衞生防護中心
Centre for Health Protection

**Scientific Committee on Enteric Infections and Foodborne Diseases**

# Epidemiology, Prevention and Control of Hepatitis A

## Purpose

This paper reviews the latest global and local situation of hepatitis A and examines the prevention and control measures of hepatitis A in Hong Kong.

## Background

2. Hepatitis A is inflammation of the liver caused by the hepatitis A virus (HAV). It is a single-stranded ribonucleic acid (RNA) virus with only one serotype (1). It is one of leading causes of acute hepatitis worldwide (2). According to Global Burden of Disease (GBD), there was an estimated of 160 million cases of hepatitis A globally in 2021 (3, 4).

Clinical Features

3. HAV infection spans a broad clinical spectrum, ranging from asymptomatic infection, to mild infection presenting with jaundice, to rare but life-threatening fulminant hepatitis that may lead to acute liver failure and death. The clinical presentation is correlated with age, with most young children having asymptomatic infection and adults usually experiencing more signs and symptoms. The clinical manifestations of HAV infection are indistinguishable to other hepatitis viruses, which includes anorexia, malaise, fatigue, nausea, vomiting, diarrhoea, fever, upper abdominal discomfort, jaundice and tea-coloured urine. The illness normally lasts for a few weeks, but may rarely take months to resolve. The

衞生防護中心乃衞生署
轄下執行疾病預防
及控制的專業架構
The Centre for Health Protection is a professional arm of the Department of Health for disease prevention and control

severity of disease and outcomes also worsen with age, with older adults and the elderly having a higher risk of hospitalisation and acute liver failure (5). Severe or fulminant hepatitis is rare in hepatitis A patients, but immunocompromised patients or patients with chronic liver disease are at higher risk (6). Pregnant women with acute hepatitis A are at an increased risk of preterm labour and other gestational complications (6).

4. Almost all hepatitis A cases resolve completely. HAV, unlike hepatitis B virus and hepatitis C virus, is not known to cause chronic infection (7). It is generally believed that the immunity to HAV is lifelong after recovery (6).

Incubation Period and Mode of Transmission

5. The incubation period of the disease is usually 14 to 28 days (up to 50 days) (6). It is transmitted primarily through the faecal-oral route, such as ingestion of contaminated water or food, or through close physical contact with an infectious person. Infected persons are most likely to transmit HAV two weeks before the onset of illness when HAV concentration in stool is peaked (8). The risk begins to decrease since onset of jaundice, and becomes minimal in 7 to 10 days (8). Waterborne outbreaks, though infrequent, are usually associated with sewage-contaminated or inadequately treated water (9). Unlike hepatitis B and hepatitis C, HAV is very rarely transmitted via blood products or medical procedures (1).

6. HAV can persist in the environment for months (10). The virus is relatively stable at low pH levels and moderate temperatures, but can be inactivated by heat (81°C or higher for 10 minutes) (1). Bivalve shellfish tend to concentrate pathogens present in seawater as they are filter feeders that filter seawater for food particles. HAV has been isolated from oysters, mussels, clams and bivalve mollusks (11-20). According to Joint FAO/WHO Expert Meeting on Microbiological Risk Assessment (JEMRA), the foods most frequently implicated with hepatitis A cases include bivalve molluscan shellfish, fresh and frozen berries, and prepared foods with extensive human handling (21). Uncooked ready-to-eat foods such as raw vegetables also carry a higher risk of contamination with HAV in hepatitis A endemic countries and in areas where sanitary conditions are poor (22, 23).

Diagnosis and Treatment

7. Diagnosis of acute HAV infection is confirmed by the detection of anti-HAV immunoglobulin M (IgM) in the serum of a person with clinically compatible illness. Anti-HAV IgM generally becomes detectable within 5-10 days of symptoms onset and can persist for up to 6 months (8). As anti-HAV IgG may persist in serum for life following an infection, the presence of IgG antibodies in serum cannot differentiate acute infection from past infection (24). During community outbreaks, nucleotide sequence analysis of HAV from stool samples can differentiate the genotypes and determine clustering of cases, which facilitate tracing the source of infection (10).

8. There is no specific treatment for acute hepatitis A. Treatment is mainly symptomatic, together with avoidance of hepatotoxic drugs and no consumption of alcohol (6). Severe hepatitis is uncommon with hepatitis A, but if life-threatening liver failure develops, liver transplant may be required (6).

Hepatitis A Vaccine

9. Hepatitis A vaccine is safe and highly effective in preventing HAV infection. There are several inactivated and live attenuated vaccines licensed and commercially available for active immunisation against hepatitis A. Two doses are required, to be given 6 to 18 months apart. Currently, there are three monovalent hepatitis A vaccines registered in Hong Kong. None of the vaccines is licensed for use in children younger than one year. A combined vaccine for hepatitis A and hepatitis B is also available (25).

**Epidemiology**

Global Situation

10. Geographical regions can be categorised as having high, intermediate or low levels of HAV endemicity (9). The World Health Organization (WHO) used two main sources of information to estimate the burden of disease associated with hepatitis A infection: (i) serological surveys estimating the *prevalence* of past infections, and (ii) reporting systems measuring the *incidence* of morbidity or mortality from acute hepatitis A (6). The WHO classified levels of endemicity on the basis of seroprevalence as

shown in Table 1. Seroprevalence by age is also a measurement of the susceptibility to HAV infection of each age group.

| HAV endemicity | Seroprevalence | Examples of regions |
|---|---|---|
| High | ≥90% by age 10 years | ● Sub-Saharan Africa<br>● Parts of South Asia |
| Intermediate | ≥50% by age 15 years, with <90% by age 10 years | ● Most middle-income regions of Asia<br>● Latin America<br>● Eastern Europe<br>● Middle East |
| Low | ≥50% by age 30 years, with <50% by age 15 | |
| Very Low | <50% by age 30 years | ● Western Europe<br>● Australia<br>● New Zealand<br>● Canada<br>● The United States<br>● Japan<br>● Korea<br>● Singapore |

Table 1. The WHO classification of levels of endemicity, with respective seroprevalences and geographical distributions.

11. The incidence of acute hepatitis A infection has demonstrated an overall declining trend globally in the past decade (4). The decrease was most pronounced in low to middle socio-demographic index[1] regions. The change is brought about by improved socioeconomic and sanitary conditions, and universal vaccination programmes in some high endemicity countries (1).

*Regions with high to intermediate HAV endemicity*

12. In developing countries with poor sanitary conditions and hygienic practices, most children are exposed to HAV before the age of 5 years, when most infections are asymptomatic (26). As a result, over 90% have detectable anti-HAV IgG by the age of 10. As life-long immunity against HAV is introduced early in life, adolescents and adults in these areas are generally not susceptible to the disease, hence symptomatic cases are few and outbreaks are rare (5).

