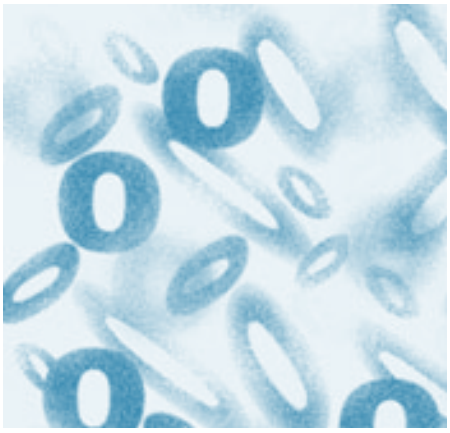


3. Blood-borne viruses

Surveillance objectives

The objectives of blood-borne virus infection surveillance are to:

- Monitor the epidemiology of blood-borne virus infections in terms of time, person and place, and risk factors for newly acquired infections;
- Communicate the patterns, risks and trends about blood-borne virus infection to the public, government and other key stakeholders;
- Inform the development of policy, service provisions and timely, appropriate and targeted prevention strategies and interventions;
- Measure the impact of interventions;
- Provide appropriate information to cases, through their treating doctors, to reduce the risk of further transmission;
- Identify and investigate clusters of infection and cases potentially associated with novel and nosocomial transmission modes to reduce risk of further transmission.

Hepatitis B – newly acquired

Summary of notifications

There were 87 cases of newly acquired hepatitis B notified in 2005, a reduction of 24 per cent on the 115 cases notified in 2004. The number of newly acquired hepatitis B cases has reduced by almost half since 2001 (table 2). Newly acquired cases as a proportion of total cases have also decreased despite a nine per cent increase in total cases in 2005 compared to 2004.

Of the newly acquired cases, 56 (64 per cent) were in males and 31 (36 per cent) were in females. Cases ranged in age from 14 to 65 years with a median age of 34 years for male cases and 28 years for female cases. The highest numbers of notified cases were in the 25–29 years and 20–24 years age groups for males and females respectively; combined sex notification rates were also highest in these age groups (figure 2).

More than 70 per cent of the newly acquired hepatitis B cases were residents of metropolitan regions; the largest number of cases was from the North and West Metropolitan region. However, the notification rate was highest for the Barwon South-Western region (figure 3).

Table 2: Notified cases of hepatitis B, Victoria, 2001–2005

Year	Total cases	Newly acquired cases (per cent)
2001	1,964	196 (10)
2002	1,938	194 (10)
2003	1,765	159 (9)
2004	1,617	115 (7)
2005	1,757	87 (5)

Figure 2: Notified cases and notification rates of newly acquired hepatitis B by age group and sex, Victoria, 2005

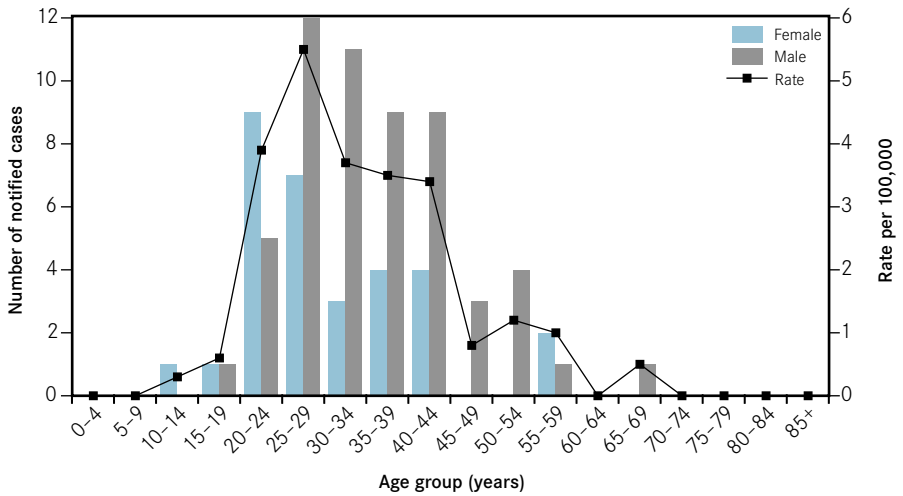


Figure 3: Notified cases and notification rates of newly acquired hepatitis B by region, Victoria, 2005

