

# Nationwide awareness-raising program for viral hepatitis in Japan: the "*Shitte kan-en*" project

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**Abstract:** Chronic viral hepatitis is one of the most widespread infectious diseases in Japan. In the 2009 financial year, the Japanese government enacted the Basic Act on Hepatitis Measures, followed by the Basic Guidelines for Promotion of Control Measures for Hepatitis 2 years later. The guidelines emphasize the importance of provision and dissemination of accurate information on viral hepatitis and public awareness-raising. A subsidy program on hepatitis was therefore launched by the Ministry of Health, Labour and Welfare in 2011, called "*Shitte kan-en*" (in English, "Let's learn about hepatitis"), and involves popular Japanese actors and singers. The project started awareness-raising activities in the 2013 financial year, as the "National Campaign Project for Hepatitis Measures". It aims to communicate concise and accurate information about hepatitis and the necessity of testing for viral hepatitis. It also encourages citizens to take a positive approach to early detection and treatment. To date, the main initiatives of the project are as follows: *i*) celebrity visits to prefectural governors to draw attention to the condition, *ii*) educational events in cooperation with hepatologists in regional core hospitals, *iii*) support for partner companies' hepatitis awareness activities in workplaces, and *iv*) support for the activities of program promoters. Targeting approaches to particular groups is likely to be key to success for general awareness-raising. Evaluation of the effectiveness of this multifaceted approach is warranted to reduce the undiagnosed population and improve the link between testing and care for viral hepatitis in Japan.

**Keywords:** Basic Act on Hepatitis Measures, Basic Guidelines on Hepatitis Measures, hepatitis, awareness-raising

## Introduction

In Japan, viral hepatitis is one of the most widespread infectious diseases. In 2015, hepatitis B virus (HBV) affected an estimated 1.1-1.2 million and hepatitis C virus (HCV) 0.9-1.3 million (1). If untreated, viral hepatitis can progress to more severe diseases such as liver cirrhosis and liver cancer. According to Vital Statistics of Japan, in 2019, hepatocellular carcinoma was the fifth most frequent cause of cancer death in men and the seventh in women (2). Over 59.7% of people with liver cirrhosis in Japan have had HBV or HCV infections (3). Approximately 25,000 deaths each year in Japan are caused by liver cancer, and 67.5% of these are attributed to persistent HBV or HCV infection (2,4). Therefore, from the public health and hygiene perspective, implementing measures against hepatitis B and C is a critical matter in Japan. Early detection and treatment of patients with viral hepatitis is important. It

is recommended that everyone undergoes hepatitis virus testing at least once in a lifetime and those with positive results should be treated by hepatologists.

To address these issues, the Japanese government enacted the Basic Act on Hepatitis Measures in January 2010, which reinforced the promotion of comprehensive measures against hepatitis (5). On the basis of this law, the government also published the Basic Guidelines for Promotion of Control Measures for Hepatitis in June 2011. The guidelines, revised in 2016 (6), explain the importance of disseminating accurate information to help all citizens understand hepatitis, and particularly how to prevent and treat it. Comprehensive measures against hepatitis including awareness-raising have therefore been implemented in line with these guidelines.

This review examines the purpose, targets and activities of the nationwide awareness-raising program for viral hepatitis in Japan, or the "*Shitte kan-en*" project (in English, "Let's learn about hepatitis"), and

involves popular Japanese actors and singers. The program name invokes the ideal attitude of people being willing to learn about hepatitis, including the necessity and importance of testing for viral hepatitis. The program is linked to the national campaign project for hepatitis measures and is positioned as one way to disseminate accurate information about the hepatitis virus and hepatitis as a liver disease. It is designed to improve attitudes towards hepatitis testing.