[1] The Socio-demographic Index (SDI) is developed by GBD researchers, to indicate the development status of a location, that correlates strongly with health outcomes. It is a composite indicator of 0 to 1, with SDI of 0 representing a theoretical minimal level of development.

13. According to the GBD data in 2019, over half of global acute hepatitis A cases occurred in low- and lower-middle-income countries (27). In particular, the South-East Asia Region of the WHO had the greatest number of estimated HAV infections, while the African Region had the highest rate (6). In most sub-Saharan African countries - such as Tanzania, Sudan, and Zimbabwe - the age at midpoint of population immunity (AMPI)[2] is less than 5 years (28).

14. For most low-income countries, however, there is a middle-class subpopulation, who had not been infected with HAV as children, therefore are at higher risk of symptomatic HAV infection later in life (26).

15. India historically was a country with high HAV endemicity, with AMPI less than 5 years before 2010 (29, 30). In a recent study of HAV seroprevalence in India (31), the seroprevalence across eight Indian states were found to vary widely: one state had high endemicity, five states with high-intermediate, one intermediate and one low-intermediate. The overall seroprevalence for children under 15 years was 51.9%, indicating that the country is in the transition from high to intermediate endemicity. This is also reflected by the increasing burden of hepatitis A in adolescents and adults in India, particularly among the urban population with higher socioeconomic status (32).

*Regions with intermediate to low HAV endemicity*

16. The populations in middle-income regions often show a mix of intermediate and low seroprevalence due to varying sanitary conditions across the regions, with some children escaping infection in early childhood (6). This leads to increased susceptibility to infection in older age groups, therefore increasing the disease rate, at the same time large community outbreaks can also occur.

17. Significant increases in AMPI were observed in middle-income regions such as East Asia, Eastern and Central Europe, and parts of Middle East between 1990 and 2005 (28). The improved socioeconomic status and sanitation had changed the HAV endemicity in these regions from intermediate

[2] Age at midpoint of population immunity (AMPI) is the youngest age at which half of the birth cohort has serologic evidence of prior exposure to HAV.

to low, but paradoxically the incidence of symptomatic HAV infection increased (6, 33). Nonetheless, it is expected that these countries would eventually shift to low endemicity, as demonstrated by many upper-middle-income countries (34).

18. With the improvement in socioeconomic status and the introduction of hepatitis A vaccine into the national routine childhood immunisation programme in 2008, the number of hepatitis A cases in the Chinese Mainland has declined significantly (35). According to the National Notifiable Disease Reporting System from 2004 to 2016, the hepatitis A incidence decreased from 6.94 per 100 000 to 1.55 per 100 000 (36). Despite the decreasing trend in hepatitis A incidence, outbreaks continue to be reported in the Chinese Mainland (37). An outbreak of hepatitis A was reported in Liaoning Province in 2020, with 138.2% increase in hepatitis A cases in February 2020 when compared to the same period in 2019 (37). Adults aged 30-54 years were most affected, with consumption of raw or undercooked seafood identified as the main risk factor of the outbreak.

*Regions with low to very low HAV endemicity*

19. In high-income regions with good sanitation and high socioeconomic status, infection rates are low with AMPI typically in middle adulthood (34). Although the proportion of susceptible persons is high due to the low to very low seroprevalence, HAV infection is limited to high-risk groups such as injecting-drug users, men who have sex with men (MSM), people travelling to areas of high endemicity, and isolated populations such as incarcerated people (5). For example, among the hepatitis A cases reported between June 2024 and February 2026 in Florida, the United States (US), 31% was associated with recent travel to Cuba, with 83% of the isolates shared matching HAV genotype 1A strain (38). On the other hand, hepatitis A outbreaks have been spreading across the US, mainly among people who use drugs and people experiencing homelessness since 2016 (39). A total of over 44 000 confirmed cases were recorded between 2016 and 2024, with outbreaks peaked in 2019. In Europe, the European Centre for Disease Prevention and Control (ECDC) reported a multi-country outbreak of hepatitis A between 2024 and 2025, driven by person-to-person transmission among people living in poor sanitary conditions (40).

20. Since the 1980s, substantial number of outbreaks among MSM have been reported (41). For MSM, the main risk factor is related to sexual transmission, particularly through anal-oral contact (9). In 2017, the WHO reported an unusual increase in hepatitis A cases affecting mainly MSM in regions with low endemicity, such as Europe and the Americas (42). Over 1 000 cases were reported from 15 countries within the WHO European Region, and 706 cases reported by Chile. In 2018, an outbreak of hepatitis A among MSM was reported in Shinjuku, Tokyo, involving 105 cases, which accounted for 81% of all male hepatitis A cases reported in that district that year (43).

21. Common-source foodborne outbreaks have also been reported following consumption of fresh or frozen products imported from areas with high endemicity (5). For places with low endemicity, HAV outbreaks can be effectively contained by identifying the sources of suspected incriminated food and removing them from the market. An outbreak linked to frozen blueberries from a specific supermarket chain was recorded in the Netherlands between 2024 and 2025, with a total of 24 patients affected (44). HAV was detected from leftover packages of blueberries from a patient, which the genome fragment was 100% match with the outbreak strain, leading to an extensive recall of the specific batch of frozen blueberries by the retailer. There was no report of new cases after the food recall.

Local Situation

22. The Department of Health (DH) has been maintaining a notification system of viral hepatitis since 1974. Since 1988, reported cases have been classified by their viral etiological agents, separating HAV from other hepatitis viruses. The annual number of hepatitis A cases have declined from over 1 000 cases in the late 80s to less than 100 on average in the past decade (Figure 1).