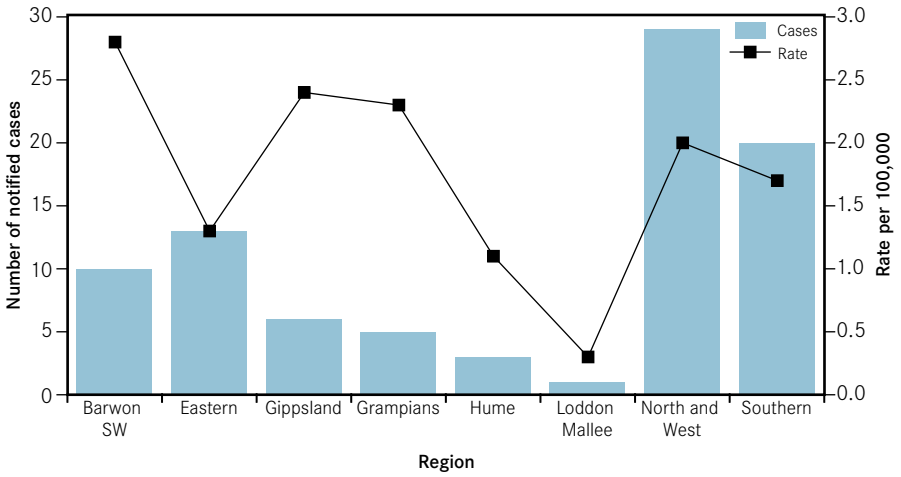


Table 3: Notified cases of newly acquired hepatitis B by reported reason for testing, Victoria, 2005

Reason for testing	Cases (per cent)
Symptoms of acute hepatitis	52 (60)
Known risk history	9 (10)
Elevated LFTs	6 (7)
STI screen suggested by patient	5 (6)
Blood donation screen	2 (2)
Incidental finding	2 (2)
Contact tracing	1 (1)
Drug and alcohol screening	1 (1)
History of hepatitis	1 (1)
Other	1 (1)
Not reported	7 (8)
Total	**87 (100)**

Forty-one cases (41 per cent) notified were Australian born, of which one person was reported as being of Aboriginal and/or Torres Strait Islander origin. Co-infection with hepatitis C was reported for 20 cases (23 per cent). Fourteen cases (16 per cent) were hospitalised and two deaths were recorded although the cause of each was unknown.

Nearly 60 per cent of the cases were tested for hepatitis B because they presented with symptoms of acute hepatitis (table 3).

Risk factors

Injecting drug use (IDU) and having a sexual contact positive for hepatitis B were the main risk factors identified, for 40 cases (46 per cent) and 52 cases (60 per cent) respectively (table 4).

Outbreaks and other investigations

No outbreaks were identified.

Comment

The number of annually notified cases of acute hepatitis B continues to decline as a higher proportion of the population becomes vaccinated as a result of the National Immunisation Program, which provides free vaccine for infants and catch-up vaccination for Year 7 students. However, efforts to vaccinate injecting drug users – a group that is difficult to target for health interventions – need to be continued to reduce the number of hepatitis B cases even further.

Table 4: Notified cases of newly acquired hepatitis B cases by reported risk factors, Victoria, 2001–2005

	Cases (per cent)				
Risk factor*	**2001**	**2002**	**2003**	**2004**	**2005**
Injecting drug use	106 (54)	88 (46)	78 (49)	60 (52)	40 (46)
Hepatitis B positive sexual contact	82 (42)	77 (40)	69 (43)	53 (46)	52 (60)
Other risks	10 (5)	24 (12)	10 (6)	2 (2)	10 (11)

* Multiple risk factors reported; excludes cases with unknown or no reported risk factors.