**Basic Act on Hepatitis Measures and the Basic Guidelines on Hepatitis Measures**

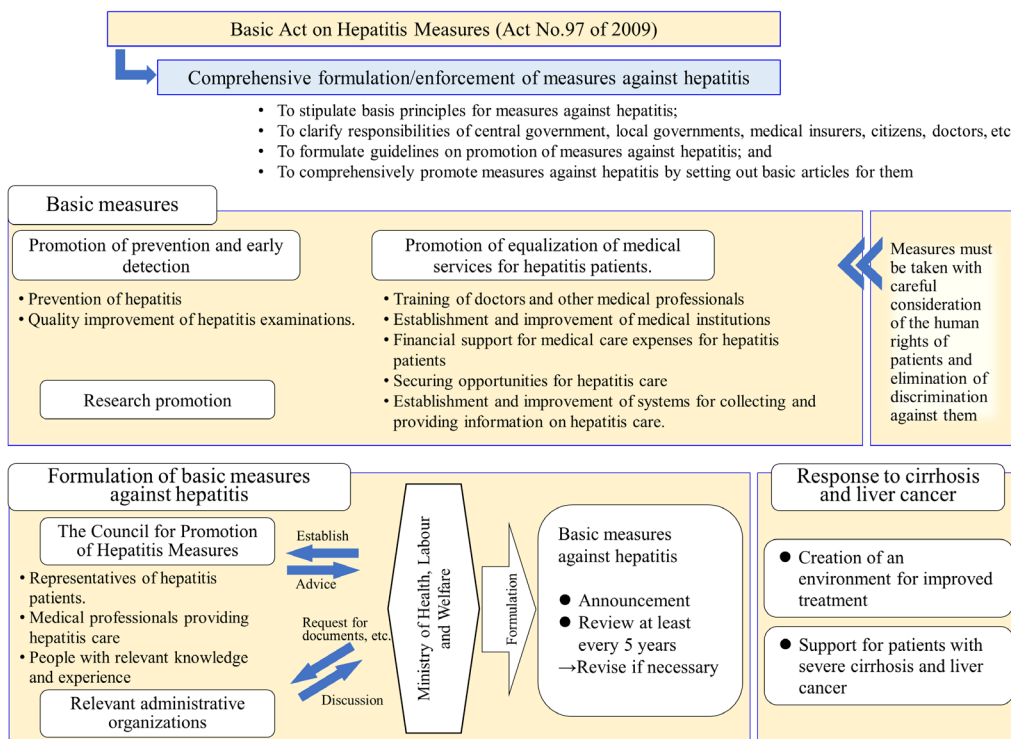
The purpose of this Act is to provide the basic principles for hepatitis measures, and clarify the responsibilities of the national government, local governments, medical insurers, citizens, physicians, and others. It also provides for the formulation of guidelines for the promotion of hepatitis and basic measures (5).

The basic principles for hepatitis measures are as follows: *i*) to promote specialized, interdisciplinary or comprehensive research on hepatitis, and to develop, disseminate, and exploit technological improvements for prevention, diagnosis, and treatment of hepatitis, and other research results; *ii*) to make hepatitis examinations equally accessible to all, regardless of their location ; *iii*) to make appropriate medical care for hepatitis

equally accessible to any carrier of the hepatitis virus or hepatitis patient regardless of where they live; and *iv*) in implementing these measures, to respect the human rights of hepatitis patients and others, and ensure that no groups are discriminated against.

In formulating the Basic Guidelines on Hepatitis Measures, the Minister of Health, Labour and Welfare is required to consult the heads of the relevant administrative organs and the Council for Promotion of Hepatitis Measures. The Minister also has to review the Basic Guidelines on Hepatitis Measures at least once every 5 years, considering changes in hepatitis-related medical care and evaluating the effects of hepatitis measures. This review may lead to revisions to the guidelines (Figure 1).

The Ministry of Health, Labour and Welfare (MHLW) has been promoting comprehensive control measures for hepatitis since the 2008 financial year. These consist of five key strategies: *i*) environmental improvement to enhance hepatitis treatment; *ii*) facilitation of hepatitis virus testing; *iii*) preparation of a treatment/consultation system for hepatitis; *iv*) preparation and dissemination of accurate information to the public; and *v*) promotion of hepatitis-related research (6). The guideline includes a detailed policy for "preparation and dissemination of accurate information to the public" (6).



**Figure 1. Overview of comprehensive hepatitis measures.** Outline of the relationships between the Basic Act on Hepatitis Measures, the Basic Guidelines on Hepatitis Measures, and the Council for Promotion of Hepatitis Measures. The Basic Guidelines on Hepatitis Measures are based on the Basic Act on Hepatitis Measures and set out the requirement for comprehensive hepatitis measures. They emphasize basic measures including promotion of prevention and early detection of hepatitis, uniform accessibility of hepatitis-related medical care, and relevant research. The Minister of Health, Labour and Welfare of Japan is required to review the Basic Guidelines on Hepatitis Measures at least once every 5 years, taking into consideration changes in hepatitis-related medical care and evaluating the effects of hepatitis measures, and revise them when necessary.