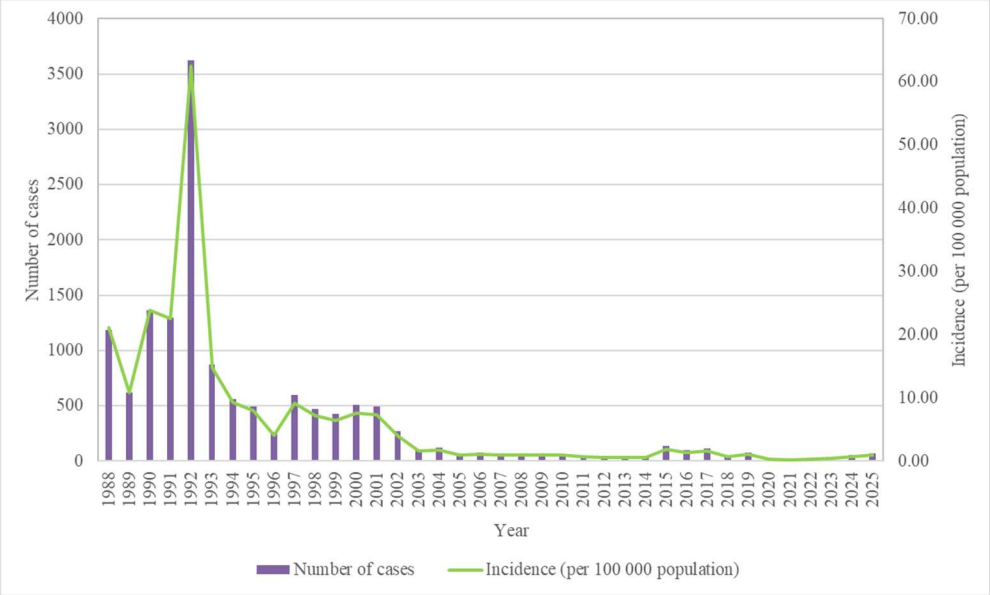

Figure 1. Number of hepatitis A cases and incidence by year, 1988 – 2025.

23. From 2016 to 2025, the number of hepatitis A cases remained relatively stable, with annual number of cases ranging from 15 to 117 (median: 51 cases). In 2026 (as of 30 October), 58 cases have been recorded so far.

24. A total of 564 cases were recorded over the past decade (2016-2025), involving 358 males and 206 females (male to female ratio = 1.7: 1). Their age ranged from 3 to 95 years, median 38 (Figure 2). They commonly presented with tea coloured urine (77.8%), jaundice (67.7%), fever (56.4%), loss of appetite (52.8%), abdominal pain (48.1%), nausea (46.3%), vomiting (44.0%) and headache (25.5%). Majority of the cases (92.2%) required hospitalisation. One fatal case was recorded in 2018, involving a 71-year-old man with chronic hepatitis B infection. The cause of death was fulminant hepatitis.

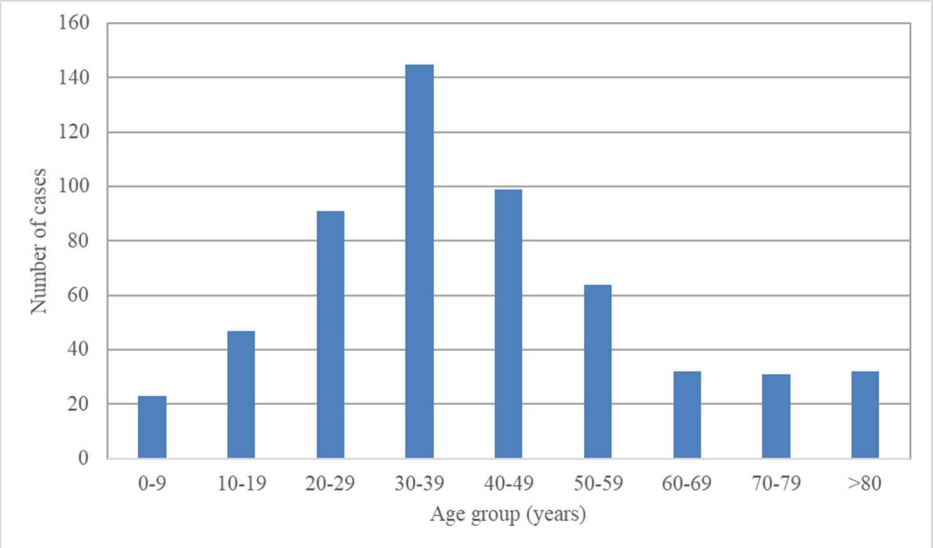

Figure 2. Age distribution of hepatitis cases in age groups, 2016 – 2025.

25. No particular seasonality is observed in the past 10 years (Figure 3).

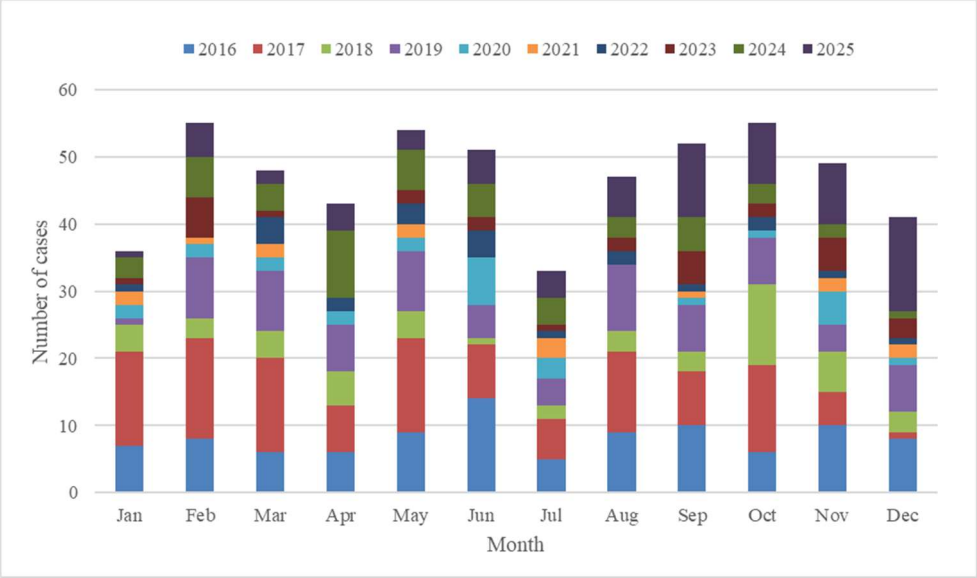


Figure 3. Number of hepatitis A cases by month of reporting, 2016 – 2025.

26. Over two-thirds of the cases (70.4%) acquired the disease locally. Among the imported cases (84 cases), almost half (41 cases, 48.9%) had travel history to Pakistan during the incubation period.

27. In October 2018, there was an increase in hepatitis A cases reported to the CHP, with 12 cases recorded within a month, compared to one to five cases per month from January to September 2018. Investigation revealed that half of those cases were either imported from Pakistan or involved Pakistani. Between October and December 2018, a total of eight cases were related to Pakistan/ Pakistanis. Apart from one case that had no specimen left for further testing, all seven cases were found to be infected with HAV genotype 3a. There was no identified common food or water source, nor any epidemiological linkage among these cases. Between 2019 and 2025, there were 25 hepatitis A cases imported from Pakistan, with more than a third of them (9 cases) reported in September. The patients involved were relatively young (aged 4 to 24 years, median 16), who were likely to have been infected during family visits to Pakistan over summer vacation.