Hepatitis B – unspecified

Summary of notifications

There were 1,671 cases of unspecified hepatitis B notified in 2005 in 939 males (56 per cent) and 698 females (42 per cent); sex was not reported for 34 cases. The number of cases and notification rates were highest for those aged 25–29 years (figure 4).

Figure 4: Notified cases and notification rates of unspecified hepatitis B by age group and sex, Victoria, 2005

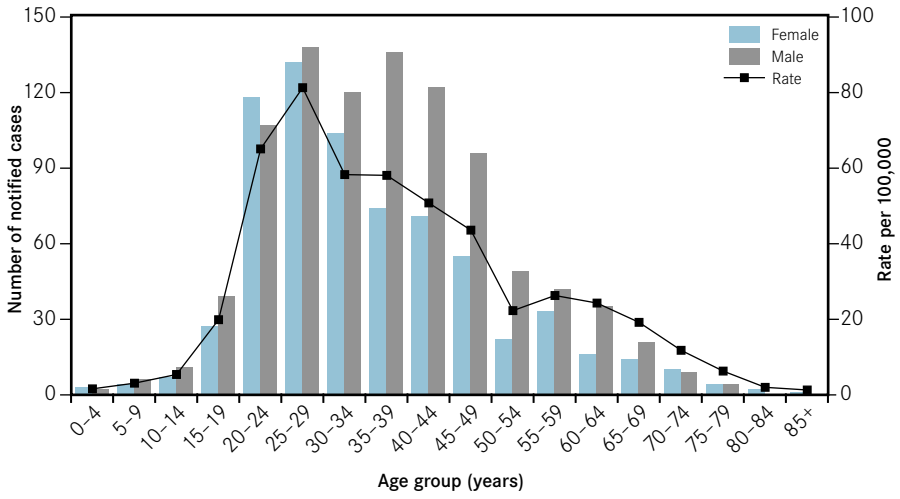
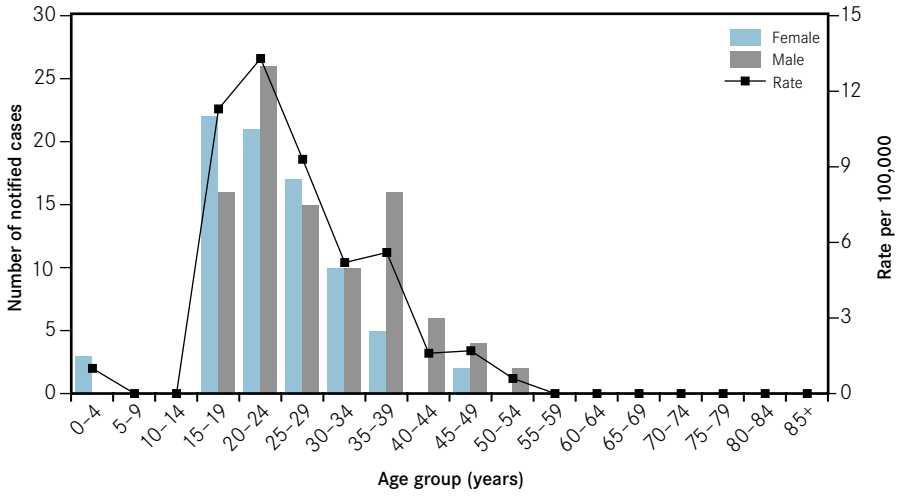


Figure 5: Notified cases and notification rates of newly acquired hepatitis C by age group and sex, Victoria, 2005



Hepatitis C – newly acquired

Summary of notifications

The department received notifications for 175 cases of newly acquired hepatitis C in 2005. These comprised six per cent of all hepatitis C infections notified for the year and was a 51 per cent increase on the 115 cases notified in 2004.

