State of Alaska Epidemiology **Bulletin**

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Chronic Hepatitis B in Alaska, 2010–2020

Background

Hepatitis B (HepB) is a vaccine-preventable liver infection caused by the hepatitis B virus, which is transmitted primarily through sexual contact, needle/syringe sharing, and during pregnancy or delivery. The risk of chronic infection is inversely proportional to age: 80%–90% of persons infected during infancy, 30% infected before age 6 years, and <1%–12% infected as an older child or adult will develop chronic HepB.[1] Persons with chronic HepB have a 70%–85% higher risk of premature death than the general population.[2] Chronic HepB infection is particularly common in the United States among immigrants from Asia and Africa.[2]

All adults should be tested for HepB at least once during their lifetime and get vaccinated if seronegative. While not curative, antiviral therapy, virological and serological test monitoring, and liver cancer screening can reduce associated morbidity and mortality among HepB patients.[3] The national prevalence of chronic HepB is approximately 1.6 million persons; the national incidence of newly reported cases in 2020 was 5 cases per 100,000 population.[4] This *Bulletin* describes the epidemiology of chronic HepB in Alaska and provides recommendations.

Methods

The Alaska Section of Epidemiology (SOE) classified reports of chronic HepB from 2010–2020 as probable and confirmed cases based on national surveillance criteria. Incidence rates were calculated using Alaska Department of Labor and Workforce Development population estimates.

Results

During 2010–2020, 1,151 cases of newly identified chronic HepB cases were reported to SOE, yielding an annual average rate of 14.2 cases per 100,000 population. Among the 1,151 cases, 579 (50.3%) were in females, 336 (58%) of whom were of reproductive age (15–44 years). The age range was 3–94 (median 44) years (Table 1). Case counts by region were highest in Anchorage (686, 59.6%), followed by Interior (109, 9.5%), Mat-Su (108, 9.4%), Gulf Coast (84, 7.3%), Southeast (73, 6.3%), Southwest (53, 4.6%), and Northern (36, 3.1%). Race data were available for 838 (72.8%) persons (Table 2). Twelve deaths attributed to chronic HepB infection (immediate or underlying cause) were reported on death certificates.

Table 1. Hepatitis B Incidence, by Age Group — Alaska, 2010–2020

Age Group (Years)	# of Cases	Rate per 100,000
<15	17	1.0
15–19	20	3.9
20–29	179	16.2
30–39	259	20.9
40–49	238	25.1
50–59	219	21.7
≥60	219	14.1

Table 2. Hepatitis B Incidence, by Race — Alaska, 2010–2020

Race	# of Cases	Rate per 100,000
Asian	371	69.5
Pacific Islander	68	53.0
Black	89	30.5
Alaska Native/American Indian	114	9.0
White	196	3.8
Hispanic	15	2.5

Discussion

During 2010–2020, the incidence of newly reported chronic HepB cases in Alaska was 2.8 times higher than the national rate. Incidence was highest among middle-aged adults and lowest among younger children. Considerable race-specific disparities were identified. Nearly 60% of cases occurred among females of reproductive age, indicating potential risk for perinatal transmission during pregnancy.

Screening tests can detect chronic HepB before the development of severe liver disease and identify persons who may benefit from HepB vaccination. Persons who receive a diagnosis of chronic HepB can benefit from a linkage to care referral for counseling and medical management following guidance from the American Association for the Study of Liver Diseases. Medical management of persons with chronic HepB infection can also prevent ongoing transmission by identifying close contacts at risk for screening and prophylaxis.

Recommendations

1. Screen all adults aged ≥18 years at least once via a triple-panel blood test, which includes hepatitis B surface antigen (HBsAg), hepatitis B surface antibody (HBsAb), and total hepatitis B core antibody (Total HBcAb).[2]
2. Test persons at increased risk, regardless of age, including infants born to HBsAg-positive pregnant women, persons born in intermediate-prevalence countries, US-born persons not vaccinated as infants whose parents were born in high-prevalence countries, current/past injection drug users, people currently or previously incarcerated, persons with human immunodeficiency virus (HIV) or hepatitis C infection, men who have sex with men, persons with a history of sexually transmitted infections or multiple sex partners, needle-sharing or sexual contacts of persons with HepB, or household contacts of persons with HepB.[2]
3. Screen for HBsAg during each pregnancy. Expectant mothers who are HBsAg-positive should be tested for HBV deoxyribonucleic acid (DNA) at 12–28 weeks (preferably during their second trimester) to guide the use of antiviral therapy when HBV DNA is >200,000 IU/mL.
4. Give HepB vaccine and hepatitis B immune globulin immunoprophylaxis to infants born to HBV-infected mothers within 12 hours of birth, followed by completion of the vaccine series and postvaccination serologic testing.[2]
5. HepB vaccine *should* be given to all infants within 24 hours of birth, all children or adolescents aged <19 years who have not yet been vaccinated, all adults aged 19 through 59 years, adults aged ≥60 years with risk factors, and health-care personnel (HCP) who have a reasonable expectation of being exposed to blood and body fluids on the job.[3,5]
6. HepB vaccine *may* be given to adults aged ≥60 years without known risk factors.[3,5]
7. HCP should have post-vaccination serological testing for HBsAb antibody concentration (mIU/mL), generally 1-2 months after the last dose of vaccine.[6]
8. Offer prompt medical attention for those exposed to blood or body fluids potentially containing HBV.[3]
9. Suspected or diagnosed cases of HepB are reportable to SOE by health care providers and laboratories (7 AAC 27.005 and .007) within 2 working days.

References

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