- Gathering of existing evidence und evidence gaps
- Identification of research gaps
- Basis for future investigations/modeling of the burden of disease and monitoring of the viral hepatitis elimination goals

- Burden of disease
- Secondary diseases
- Treatment/Care
- Routes of transmission
- In consideration of vulnerable groups and gender aspects

- Systematic literature review (scoping & sytematic part)
- Overview of existing secondary data
- Publications published between 2005 and 2017



Evidence on Hepatitis D in Germany

	Burden of disease				Sequelae			Care		
	Prevalence	Incidence	Mortality	Transmiss. routes	Acute liver failure	Liver cirrhosis	HCC	Diagnosis	Treatment	Liver transpl.
General population										
Blood donors										
Pregnant women										
People living with viral hepatitis										
Clinical populations										
Household contacts of People living with viral hepatitis										
Health care workers										
People living with HIV										
People in prisons										
Men who have sex with Men										
Migrant/mobile populations										
People who inject drugs										



Prevalence of Hepatitis D in Germany

Publication	Data collection period	Place of data collection	Study type	Recruitment setting	N	Mean/media age (range)	Prevalence	Risk of bias
Erhardt 2010	Jan 1989- Dec 2008	Düsseldorf	Cohort	Hospital	N=1307	Not reported	5.1% (chronic HDV)	Low risk
Fischer et al. 2012	Dec 2004- Mar 2007	Nationwide	Cross-sectional	Centres with hepatologic focus (n=74)	N=1535	39.8 yrs. (mean)	1.4% (HDV)	Low risk
Reinheimer et al. 2012	Jan 2000 – Oct 2011	Frankfurt am Main	Cross-sectional	University Hospital Frankfurt	N=2844	Not described	7.4% (anti-HDV)	Low risk
Magistro 2014	Jan 2000 – Dec 2008	Ulm	Cross-sectional	Hepatology Unit, University Hospital	N=327	41.9 yrs. (mean) (17-81 yrs.)	0% (HDV)	Low risk

Population: VH population in care --> chronic HBV



Mortality, transmission routes and care of hepatitis D in Germany

Publication	Data collection period	Place of data collection	Study type	Recruitment setting	N	Mean/media age (range)	Prevalence	Risk of bias
Erhardt 2010	Jan 1989- Dec 2008	Düsseldorf	Cohort	Hospital	N=1307	Not reported	5.1% (chronic HDV)	Low risk

Males 61% (n=40), females 39% (n=27)
Mean age: 37 yrs

Origin (N=67):

Foreign origin 85.1%,
Eastern Europe 40.3% (n=27)
Mediterranean Area 29.9% (n=20)
Central Europe 14.9% (n=10)
Africa 10.4% (n=7)
East Asia 4.5% (n=3)

Transmission route (N=67):

Unknown: 37.4% (n=25)
Family history 19.4% (n=13)
Transfusion/medical intervention 13.4% (n=9)
Drug abuse 10.4% (n=7)
Sexual 10.4% (n=7)
Multiple risk factors: 9.0% (n=6)



Mortality, transmission routes and care of hepatitis D in Germany

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Type of Burden of Disease N

Cirrhosis	67	38.8% (n=26)
HCC	67	7.5% (n=5)
Liver transplantation	67	7.5% (n=5)
Mortality and Survival	67	13.4% (n=9). Cumulative incidence of death 23%, resulting in yearly incidence rate 3.2% // Overall survival after 12 years 85% (Kaplan-Meyer). Survival during 12 years: 72% of the 26 cirrhotic patients, 100% non-cirrhotic patients
Therapy rate HDV	67	Treatment rate: 61.2% (n=41)



Prevalence of antibodies against Hepatitis D virus (HDV) in blood donors in Northern Germany

- 167 donors with anti-HBc:
 - 9 (5.4 %) HBsAg and HBV DNA
 - 2 (1.2%) Anti-HDV
 - 4 (2.4 %) borderline result.
 - Nobody with HDV RNA

Juhl D, Chudy M, Görg S, Hennig H. Prevalence of antibodies against Hepatitis D virus (HDV) in blood donors in Northern Germany. Transfus Apher Sci. 2020 Jun;59(3):102721. doi: 10.1016/j.transci.2020.102721. Epub 2020 Jan 9. PMID: 31964608.