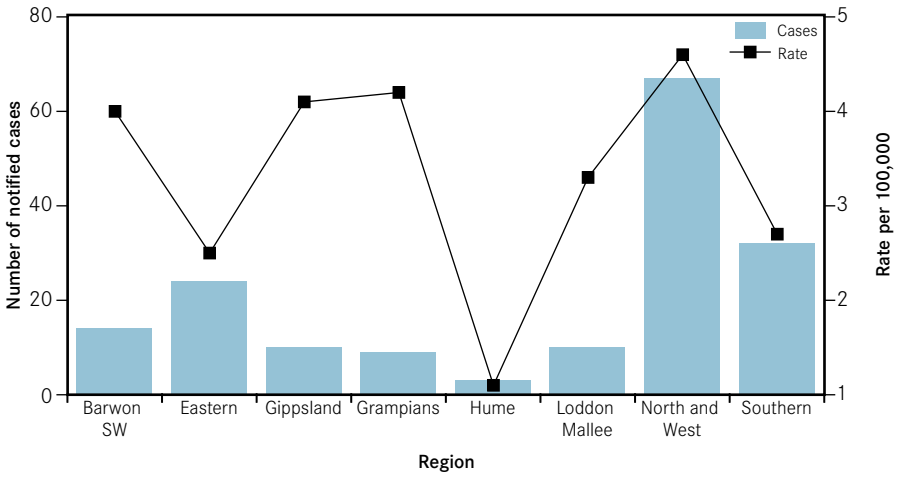
Of the 175 newly acquired cases, 95 (54 per cent) were in males, with a median age of 26 years (range: 16–52 years); 80 (46 per cent) were in females, with a median age of 24 years (range: 1–47 years). The highest numbers of cases were in the 15–19 years and the 20–24 years age groups in females and males respectively. The combined sex notification rate was highest in the 20–24 year age group (figure 5).

Cases were notified sporadically throughout the year and were received from all departmental regions. The number of cases and the notification rate were highest for the North and West Metropolitan region (figure 6).

Indigenous status was reported for 148 cases (85 per cent), of which five were reported as being of Aboriginal and/or Torres Strait Islander origin. Nine cases were co-infected with hepatitis B; both infections were newly acquired for six cases.

More than two thirds of the newly acquired cases (n=120) were determined by demonstrated seroconversion to hepatitis C virus within the preceding 24 months. The remaining 54 cases were determined based on clinical evidence.

Figure 6: Notified cases and notification rates of newly acquired hepatitis C by region, Victoria, 2005



Having elevated liver function tests was reported as the main reason for testing for 57 cases (33 per cent). Other commonly reported reasons reported included presenting with symptomatic hepatitis, history of alcohol consumption and injecting drug use and patient request (table 5).

Risk factors

All cases of newly acquired HCV infections were followed up with the notifying doctor to collect risk factor information. Injecting drug use continued to be the highest risk factor, reported for 144 cases (82 per cent), although only 59 per cent of these reported injecting drug use in the last two years. Risk factors reported for the other 31 cases are shown in table 6.

Outbreak and other investigations

No outbreaks were identified.

Comment

Much of the increase in notifications of newly acquired hepatitis C is likely to be attributable to a change in surveillance practice in 2005 in which the diagnosing laboratory of all notified cases were followed up for previous hepatitis C testing results. Those for which there was a negative test in the previous 24 months were classified as newly acquired. Despite the increase in case ascertainment, the number of newly acquired cases is still likely to be significantly underestimated. Most hepatitis C infections are asymptomatic and diagnosis of newly acquired infection is difficult in the absence of definitive laboratory evidence.

