



Bridging the Gap between Viral Hepatitis and Liver Cancer

Policy Recommendations of the
European Expert Group for Better
Control of Liver Cancer by Optimally
Managing Viral Hepatitis

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I. Recommendations

1. A vast majority of liver cancer cases could be prevented with appropriate management of viral hepatitis B and C. Therefore, specific policy measures are required to ensure earlier detection of viral hepatitis, cirrhosis and liver cancer and therefore increase the chances for better health outcomes.
2. The EU and its Member States should ensure that awareness, prevention and treatment of viral hepatitis, liver cancer and cirrhosis, are envisaged holistically in all relevant policy areas. Education and awareness-raising, especially among policy makers, the general public and healthcare professionals, is pivotal to improve the prevention and management of viral hepatitis, cirrhosis and liver cancer. Thus, there is an urgent need to better understand and address the unmet needs related to viral hepatitis and liver cancer.
3. Prevention measures must be offered, such as regular screening to high-risk groups, so as to detect viral hepatitis, cirrhosis and liver cancer.
4. In order to allow for a better understanding of viral hepatitis, the ECDCⁱ should monitor the conditions viral hepatitis can lead to (such as cirrhosis and hepatocellular carcinoma (HCC)) if left untreated. Prevention measures must be offered, such as regular screening to high-risk groups, so as to detect viral hepatitis, cirrhosis and liver cancer.
5. Member States must implement vaccination programmes for hepatitis B and case finding programmes for hepatitis B and C as to prevent viral hepatitis from spreading.
6. The EU and its Member States should encourage the sharing of best practices in terms of management of viral hepatitis and liver cancer.
7. Member States should implement holistic prevention strategies, and screening programmes for viral hepatitis, cirrhosis and liver cancer, then put in place an appropriate follow up of patients diagnosed with viral hepatitis, cirrhosis and liver cancer and prioritise funding for providing access to innovative treatment options.
8. Stakeholders should be consulted in setting up Reference Networks and labeling of Centres of Expertise, including, notably, patients' representatives, academic experts and treating physicians. The European Commission and the EUCERD, its advisory body on rare diseases, should include liver cancer in their work.
9. The European Commission, via notably the Public Health Programme and the Framework Programme for Research and Innovation, should support stakeholders in the developing of medical guidelines addressing the causes of liver cancer and developments in liver cancer management.
10. The EU and Member States should support the setting up of specific patients' registries for viral hepatitis and liver cancer as to allow the collection of data that could facilitate surveillance, research and the overall management of these conditions.
11. The EU and Member States should develop and implement an action plan to tackle viral hepatitis and cirrhosis and liver cancer, as recommended in the World Health Organization (WHO) Resolution on Viral Hepatitisⁱⁱ.
12. Member States, with appropriate support from the EU, should prioritise action on liver cancer and its causes in national cancer plans.
13. Actions in the field of cancer, including the European Partnership for Action against Cancer (EPAAC), and the European Code Against Cancer should encourage optimal management of viral hepatitis to prevent liver cancer.

14. The EU Health for Growth programme should encourage cooperation between the Member States and lend support to their action as to enhance cooperation between oncology- and hepatology-experts and ensure a better management of viral hepatitis, cirrhosis and liver cancer.
15. Online communication tools for experts, healthcare professionals and policy makers should be created as to pool expertise and allow discussion on how their initiatives should best address viral hepatitis- and liver cancer-related issues.



Foreword

Viral hepatitis is a major health scourge, with infections causing around 1 million deaths per year worldwide.ⁱⁱⁱ Hepatitis viruses directly and repeatedly attack the liver, damage it and are the most common single factor causing cirrhosis and liver cancer^{iv}. These viruses, around 100 times more contagious than HIV^v, can affect anyone and can cause hepatocellular carcinoma (HCC). HCC is the most common type of liver cancer and the third most common cause of death from cancer worldwide.^{vi}

Several policy initiatives have designated viral hepatitis as an urgent public health issue since the European Parliament's Written Declaration on Hepatitis C^{vii} and the Recommendation of the EU Hepatitis B Expert Group^{viii}. All of these call for more prevention, earlier diagnosis, wider access to treatment and care as well as measures to increase awareness on viral hepatitis, its causes and possible consequences such as cirrhosis and cancer. The relatively recent inclusion of chronic viral hepatitis in diseases to be monitored by the European Centre for Disease Prevention and Control (ECDC), the publication of the Report on viral hepatitis B and C in the EU and neighbouring countries^{ix} and the WHO Resolution on Viral Hepatitis^x are important first steps. On the other hand, while prevention of cancer has risen to a public health priority, the link between viral hepatitis and liver cancer is still not appropriately addressed in existing policy frameworks.

Sadly, all these initiatives have also shown that much still has to be done in order to improve the management of both viral hepatitis and liver cancer. Concrete policy measures have yet to be adopted in many Member States as to improve prevention, screening, early detection, treatment and care.

The issues posed by viral hepatitis and liver cancer cannot be addressed without a holistic approach. Viral hepatitis and liver cancer must therefore be addressed by forward-looking policies, encompassing public health, research and social and employment affairs. In a period of economic constraints and budget cuts threatening our social model, the need to recognise the real impact of these deathly conditions - including their impact on one's ability to lead a normal, productive life, is paramount.

An integrated strategy to address viral hepatitis and its consequences such as liver cancer is still lacking. This report aims at identifying and addressing the issues posed by these conditions and hopefully bridge the gap between strategies on sexually- and blood borne-transmitted infections and strategies to fight cancer.

