Executive summary

Health Council of the Netherlands. Screening risk groups for hepatitis B and C. The Hague: Health Council of the Netherlands, 2016; publication no. 2016/16.

This advisory report deals with the question of whether it would be desirable to use screening to identify people with chronic hepatitis B virus (HBV) or hepatitis C virus (HCV) infections. This question is relevant because there are groups in the Netherlands that have higher rates of chronic infection with one of these viruses and because there have been major improvements recently in the treatment options for especially chronic HCV infections.

Screening can allow people to be identified who have unknowingly become infected by the virus and now are carriers – in other words, who are chronically infected. The main aim of screening is to track down carriers of HBV or HCV before they have developed symptoms. This will on average reduce the risk of them eventually developing severe liver conditions as a result of the chronic infection, such as cirrhosis and liver cancer. A second aim is to prevent the further spread of HCV and especially HBV.

In this advisory report, the Committee set up for this purpose, answers the question of whether screening the general population for HBV or HCV is desirable, or whether screening should be limited to specific risk groups.

A second question answered by the Committee is whether people who have been diagnosed with HBV or HCV in the past but are no longer receiving care should be traced (‘retracing’).

Types of screening and decision-making framework

Screening often takes the form of prevention programmes (at the national, regional or local level). However, screening can also be carried out in the doctor's surgery. In that case it is often termed '*case finding*'. The Committee has adopted this terminology.

To determine whether screening is beneficial or necessary on balance, various factors have to be weighed against one another. The Health Council of the Netherlands [Gezondheidsraad] has developed a framework for this. Key aspects of this framework are that screening should be focused on health problems that are significant in terms of their extent and severity and that the benefits of screening must outweigh the disadvantages. Furthermore, the Committee has adopted the principle that participation in screening must always be voluntary.

Nationwide screening for HBV and HCV not indicated

The Committee has concluded that screening the general population is not indicated for either HBV or HCV for several reasons. The key reason is that both infections are quite rare in the Netherlands: the prevalence in the general population is estimated at between 0.1 and 0.4 per cent for both chronic HBV and chronic HCV infections. A second reason is that 80 per cent of people chronically infected with HBV or HCV do not develop an illness. Screening would therefore not lead to improvement in the health of these individuals.

Screening is recommended for specific groups

The Committee distinguishes several groups of people among whom chronic HBV or HCV infections are more common or who have a greater risk of infection. The Committee does not think a nationwide screening programme is indicated for these people either. However, it does recommend using another method to screen for chronic HBV or HCV infections among these risk groups, provided that this can be combined with an offer of care and treatment in line with the applicable guidelines. The Committee also feels that all parties involved, including the national government, should actively assume their responsibility for both the content and administration of screening.

The Committee advocates a parallel three-track approach for residents of the Netherlands, whereby the third component only applies for HBV. In the first

track, the Committee recommends case finding by GPs for people in risk groups. The Committee also recommends case finding in the second track, to be carried out in institutions that are responsible for delivering care to people in risk groups or for accommodating these people (in particular institutions in addiction care and the penal system). In the third track, only for HBV, the Committee recommends local and regional screening programmes in cities and regions with relatively large groups of first-generation migrants who have lived in the Netherlands for a long time and who come from countries with relatively high levels of chronic HBV infection (2 per cent of the population or more).

The Committee also recommends screening staff in the healthcare sector for chronic HCV infection, and screening refugees from countries where HBV or HCV is relatively common, for chronic HBV or HCV infections respectively.

Migrants

On average, first-generation migrants from countries where chronic HBV or HCV infections are common are more likely to be chronically infected with one of these two viruses than the general Dutch population. That is why the Committee advises offering migrants from these countries screening for HBV or HCV. The Committee recommends using a threshold value of at least 2 per cent of the population in the country of origin being chronically infected with HBV or HBC. This screening could best be carried out as individual case finding by GPs.

The Committee also recommends setting up local or regional HBV screening programmes in cities or regions that have relatively large numbers of first-generation migrants who have lived in the Netherlands for a long time and who come from countries where chronic HBV infections are common. The Committee feels that such a screening programme could best be carried out by healthcare institutions operating locally or regionally.

Applications for such screening programmes must be checked against the Population Screening Act, which may require them to have a licence.

Drug users who regularly use or have used needles

The injection of drugs, particularly heroin, mainly dates from the period 1960 to 1990. Since the start of the needle exchange programmes, clean injection needles have almost always been used and the transmission of HBV and HCV through the injection of drugs is rare now.