Table 5: Notified cases of newly acquired hepatitis C by reported reason for testing, Victoria, 2005

Reason for testing*	Cases (per cent)
Elevated LFTs	57 (33)
Drug and alcohol	44 (25)
Symptomatic hepatitis	44 (25)
Patient request	35 (20)
Medical problem	15 (9)
Positive sexual partner	6 (3)
Household contact	5 (3)
Antenatal screening	4 (2)
Imprisonment	4 (2)
Postnatal screening	2 (1)
Hepatitis C monitoring	1 (1)
STI screening	1 (1)
Other	29 (17)

* Multiple reasons reported

Table 6: Notified cases of newly acquired hepatitis C by risk factors, Victoria, 2005

Reason for testing*	Cases (per cent)
Injecting drug use	144 (82)
Positive sexual partner	6 (3)
Imprisonment	5 (3)
Household contact	3 (2)
Tattoo	3 (2)
Piercing	2 (1)
Perinatal transmission	3 (2)
Healthcare worker	1 (1)
Other risk	8 (5)
Unknown	13 (7)

* Only cases for which injecting drug use is not reported were followed up for other risk factors; multiple risk factors may be reported for these cases

Hepatitis C – unspecified

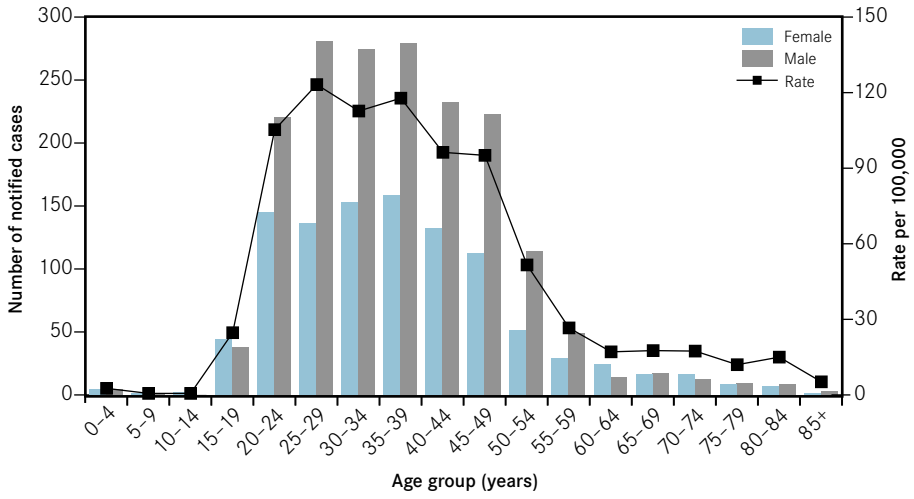
Summary of notifications

The department received notifications for 2,849 cases of unspecified hepatitis C in 2005. Of these, 1,780 were male and 1,040 were female; sex was not reported for 29 cases. The modal age group in females was those aged 35–39 years and in males was 25–29 years (figure 7). The combined sex notification rate was also highest in the 25–29 years age group.

Risk factors

Risk factor data for cases of unspecified hepatitis C are not routinely collected.

Figure 7: Notified cases and notification rates of unspecified hepatitis C by age group and sex, Victoria, 2005



Hepatitis D

Summary of notifications

There were two cases of hepatitis D notified in 2005, compared to four cases in 2004. These were in a 16-year-old male and a 31-year-old female.

Risk factors

Risk factor data were not routinely collected.

Outbreaks and other investigations

No outbreaks were identified in 2005.

Comment

Hepatitis D can be misdiagnosed as an exacerbation of chronic hepatitis B infection. Hepatitis delta virus (HDV) and hepatitis B virus (HBV) may co-infect, or HDV infection may occur in persons with chronic hepatitis B. Prevention of HBV infection with vaccination therefore prevents infection with HDV. Chronic carriers of hepatitis B can avoid exposure to HDV by adopting safe sexual and injecting behaviours.