**What is the "Shitte kan-en" project?**

Hepatitis is still under-recognized and misunderstood, often undiagnosed and untreated, despite the incredible toll it takes on health (7). In 2010, the WHO designated July 28 as "World Hepatitis Day", with the aim of preventing the spread of viral hepatitis on a global scale, eliminating stigma, discrimination and prejudice against patients and infected people, and promoting infection prevention (8). Japan has therefore designated July 28 as Japan Hepatitis Day and has been working on an awareness-raising program to promote understanding of the pathogenesis, prevention, and treatment of hepatitis. It also encourages medical examinations, in cooperation with national and local governments, medical organizations, employers' organizations and other stakeholders.

The national sampling survey conducted by the MHLW in the 2011 financial year has been analyzed in detail (1). It clarified the rate of hepatitis screening by metropolis and districts, and identified factors associated with hepatitis screening. The rate of screening was 57.7% for HBV and 48.1% for HCV. By 2017, the rates had risen to 71.0% and 61.6%. These results show that approximately 30%-40% of people have never taken a hepatitis virus test, although the testing rate seems to be increasing. In 2017, 20.1% of people who had taken a test for HBV, and 18.7% for HCV acknowledged being screened for hepatitis, although approximately 40% were not sure. The survey also showed that approximately 30% of people did not seek out medical attention even

if their results were positive. Approximately 40% of the public were unaware of the government's measures to promote hepatitis awareness (1,9).

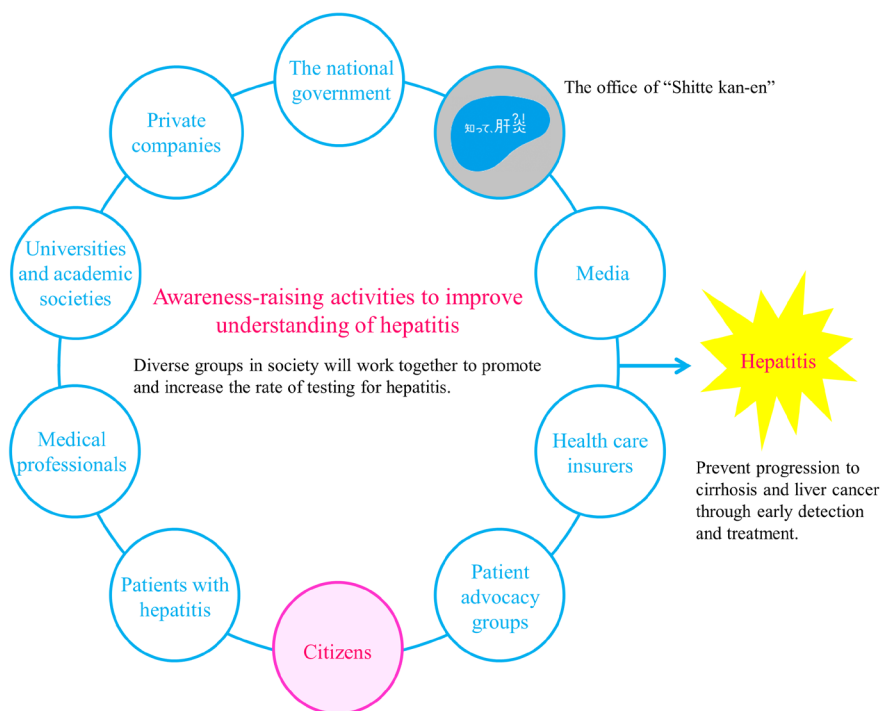
The "Shitte kan-en" project was launched as a subsidy program for hepatitis measures by the MHLW following publication of the basic guidelines for hepatitis measures in May 2011. The project uses popular Japanese athletes, actors and singers as delegates. By publicizing them undertaking various activities about hepatitis, the project is able to attract considerable public attention. The project started its awareness-raising activities in the 2013 financial year as the "National Campaign Project for Hepatitis Measures". It aimed to communicate information about hepatitis and the importance of testing, and to ensure that all citizens know about hepatitis and act proactively to enable early detection and treatment.

This project therefore involves the cooperation of many people, including local governments, medical professionals, patients with viral hepatitis, universities and academic societies, private companies, the media, public organizations, and the wider public. The "Shitte kan-en" project will serve as a catalyst to connect these groups (Figure 2) (7).