The Committee does not consider individuals to be at risk if they injected drugs only once or only occasionally in the past and are now generally fully

integrated and participating members of society. However the Committee does consider people who *regularly* injected drugs during that period or still do to be a risk group still. That is because severe liver conditions due to chronic HBV or HCV infections often only develop decades later.

An estimated 3 to 4 per cent of people who regularly use or have used needles to inject drugs are HBV carriers. Substantially higher proportions are HCV carriers, particularly if they are also HIV positive. It is estimated that more than 90 per cent of the latter group are HCV carriers.

The Committee feels it is necessary to offer screening for HBV and HCV to people who regularly inject or injected drugs. If they are shown to be chronically infected with HBV, a decision needs to be made on whether to offer treatment or whether monitoring will suffice. If they are shown to be chronically infected with HCV, they should be offered a treatment with direct-acting antiviral agents.

The Committee considers chronic HBV or HCV infection among people who inject or injected drugs to be a consequence of their addiction. It therefore believes that case finding to detect HBV and HCV among these people is the duty of care of the regular addiction care sector and it stresses that these institutions should assume this task. Individuals who regularly inject or injected drugs and who cannot be reached through the regular addiction care institutions could perhaps be found through welfare centres, other healthcare institutions, GPs or penal institutions. Here too, as far as the Committee is concerned, priority should be given to HBV and HCV case finding for locating these drugs users.

Men who have sex with men

Chronic HBV infections are more common among men who have sex with men than among the general population. Screening for HBV is part of the vaccination programme for preventing infection with HBV that has been set up for men who have sex with men.

Men with HIV who have sex with men are relatively more likely to have chronic HCV infections. The Committee therefore recommends offering these men screening for HCV as well. If they are shown to have a chronic HCV infection, they should be offered treatment with direct-acting antiviral agents. The Committee is of the opinion that case finding to detect HCV among this group of people is covered by the duty of care of the HIV treatment centres.

As regards men who have sex with men and who have not been diagnosed with HIV, the Committee recommends monitoring to check for chronic HCV infections, as there are signs that the number of chronic HCV infections among this group is on the increase.

Healthcare employees

The risk of healthcare employees becoming infected with HBV has fallen considerably thanks to the current vaccination programme. The Committee does not believe that any further measures are required.

In view of the greatly improved possibilities for treating chronic HCV infections, the Committee recommends offering screening for HCV to staff who run the risk of becoming infected through contacts with patients or of infecting others, with the offer of treatment where appropriate.

The Committee sees chronic HCV infections among these healthcare employees, who both run a risk and constitute a risk, as an occupational disease. That means that it is the employer's responsibility to offer screening.

Refugees

As regards refugees, the Committee recommends offering them screening for HBV and HCV during the admission procedure, provided that the screening can be combined with opportunities for care and treatment in line with the applicable guidelines. Here too, it recommends adopting a threshold value of at least 2 per cent of the population in the country of origin being infected.

If refugees are not screened for HBV during the asylum application procedure, there is a continued risk of infections being transmitted in the centres. The Committee therefore recommends paying attention in the information provided to refugees to the risk of sexual transmission of HBV.

Desirability of retracing

The Committee feels that the improved treatment options for chronic HBV infections and (especially) chronic HCV infections are a reason for retracing people who have been diagnosed with a chronic infection in the past but are no longer receiving care. This retracing should focus on giving patients the opportunity to make use of the new treatment options. Once they have been retraced, they must promptly be given appropriate care if they so wish.

Research and monitoring

The Committee notes various areas where scientific research or patient monitoring could improve knowledge about chronic HBV and HCV infections.

Research on the efficiency of screening pregnant women

In the Netherlands, pregnant women are screened for HBV as a matter of course. Given the developments in the treatment of chronic HCV infections, the Committee recommends to investigate whether it would be efficient to screen pregnant first-generation migrants from low-income and middle-income countries for HCV as well as HBV.

Monitoring HCV among men who have sex with other men and are HIV-negative

Chronic HCV infections seem to be increasing among men who have sex with other men and are HIV-negative. Although the numbers are still small at present, the Committee recommends keeping a close eye on this development. It feels that monitoring is indicated.

Data collection

The Committee recommends setting up a national register to collate data on all individuals who are chronically infected with HBV or HCV. The data that is collected could be used to evaluate the screening, among other things. That means that additional data is needed, for example on participation.

Given the current treatment options, the Committee realises that the data on chronic HCV infections will mainly be useful for scientific research; at least some of the people treated for chronic HCV infections will no longer be receiving care after their treatment has finished. However, the Committee does not rule out the possibility of a clinical significance in the future too.