28. In terms of food history, food items consumed, and restaurants or food stalls patronised were found to be highly heterogeneous among the cases. Out of 214 cases with food history information available, 207 (96.7%) had consumed high-risk food during the incubation period. Seventy-eight cases (36.4%) reported to have consumed raw bivalve shellfish such as oysters,

geoduck, clams and scallops; another 50 cases (23.4%) have consumed cooked bivalve shellfish. Other commonly consumed high risk food items include various types of sashimi and sushi (excluding bivalve shellfish), berries (such as strawberries and blueberries), salads, *siu mei* (a ready-to-eat roasted meat products) (45), etc. Nonetheless, due to the long incubation period of hepatitis A, and most cases (83.2%) have consumed more than one high-risk food items during the incubation period, it is difficult to ascertain the exact source of infection of individual cases.

*MSM clusters in 2015-2017 and 2025-2026*

29. In late 2016, an unusual upsurge of acute HAV infection affecting MSM with human immunodeficiency virus (HIV) infection was noted. With retrospective investigations and prospective reporting, a total of 54 cases of laboratory-confirmed HAV infection with clinical symptoms among individuals identified as MSM were recorded between September 2015 and December 2017. The age ranged from 20 to 55 years (median 33). Thirty-seven cases (68.5%) were known to be HIV-positive. Over 95% did not report history of hepatitis A vaccination. Around one quarter of the cases had concurrent diagnosis of other sexually transmitted infections (STI) including syphilis, gonorrhoea and chlamydia infection. Among the cases with specimens available for laboratory analysis, over 80% had identical nucleotide sequences within the genotyping window. Apart from one cluster affecting two patients who were sex partners residing together, no other epidemiological linkage could be found. No common food nor water source or social gathering was identified among these cases. Epidemiological investigations suggested that the outbreak was contributed by transmission by way of sexual contact between men, a high proportion of whom were HIV-infected (46). Hepatitis A outbreaks among MSM were reported during the same period in other regions with low HAV endemicity, including Taiwan (47), Europe (48) and the Americas (49, 50).

30. There was an upsurge in acute hepatitis A infections in September 2025, with 11 cases reported, compared to an average of 3.75 cases per month in the first eight months of 2025. The high number of monthly reported cases persisted from September 2025 to March 2026, with a total of 73 cases recorded over the 7-month period (Figure 4). There was also a significant shift in the male-to-female ratio noted in the reported cases, increasing from 1.31:1 during January to August 2025, to 3.56:1 from September 2025 to March 2026 (Figure

5). Genetic analysis by the CHP's Public Health Laboratory Services Branch (PHLSB) found that 27 out the 50 cases with available viral samples harboured an identical genetic sequence within the genotyping window, while the remaining cases exhibited 19 different types of sequences. Among these 27 cases with identical genetic sequence, 25 were males, and 16 of them were identified as MSM, aged ranged from 20 and 55 years (median 34). The CHP launched a vaccination programme offering two doses of hepatitis A vaccine free of charge to MSM since March 2026. Since then, the number of hepatitis A cases involving MSM continued to decline over the following months, and returned to a low level in July 2026.

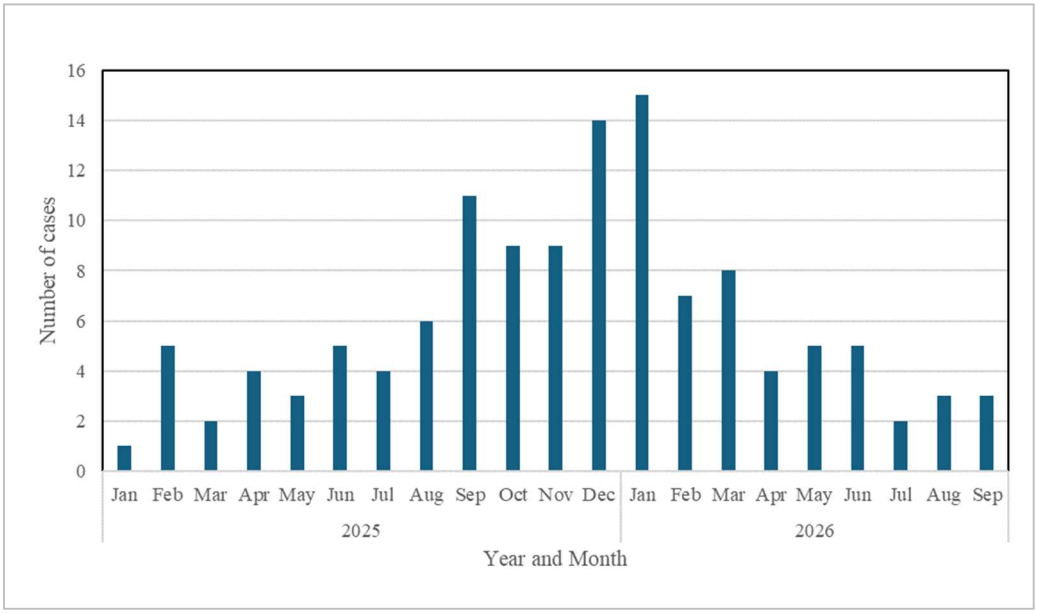


Figure 4. Number of hepatitis A cases recorded by month, January 2025 to September 2026.

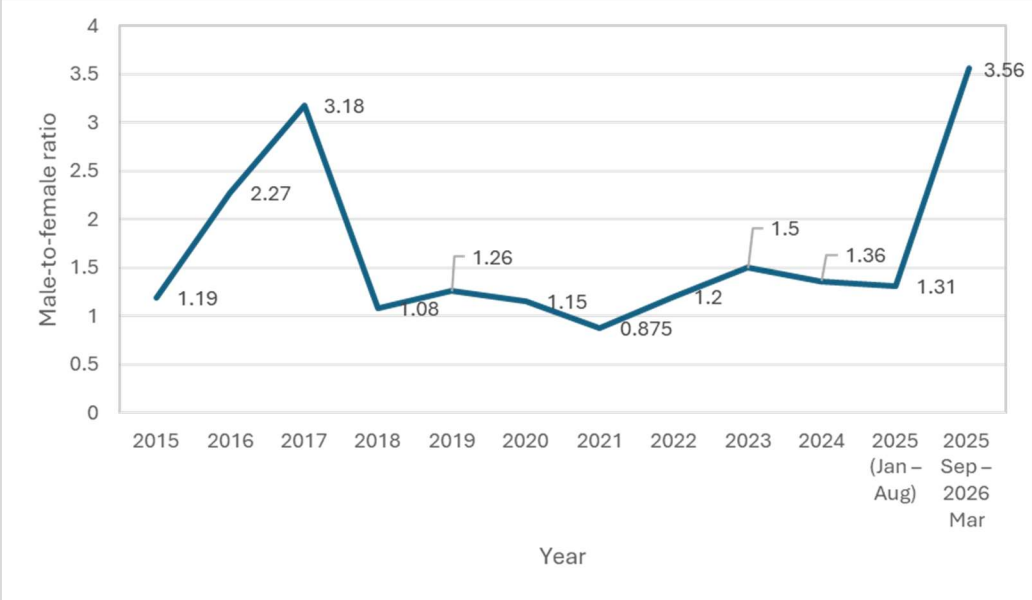


Figure 5. Male-to-female ratio of hepatitis A cases from 2015 to March 2026.