**Specific measures in the "Shitte kan-en" project**

*Visits to the prefectural governors*

The project has asked celebrities to act as ambassadors and special supporters. In Japan, the main work on



**Figure 2. Preparation and dissemination of accurate information to the public for hepatitis.** To improve understanding about hepatitis, and promote control measures at a national and local government level, all relevant parties need to work together and establish further collaboration.

hepatitis measures is at the prefectural government level. The ambassadors and special supporters have therefore visited the prefectural governors in every part of Japan to talk about the necessity of early diagnosis and treatment, and ask them to promote measures to encourage viral hepatitis screening. These visits drew considerable public attention. At the end of the 2020 financial year, the delegates had visited 38 of the 47 prefectures in Japan.

#### *Educational events with regional core centers for the management of liver disease*

Since 2007, the MHLW has required the prefectural governments to prepare linked regional core centers for the treatment of liver disease. There are currently 71 regional core centers nationwide. The roles of these centers fit into four main categories: *i*) the capacity to offer general medical information about liver disease; *ii*) the ability to collect and disseminate information about medical and related institutions; *iii*) the capacity to organize workshops and lectures for medical personnel and local residents, and offer consultations and provide support for liver disease; and *iv*) the capacity to hold meetings with specialized institutions to discuss matters concerning liver disease. To support these regional core centers, the Hepatitis Information Center was established as a division of the Research Center for Hepatitis and Immunology, National Center for Global Health and Medicine (Ichikawa, Japan) in November 2008 (10).

The Hepatitis Information Center has conducted an annual survey about the activities of all regional core centers since 2010. The activities include liver disease seminars to give patients with hepatitis information about the pathology of hepatitis, the latest therapies, and points to note in daily life. In the 2017 financial year, seminars were held at 60 regional core centers. The most common type of educational activity was distribution of posters/leaflets, newspaper advertisements/articles, and events/symposiums. Other activities included dissemination of information through websites and social media, traveling liver disease seminars, and hepatitis testing (11).

Several hepatitis awareness events have also been organized by the "Shitte kan-en" project in cooperation with regional core centers. These are designed to provide information to the general public about hepatitis. To date, the project has worked with 29 regional core centers. At most events, hepatologists give lectures on hepatitis, and celebrities communicate the importance of hepatitis testing. The events aim to increase understanding and empathy for those with hepatitis.

The project has used an approach tailored to the targeted population, who are relatively active and healthy. The project starts with a lecture on the basics, such as the role of the liver. People are then given

opportunities to learn about viral hepatitis transmission and prevention. Junior high and high school students may not have much opportunity to undergo hepatitis testing, but the aim is to convey the message to their families about the need for early detection and treatment. For people of working age, the project mainly provides information about where they can be tested for hepatitis, and subsidy programs offered by the government. Until 2020, most awareness-raising was *via* lectures open to all, including college, elementary, junior high, and high school students. Promotional leaflets were also distributed on the streets. These events were often held in open spaces, such as Civic Halls, college campuses, and public squares (plazas) (Table 1). Sometimes there was a demonstrational event where celebrities were tested for hepatitis or had an abdominal ultrasound examination in public. These events are appealing to the younger generation, and convey the message that hepatitis testing is quick and easy. A recorded video was distributed online and had been viewed more than one million times on YouTube by May, 2021.

In 2020, the impact of COVID-19 meant it was difficult to hold events with a lot of people, so "Movie for hepatitis awareness" was created. The purpose of this video is to inform young people (mainly junior high and high school students) about viral hepatitis using an educational approach. The video was recorded in a studio that resembled a school classroom, with hepatologists from three regional core centers as the teachers and celebrities as the students. The video was produced so that the viewers would feel as if they were taking a class together. Three 10-minute videos were created to keep viewers interested.

The first video is titled "Knowledge about viruses. Let's learn about viruses!". It provides general information about viruses including COVID-19, and the infection route of the hepatitis virus. The video contains two important messages. First, there are still patients with viral hepatitis who face discrimination and prejudice in Japan. Second, sharing accurate information about infectious diseases can help us to create a society where we can coexist without stigma and discrimination.

The second video is entitled "Progress in hepatitis treatment. It's amazing how far science has come". Since 2014, some new direct-acting antiviral agents have enabled high rates (> 90%) of sustained virological response in Japanese patients with HCV infection. For hepatitis B, nucleotide/nucleoside analogue therapies have suppressed viral replication in patients under treatment. This video conveys the importance of early detection of viral hepatitis to receive these treatments.