Seroprevalence Studies

31. Seroprevalence studies on different age groups were performed by PHLSB in 2010, 2015, 2020 and 2021-2025 (51). The seroprevalence rates showed that HAV endemicity of Hong Kong was low by the WHO classification, with around 50% seroprevalence among the 31-40 years age group. Overall decline in the prevalence has been observed over the 15-year period. The most marked decrease in seroprevalence occurred in the 51-60 years and >60 years age groups (Figure 6).

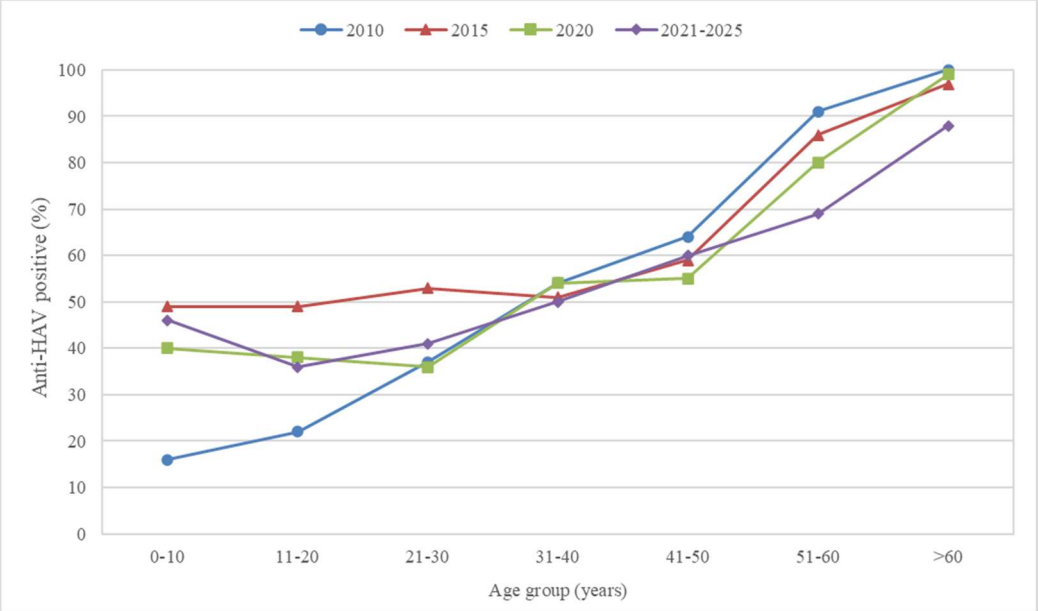


Figure 6. Seroprevalence of hepatitis A in different age groups in 2010, 2015, 2020 and 2021-2025.

32. Similar cohort effect was demonstrated in the Population Health Survey (PHS) 2020-22, which included a territory-wide assessment of hepatitis A, B, C and E seroprevalence in Hong Kong. The survey involved 2 072 residents of Hong Kong aged 15 to 84 years. The age- and sex-adjusted anti-HAV prevalence was 58.7%, with the prevalence among persons under 30 years old remained low at around 30% (52).

**Prevention and Control**

33. The WHO considers improved sanitation, food safety, safer sex practice, and immunisation as the most effective interventions for combating hepatitis A transmission (9).

Water Quality and Sewerage

34. Hong Kong maintains robust infrastructure to ensure public health through high-standard water supply and sanitation systems. The Water Supplies Department delivers safe drinking water fully compliant with the Hong Kong Drinking Water Standards, which incorporate the WHO guidelines (53). Concurrently, the Drainage Services Department manages comprehensive wastewater and stormwater collection, with public sewerage coverage extending to over 94% of the population (54).

Food Safety

35. In Hong Kong, the Centre for Food Safety (CFS) of the Food and Environmental Hygiene Department (FEHD) is responsible for the enforcement of food safety legislation and food import control. Under the Public Health and Municipal Services Ordinance (Cap. 132), all food intended for human consumption, locally produced or imported, should be fit for human consumption (55). Shellfish, fresh, chilled or frozen, is classified as a restricted food item that is subject to licensing control (56). For sale of certain high-risk shellfish, e.g. oysters to be eaten raw and hairy crabs, health certificates issued by health authorities of the countries of origin certifying that the imported shellfish is fit for human consumption should be obtained.

36. In addition, the Food Safety Ordinance (Cap. 612) provides a food tracing mechanism to help Government trace the source of the food more effectively and take prompt action when dealing with food incidents (57).

Hepatitis A Vaccination

37. The Scientific Committee on Vaccine Preventable Diseases (SCVPD) under CHP recommends the following groups to receive hepatitis A vaccination as pre-exposure prophylaxis for personal protection in Hong Kong:

- Persons with chronic liver disease;
- Persons with clotting factors disorders receiving plasma-derived replacement clotting factors;
- Travellers to endemic areas; and
- Men who have sex with men.

The recommendation was extended to MSM in June 2017, following the hepatitis A outbreak among MSM between 2016 and 2017, in order to reduce the risk of infection in this vulnerable group (58).

38. Depending on the epidemiological profile and setting of the outbreak, pre-exposure or post-exposure prophylaxis with hepatitis A vaccine may be recommended. An outbreak that involves a small self-contained community or a well-defined population is more likely to be successfully controlled by hepatitis A vaccination (6). Immunoglobulin was used as short-term pre- and post-exposure prophylaxis against hepatitis A before the introduction of hepatitis A vaccines, but its use has declined due to high cost, limited availability and the comparatively short protection (lasting only 12-20 weeks) (5).

39. The WHO recommends introducing hepatitis A vaccination into national immunisation schedules for individuals older than one year old, if indicated on the basis of (i) an increasing trend of acute hepatitis A over time among older children, adolescents or adults; (ii) changes in HAV endemicity from high to intermediate; and (iii) cost-effectiveness considerations (6). Locally, a systematic review on cost-effectiveness analysis of vaccinations in Hong Kong found that hepatitis A vaccination was not cost-saving or cost-effective when compared to status quo (59). Given the low incidence of hepatitis A in Hong Kong, hepatitis A vaccine would have a very high cost per life year saved, hence hepatitis A vaccination of infants in Hong Kong would have no cost-benefit advantage (60).

Investigation and Control

40. Viral hepatitis is one of the statutory notifiable diseases specified in the First Schedule to the Prevention and Control of Disease Ordinance (Cap. 599). All registered medical practitioners are required to report cases of acute hepatitis A to the CHP. Upon receipt of notifications, the CHP would carry out investigation and public health control measures. A confirmed case is defined as a person with compatible clinical features with laboratory confirmation of the presence of anti-HAV IgM antibody.

41. The patient and the attending physician would be interviewed for relevant clinical information. Detailed food, travel, and vaccination history and

other risk factors would be elicited. Food collaterals, travel collaterals and household contacts would also be traced and kept on medical surveillance. When a common food source is identified or suspected, FEHD would be informed for further investigation and control of the food source. In institutional outbreaks, field visits would be carried out to search for common source of infection and instigation of control measures.

42. For patients working as food handlers, FEHD would be informed for consideration of suspension of work until seven days after the onset of jaundice, or 14 days after onset of other symptoms if there is no history of jaundice. For patients who work in institutions or as healthcare workers, they are advised to be excluded from food handling and direct care of young children or institutionalised persons.

43. Detailed sexual history would also be taken from HAV cases to aid the investigation of the source of infection. For MSM patients, the CHP would also advise their male sexual partners to receive prophylactic hepatitis A vaccination.

Public Education

*Food Hygiene*

44. The DH and FEHD contribute to public education on the prevention of foodborne hepatitis A infection. The CFS advocates the "Five Keys to Food Safety" to reduce the risk of foodborne hepatitis A infection (61):

- Choose (Choose safe raw materials);
- Clean (Keep hands and utensils clean);
- Separate (Separate raw and cooked food);
- Cook (Cook thoroughly); and
- Safe Temperature (Keep food at safe temperature).

*Safer Sex Practice*

45. To prevent the sexual transmission of hepatitis A, the DH actively promotes safer sex practices tailored to high-risk behaviours like anal-oral contact. Educational resources advocating for the consistent and correct use of

condoms during sex are disseminated through DH and non-governmental organisations websites and social media platforms. During the recent hepatitis A cluster involving MSM, the CHP has implemented multiprong measures, including enhanced public education via various means, such as issuance of press releases and increased outreach on social media platforms.

**Way Forward**

46. With development of advanced water systems and sewerage over the past few decades, together with improvements in socioeconomic status of the general public, Hong Kong has changed from an area of hepatitis A endemicity to one of low endemicity. Nevertheless, sporadic cases continue to occur and clustering of cases among MSM has occurred two times in recent years. Hong Kong has robust mechanisms in place to detect, investigate and control any clustering that may arise. The statutory disease notification system enables the CHP to identify any unusual increase in the number of cases or changes in the profile of cases, facilitating our prompt epidemiological investigations to identify the source of infection and the risk factors contributing to the clustering of cases.

47. To prevent foodborne transmission of hepatitis A, the CFS maintains a well-developed regulatory framework, supported by legislation, to ensure that the food supply in Hong Kong is fit for consumption. Continued vigilance is required in respect of foodborne hepatitis A outbreaks in countries that export food to Hong Kong. The CFS and CHP will sustain their efforts to promote safe food handling practices among the public and the food industry.

48. Experience with clustering of HAV cases among MSM has demonstrated the effectiveness of the current disease surveillance system and epidemiological investigations. Subsequent control measures—including risk communication, health promotion and the provision of free vaccination to the target group - have successfully halted the transmission chain.

49. Hepatitis A vaccination is highly effective and is readily available in Hong Kong. Given the low incidence of disease and the relatively stable annual number of cases in recent years, introduction of the HAV vaccine into routine immunisation programme is not indicated at this juncture. Existing recommendations for high-risk groups to receive vaccination as pre-exposure

prophylaxis should be maintained in order to minimise the risk of episodic clustering among vulnerable populations. These recommendations will be kept under review in the light of ongoing surveillance of incidence trends, age-specific severity, seroprevalence and any new cost-effectiveness evidence.

50. Effective risk communication should continue with overseas health authorities, members of the food trade and the public. Information on the risks of hepatitis A should be disseminated through multiple channels to raise public awareness of food hygiene, travel-related precautions, safer sex practices and appropriate preventive measures.

**Centre for Health Protection**
**Department of Health**
**November 2026**

The copyright of this paper belongs to the Centre for Health Protection, Department of Health, Hong Kong Special Administrative Region. Contents of the paper may be freely quoted for educational, training and non-commercial uses provided that acknowledgement be made to the Centre for Health Protection, Department of Health, Hong Kong Special Administrative Region. No part of this paper may be used, modified or reproduced for purposes other than those stated above without prior permission obtained from the Centre.