The third video is entitled "Take a hepatitis virus test at least once in your lifetime! Early detection is key". This video shows that hepatitis A and B are preventable by vaccination, and that there are many places where you can be tested for viral hepatitis. Examinations include blood tests and imaging, as well

**Table 1. Educational events with regional core centers for the management of liver disease**

Date	Region	Target group	Contents	Participating regional core center (Number)
July 31, 2016	Saga	All	· Hepatitis seminar	Saga
November 26, 2017	Ehime	College students	· Hepatitis seminar · Talk on hepatitis awareness with hepatologist and special supporter	Ehime
July 8, 2018	Tokyo	All	· Hepatitis seminar · Information on exercise and hepatitis · Talk on hepatitis awareness between hepatologist and special supporter	Kanto regions (5)
November 21, 2018	Toyama	Elementary school students	· Hepatitis seminar · Talk on hepatitis awareness between hepatologist and special supporter	Toyama
July 27, 2019	Yamaguchi	All	· Distribution of leaflets about hepatitis awareness	Chugoku and Shikoku regions (10)
October 23, 2019	Hokkaido	High school students	· Hepatitis seminar · Talk on hepatitis awareness between hepatologist and special supporters	Hokkaido
November 2, 2019	Tokyo	All	· Hepatitis seminar · Talk on hepatitis awareness between hepatologist and special supporter	Kanto regions (4)
December 1, 2019	Aomori	College students	· Hepatitis seminar · "Shitte kan-en" dance with participants	Aomori
January 14, 2020	Ibaraki	Elementary and junior high school students	· Hepatitis seminar · Talk on hepatitis awareness between hepatologist and special supporter	Ibaraki
March 1, 2021	Online	All	· Classes on hepatitis awareness	Tohoku, Niigata and Saitama (3)

as other methods for precise detection of viral hepatitis. The video also explains the importance of checking the results and visiting a medical institution if the result is positive. It concludes with celebrity supporters saying, "We would like to share these videos with more people, so that more people learn about hepatitis".

#### *Support for partner companies' hepatitis awareness activities*

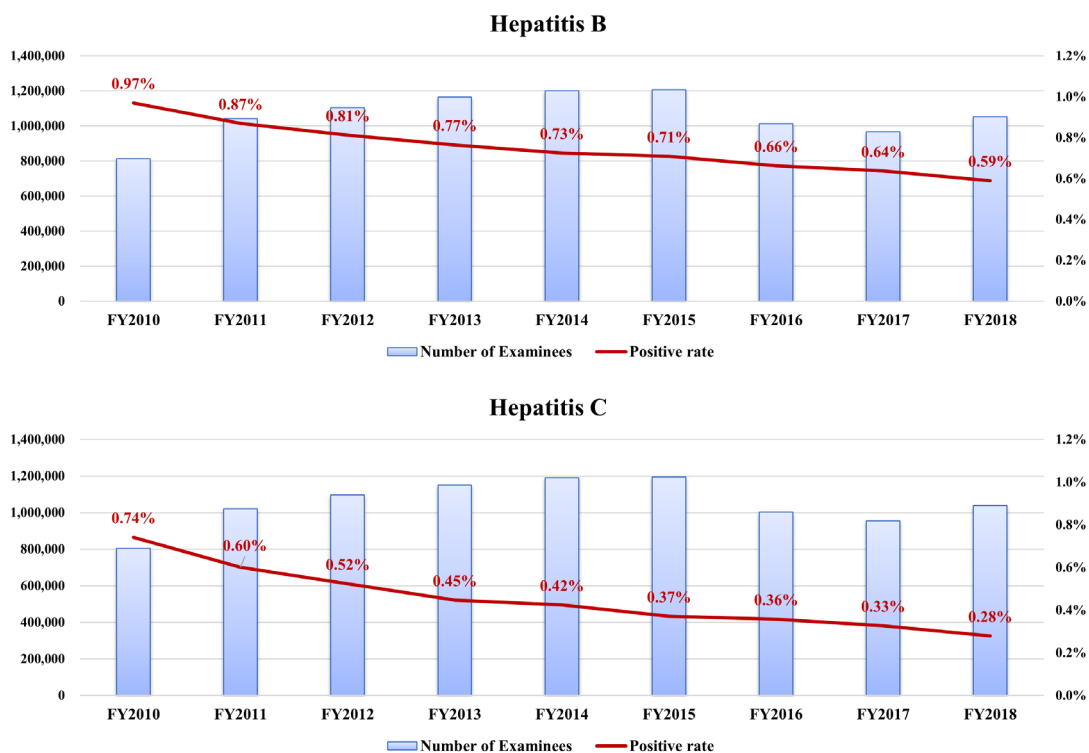
The "Shitte kan-en" project is recruiting partner companies that support the aims of the project. Possible ways to participate include: *i*) distributing booklets about viral hepatitis to employees, sharing posters to raise awareness of hepatitis, and providing the URL of websites about hepatitis; *ii*) holding study groups and seminars on hepatitis; and *iii*) conducting questionnaires on hepatitis.