## Reference


1. World Health Organization. WHO Immunological Basis for Immunization Series. Module 18: Hepatitis A. Update 2019. 2019. Available from: https://iris.who.int/server/api/core/bitstreams/270c4dc5-cb11-47d9-bd00-069471541ca7/content. Accessed on 4 November 2026.
2. Ouyang G, Pan G, Guan L, Wu Y, Lu W, Qin C, et al. Incidence trends of acute viral hepatitis caused by four viral etiologies between 1990 and 2019 at the global, regional and national levels. Liver Int. 2022;42(12):2662-73.
3. Global Health Data Exchange. Global Burden of Disease Study 2021 (GBD 2021) Data Resources 2021. Available from: https://ghdx.healthdata.org/gbd-2021. Accessed on 4 November 2026.
4. Zhang L, Wang T, Zhou S, Li S, Mo T, Wu S. Update on the global burden of acute viral hepatitis in 2021: addressing health inequalities. Front Public Health. 2025;13:1580863.
5. Van Damme P, Pintó RM, Feng Z, Cui F, Gentile A, Shouval D. Hepatitis A virus infection. Nat Rev Dis Primers. 2023;9(1):51.
6. World Health Organization. Hepatitis A vaccines: WHO position paper, October 2022. 2022. Available from: https://iris.who.int/server/api/core/bitstreams/61dbf312-2a7c-41d5-a2d2-782ec11cb711/content. Accessed on 4 November 2026.
7. World Health Organization. Global hepatitis report 2026. 2026. Available from: https://iris.who.int/server/api/core/bitstreams/6f6caedc-37a0-49ee-a02a-df9c3b78ff42/content. Accessed on 4 November 2026.
8. Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases (14th Edition). Chapter 9: Hepatitis A. 2024. Available from: https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-9-hepatitis-a.html. Accessed on 4 November 2026.
9. World Health Organization. Hepatitis A. 2026. Available from: https://www.who.int/news-room/fact-sheets/detail/hepatitis-a. Accessed on 4 November 2026.
10. Nainan OV, Xia G, Vaughan G, Margolis HS. Diagnosis of hepatitis a virus infection: a molecular approach. Clin Microbiol Rev. 2006;19(1):63-79.
11. Di Pinto A, Forte VT, Tantillo GM, Terio V, Buonavoglia C. Detection of hepatitis A virus in shellfish (Mytilus galloprovincialis) with RT-PCR. J Food Prot. 2003;66(9):1681-5.
12. Di Pinto A, Conversano MC, Forte VT, La Salandra G, Montervino C, Tantillo GM. A comparison of RT-PCR-based assays for the detection of HAV from shellfish. New Microbiol. 2004;27(2):119-24.
13. Sánchez G, Pintó RM, Vanaclocha H, Bosch A. Molecular characterization of hepatitis a virus isolates from a transcontinental shellfish-borne outbreak. J Clin Microbiol. 2002;40(11):4148-55.
14. Coelho C, Heinert AP, Simões CM, Barardi CR. Hepatitis A virus detection in oysters (Crassostrea gigas) in Santa Catarina State, Brazil, by reverse transcription-polymerase chain reaction. J Food Prot. 2003;66(3):507-11.
15. Desenclos JC, Klontz KC, Wilder MH, Nainan OV, Margolis HS, Gunn RA. A multistate outbreak of hepatitis A caused by the consumption of raw oysters. Am J Public Health. 1991;81(10):1268-72.
16. Chironna M, Germinario C, De Medici D, Fiore A, Di Pasquale S, Quarto M, et al. Detection of hepatitis A virus in mussels from different sources marketed in Puglia region (South Italy). Int J Food Microbiol. 2002;75(1-2):11-8.
17. Bosch A, Sánchez G, Le Guyader F, Vanaclocha H, Haugarreau L, Pintó RM. Human enteric viruses in Coquina clams associated with a large hepatitis A outbreak. Water Sci Technol. 2001;43(12):61-5.
18. Kingsley DH, Meade GK, Richards GP. Detection of both hepatitis A virus and Norwalk-like virus in imported clams associated with food-borne illness. Appl Environ Microbiol. 2002;68(8):3914-8.
19. Suñén E, Sobsey MD. Recovery and detection of enterovirus, hepatitis A virus and

Norwalk virus in hardshell clams (Mercenaria mercenaria) by RT-PCR methods. J Virol Methods. 1999;77(2):179-87.
20. Suñén E, Casas N, Moreno B, Zigorraga C. Comparison of two methods for the detection of hepatitis A virus in clam samples (Tapes spp.) by reverse transcription-nested PCR. Int J Food Microbiol. 2004;91(2):147-54.
21. World Health Organization. Microbiological risk assessment of viruses in foods: part 2: prevention and intervention measures: meeting report. 2026. Available from: https://www.who.int/publications/i/item/9789240113756. Accessed on 12 November 2026.
22. Todd ECD. Foodborne Diseases: Overview of Biological Hazards and Foodborne Diseases. In: Motarjemi Y, editor. Encyclopedia of Food Safety. Waltham: Academic Press; 2014. p. 221-42.
23. Fokas R, Anastopoulou Z, Koukouvini KA, Dimitrakopoulou ME, Kotsiri Z, Chorti-Tripsa E, et al. Long-Term Surveillance of Food Products of Diverse Origins: A Five-Year Survey of Hepatitis A and Norovirus in Greece, 2019-2024. Pathogens. 2025;14(2).
24. Lemon SM, Ott JJ, Van Damme P, Shouval D. Type A viral hepatitis: A summary and update on the molecular virology, epidemiology, pathogenesis and prevention. J Hepatol. 2017.
25. Centre for Health Protection. Hepatitis A immunisation in high risk groups and outbreak situations. 2006. Available from: http://www.chp.gov.hk/files/pdf/hepatitis_a_immunisation_in_high_risk_groups_and_outbreak_situations_r.pdf. Accessed on 4 November 2026.
26. SAGE Working Group on Hepatitis A. Background document for the SAGE April 2022 session on Hepatitis A vaccines. 2022. Available from: https://cdn.who.int/media/docs/default-source/immunization/position_paper_documents/hepatitis/sage_april2022_hepatitisa_background.pdf?sfvrsn=86bdcf60_1. Accessed on 4 November 2026.
27. Global Health Data Exchange. Global Burden of Disease Study 2019 (GBD 2019) Data Resources. 2019. Available from: https://ghdx.healthdata.org/gbd-2019. Accessed on 4 November 2026.
28. Jacobsen KH, Wiersma ST. Hepatitis A virus seroprevalence by age and world region, 1990 and 2005. Vaccine. 2010;28(41):6653-7.
29. Kunasol P, Cooksley G, Chan VF, Isahak I, John J, Loleka S, et al. Hepatitis A virus: declining seroprevalence in children and adolescents in Southeast Asia. Southeast Asian J Trop Med Public Health. 1998;29(2):255-62.
30. Franco E, Meleleo C, Serino L, Sorbara D, Zaratti L. Hepatitis A: Epidemiology and prevention in developing countries. World J Hepatol. 2012;4(3):68-73.
31. Deoshatwar AR, Pulinchani A, Mathapati B, Sudan M, Mhatre SM, Patil A, et al. Hepatitis A virus endemicity and vaccine policy, India. Bull World Health Organ. 2026;104(5):290-300.
32. Agrawal A, Singh S, Kolhapure S, Hoet B, Arankalle V, Mitra M. Increasing Burden of Hepatitis A in Adolescents and Adults and the Need for Long-Term Protection: A Review from the Indian Subcontinent. Infect Dis Ther. 2019;8(4):483-97.
33. Guzman-Holst A, Luna-Casas G, Burguete Garcia A, Madrid-Marina V, Cervantes-Apolinar MY, Andani A, et al. Burden of disease and associated complications of hepatitis a in children and adults in Mexico: A retrospective database study. PLoS One. 2022;17(5):e0268469.
34. Jacobsen KH. Globalization and the Changing Epidemiology of Hepatitis A Virus. Cold Spring Harb Perspect Med. 2018;8(10).
35. Gloriani NG, de Paz-Silava SLM, Allison RD, Takashima Y, Avagyan T. The Shifting Epidemiology of Hepatitis A in the World Health Organization Western Pacific Region. Vaccines (Basel). 2024;12(2).
36. Zhang M, Wu R, Xu H, Uhanova J, Gish R, Wen X, et al. Changing incidence of reported viral hepatitis in China from 2004 to 2016: an observational study. BMJ Open.

2019;9(8):e028248.
37. Sun J, Li Y, Fang X, Wang Y, Han Y, Liu Y, et al. An Epidemic of Hepatitis A - Liaoning Province, 2020. China CDC Wkly. 2020;2(30):570-4.
38. Linwong NN, Etienne MK, Llau A, Menke S, Patelsky S, Cano N, et al. Hepatitis A Outbreak Associated with Cuba - Florida, June 2024-February 2026. MMWR Morb Mortal Wkly Rep. 2026;75(37):567-72.
39. Centers for Disease Control and Prevention. Hepatitis A outbreaks linked to person-to-person contact. 2024. Available from: https://www.cdc.gov/hepatitis-a/outbreaks/person-to-person/index.html. Accessed on 4 November 2026.
40. European Centre for Disease Prevention and Control. Communicable Disease Threats Report. Week 48, 22-28 November 2025. Hepatitis A – Multi-country (EU) – 2024-2025. 2025. Available from: https://www.ecdc.europa.eu/sites/default/files/documents/Communicable-disease-threats-report-week-48-2025.pdf. Accessed on 4 November 2026.
41. Weerakoon AP, Chen MY, Read TRH, Bradshaw C, Fairley CK. Immunity to hepatitis A when outbreaks of infection in men who have sex with men (MSM) are rare. Vaccine. 2012;30(23):3430-4.
42. World Health Organization. Hepatitis A outbreaks mostly affecting men who have sex with men – European Region and the Americas. 2017. Available from: https://www.who.int/news/item/07-06-2017-hepatitis-a-outbreaks-mostly-affecting-men-who-have-sex-with-men-european-region-and-the-americas. Accessed on 4 November 2026.
43. Itaki M, Endo M, Asakura H, Nagashima M, Somura Y, Takahashi A, et al. Hepatitis A outbreak among men who have sex with men, Shinjuku, Japan, 2018. Western Pac Surveill Response J. 2025;16(1):1-10.
44. Friesema IHM, Boxman ILA, Slegers–Fitz-James I, van Brug H, Elzakkers JCJ, Sips G, et al. Outbreak of Hepatitis A Linked to Frozen Blueberries, the Netherlands, 2024–2025. Emerging Infectious Disease journal. 2026;32(8):1327.
45. Centre for Food Safety. Siu Mei. Food Safety Guidelines for Food Business. 2023. Available from: https://www.cfs.gov.hk/english/multimedia/multimedia_pub/files/Siu_Mei_Food_Safety_Guidelines_for_Food_Businesses.pdf. Accessed on 4 November 2026.
46. Ho B, Wong B, Chan K. Summary on the recent upsurge of hepatitis A infection among MSM in Hong Kong. Communicable Diseases Watch. 2017;14(24):96-7.
47. Chen WC, Chiang PH, Liao YH, Huang LC, Hsieh YJ, Chiu CM, et al. Outbreak of hepatitis A virus infection in Taiwan, June 2015 to September 2017. Euro Surveill. 2019;24(14).
48. Ndumbi P, Freidl GS, Williams CJ, Mardh O, Varela C, Avellon A, et al. Hepatitis A outbreak disproportionately affecting men who have sex with men (MSM) in the European Union and European Economic Area, June 2016 to May 2017. Euro Surveill. 2018;23(33).
49. Latash J, Dorsinville M, Del Rosso P, Antwi M, Reddy V, Waechter H, et al. Notes from the Field: Increase in Reported Hepatitis A Infections Among Men Who Have Sex with Men - New York City, January-August 2017. MMWR Morb Mortal Wkly Rep. 2017;66(37):999-1000.
50. Rivas V, Barrera A, Pino K, Nunez R, Caceres CJ, Lopez-Lastra M, et al. Hepatitis A outbreak since November 2016 affecting men who have sex with men (MSM) in Chile connected to the current outbreak in MSM in Europe, situation up to October 2017. Euro Surveill. 2018;23(9).
51. Centre for Health Protection. Seroprevalence rates of hepatitis A virus antibodies. 2026. Available from: https://www.chp.gov.hk/en/statistics/data/10/641/701/3936.html. Accessed on 4 November 2026.
52. Viral Hepatitis Control Office. Surveillance of viral hepatitis in Hong Kong, 2022 report. 2023. Available from: https://www.chp.gov.hk/files/pdf/surveillance_of_viral_hepatitis_in_hk_2022_full_report.pdf. Accessed on 4 November 2026.

53. Water Supplies Department. Hong Kong Drinking Water Standards (HKDWS). 2025. Available from: https://www.wsd.gov.hk/en/core-businesses/water-quality/my-drinking-water-quality/hong-kong-drinking-water-standards/index.html. Accessed on 4 November 2026.
54. Environmental Protection Department. Sewerage infrastructure. 2025. Available from: https://www.epd.gov.hk/epd/english/environmentinhk/water/hkwqrc/sewerage/sewerage.html. Accessed on 4 November 2026.
55. Hong Kong SAR Government. Public Health and Municipal Services Ordinance, Chapter 132, Laws of Hong Kong. 2026. Available from: https://www.elegislation.gov.hk/hk/cap132. Accessed on 4 November 2026.
56. Centre for Food Safety. Risk in Brief: Hepatitis A virus in shellfish. 2000. Available from: https://www.cfs.gov.hk/english/programme/programme_rafs/programme_rafs_fm_02_06.html. Accessed on 4 November 2026.
57. Centre for Food Safety. Food Safety Ordinance. 2025. Available from: https://www.cfs.gov.hk/english/foodsafetyordinance/food_safety_ordinance.html. Accessed on 13 November 2026.
58. Centre for Health Protection. Statement on hepatitis A vaccination and men who have sex with men. 2017. Available from: https://www.chp.gov.hk/files/pdf/statement_on_hav_and_msm_201706.pdf. Accessed on 4 November 2026.
59. Wong CKH, Liao Q, Guo VYW, Xin Y, Lam CLK. Cost-effectiveness analysis of vaccinations and decision makings on vaccination programmes in Hong Kong: A systematic review. Vaccine. 2017;35(24):3153-61.
60. Sarah M McGhee, June Chau, Lai Chin Wong, Pauline PS Woo, Ada LY Ho, Annie WL Cheung, C Mary Schooling, Graham Neil Thomas. Economic analysis on Haemophilus influenza b, chickenpox, pneumococcal, hepatitis A and combination vaccine in the Childhood Immunisation Programme in Hong Kong 2008. Available from: https://rfs2.healthbureau.gov.hk/app/fundedsearch/projectdetail.xhtml?id=508. Accessed on 4 November 2026.
61. Centre for Food Safety. Be vigilant against hepatitis A. 2022. Available from: https://www.cfs.gov.hk/english/whatsnew/whatsnew_fst/whatsnew_fst_Be_Vigilant_against_Hepatitis_A.html. Accessed on 4 November 2026.