The project provides partner companies with reports on the status of activities on the "Shitte kan-en" project's website. It also provides support for internal awareness-raising activities, and on-site seminars. Where company annual health checkups do not include a viral hepatitis

test, the project recommends employees take a viral hepatitis test provided by local governments or at testing facilities. By promoting these initiatives, the project aims to raise workplace awareness of the importance of early detection, diagnosis, and treatment of hepatitis, and hepatitis prevention. There are currently 195 companies and organizations participating in this project (as of May 2021).

#### *Support for the activities of the "Shitte kan-en" promoters*

"Shitte kan-en" promoters are hepatitis medical care coordinators (HMCCs) who support the project's activities in Japan, and who are responsible for disseminating information on the "Shitte kan-en" project in addition to their usual activities. The MHLW has aimed to strengthen regional hepatitis care networks through the Hepatitis Information Center. Local government and regional core medical centers have organized education programs, including a viral hepatitis lecture for medical workers to certify participants as an HMCC. By the end of March 2020,



**Figure 3. Hepatitis screening conducted by local governments in Japan.** The bars show the number of people being tested for viral hepatitis, and the line shows the rate of positive results at the local government level. Since the 2010 financial year, when the awareness-raising program was started, the number of people undergoing testing has increased, and the rates of positive tests for HBV and HCV have decreased year to year. *Abbreviations:* FY, financial year.

20,049 HMCCs had been certified in Japan. The expected role of HMCCs includes: *i*) to share up to date knowledge about viral hepatitis; *ii*) to support patients and their families by providing information and advice on hepatitis, directing them to consultation services, encouraging them to undergo examinations and consultations, and explaining the system; and *iii*) to play a coordinating role in promoting appropriate hepatitis medical care. HMCCs are located in communities, workplaces, hospitals, and other places that are familiar to patients. By providing materials and encouraging celebrities to attend events, the project aims to support the spread of awareness and further promotion about viral hepatitis. As of May 2021, 175 HMCCs have been registered as "Shitte kan-en" promoters.

As an example of an activity organized by promoters, a special educational class was held by a hepatologist, following a talk with a special supporter in a school. The special class was reported in both local and regional newspapers and on many websites.

**Future tasks**

A strong correlation is found between awareness of hepatitis testing and awareness-raising activities, and the hepatitis virus testing rate (7). Disseminating information about hepatitis is therefore desirable. The number of

people tested for hepatitis by the local government has increased since the project started, although it seems to have decreased slightly again more recently. The proportion of people testing positive for HBV and HCV has also been decreasing from year to year (Figure 3) (12). However, the national sampling surveys found that the proportion of people who tested positive and then sought medical help was 32.8% in 2011 and 31.9% in 2017. In other words, the link between obtaining a positive test result and seeking treatment did not improve over this period (1,9). We therefore know that even with awareness-raising, not all those who received a positive test for hepatitis will visit medical institutions specializing in liver disease. Those who do not may not receive further examinations and appropriate treatment. One of the motives for launching the "Shitte kan-en" project was to reduce undiagnosed and untreated cases.

To pick up latent hepatitis virus carriers who remain unaware of their status, it is essential to target awareness-raising. In general, positive feedback is important in knowledge retention for learners. For example, a concise Q&A may be a helpful way to determine how much knowledge has been retained. A survey on how many participants at events eventually responded to Q&A also provides feedback. Tailoring approaches to particular target groups could improve

awareness-raising, and hopefully also enhance the link from testing to treatment in patients with viral hepatitis. We recommend that central and local governments take action to create an environment where everyone can easily get access to testing and treatment.

## Conclusion

Choosing appropriate methods of awareness-raising to match target groups is likely to be the key to success. Evaluation of the effectiveness of this type of multifaceted approach is warranted, to reduce the undiagnosed population and improve the link from testing to care for viral hepatitis in Japan. Programs to raise awareness using a variety of methods are necessary to eliminate viral hepatitis.

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