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Facts: Hepatitis B

- Hepatitis B is the most common cause of cancer after tobacco.^{xi}
- Hepatitis B can cause chronic liver disease and puts people at high risk of death from cirrhosis of the liver and liver cancer.^{xii}
- Individuals chronically infected with hepatitis B virus are 200 times more likely to develop HCC than uninfected people.^{xiii}
- Hepatitis B is 50 – 100 times more infectious than HIV.^{xiv}; worldwide, it is estimated that 350 million people are chronically infected with hepatitis B.^{xv}
- 1 out of 4 adults who become chronically infected with hepatitis B during childhood, later die from liver cancer or cirrhosis caused by the chronic infection.^{xvi}
- Globally, hepatitis B virus accounts for an estimated 600 000 deaths each year, mainly due to the consequences of chronic hepatitis, such as cirrhosis and liver cancer.^{xvii}
- Hepatitis B is preventable with a generally safe and effective vaccine.^{xviii}
- Hepatitis B is largely asymptomatic.

Facts: Hepatitis C

- Every year, more than 350 000 people die from hepatitis C-related liver diseases.^{xix}
- Around 170 million persons are estimated to have chronic hepatitis C.^{xx}
- There are around 5 million chronic Hepatitis C Virus carriers in Western Europe alone.^{xxi}
- Hepatitis C is not preventable by vaccination.^{xxii}
- HCC arising in chronic hepatitis C carriers is generally associated with liver cirrhosis.^{xxiii}
- Of those infected with the Hepatitis C Virus, 50–80 % will develop chronic infection; up to 50 % cirrhosis; and 1 to 5 % will develop liver cancer over a period of 20 to 30 years.^{xxiv}
- Hepatitis C is largely asymptomatic.
- Three to four million new cases of hepatitis C occur each year.^{xxv}

Facts: Liver cancer

- Liver cancer is the third most common cause of death from cancer worldwide.^{xxvi}
- Hepatocellular carcinoma (HCC) is the most frequent cancer of the liver.^{xxvii}
- HCC accounts for 70 % to 85 % of cases of liver cancer worldwide.^{xxviii}
- In 2008 alone, liver cancer caused around 694 000 deaths worldwide.^{xxix}
- The lack of appropriate treatment of liver cancer leads to deaths within months of diagnosis.^{xxx}

I. Awareness and prevention

Facts

- The majority of hepatitis sufferers in Europe are unaware of their condition.^{xxxvi} In 2009, 78.5 % of Europeans were unaware of hepatitis at the time of their infection.^{xxxvii} Of these, only 23 % of Europeans were aware of hepatitis B at the time of their infection and 20 % for hepatitis C.^{xxxviii}
- Viral hepatitis infections are responsible for the deaths of 1 million people worldwide, every year.^{xxxix}
- There is a need to increase awareness among communities and healthcare workers to prevent viral hepatitis.^{xl}
- It has recently been estimated that there are more than 1 million needle-stick injuries in the European Union every year^{xli} – even though preventing the spread of infections in hospital and community health-care settings, through training in safe injection practices, could reduce the incidence of hepatitis B and C.^{xlii}
- Unsafe injection practices are estimated to be responsible for 21 million new Hepatitis B Virus infections and 2 million new Hepatitis C Virus infections every year.^{xliii}

Anyone can be affected by viral hepatitis or liver cancer. Prevention and awareness-raising programmes should target the general public, but also factor in the specific needs of high-risk or more vulnerable groups, including healthcare professionals, migrant population, substance abusers and inmates.

Awareness and education on viral hepatitis is pivotal to improve prevention and management of liver cancer. The asymptomatic nature of hepatitis infections and the general lack of awareness on the risks associated with hepatitis, contributes to a staggering number of people being affected. Viral hepatitis is commonly known as the “silent killer” as a lot of patients only become aware of their condition once their infection has evolved into liver cirrhosis or end-stage liver disease such as HCC. If liver cancer is not diagnosed and treated in a timely manner, patients can die in a matter of months.^{xliiii}

Raising awareness among policy makers, the general population and vulnerable groups is crucial to prevent the spread of viral hepatitis and enable its management – which would prevent complications such as cirrhosis or liver cancer or allow these to be addressed at a stage where several treatment options may be envisaged.

Prevention and management of both viral hepatitis and liver cancer must be improved by providing high-risk groups with the opportunity to be screened regularly. Patients with viral hepatitis should be made aware that regular liver cancer screening can help prevent progression to advanced stages of liver cancer.

The EU and its Member States have a driving role to play in bridging the gap between oncology and hepatology, so as to pool expertise and implement the most effective actions in the fight against viral hepatitis and liver cancer.

There is a need to raise awareness on the impact of risk factors such as the use of alcohol or diabetes and stress the importance of adopting a healthy lifestyle to prevent progression to liver cancer or liver cirrhosis, especially among people infected with viral hepatitis. Relevant stakeholders can play a key role by making sure policy makers fully understand the unmet medical needs and the contribution of medical innovation in the field of viral hepatitis and liver cancer.

Recommendations

1. The EU and its Member States should ensure that awareness, prevention and treatment of viral hepatitis, liver cancer and cirrhosis, are envisaged holistically in all relevant policy areas. Education and awareness-raising, especially among policy makers, the general public and healthcare professionals, is pivotal to improve the prevention and management of viral hepatitis, cirrhosis and liver cancer. Thus, there is an urgent need to better understand and address the unmet needs related to viral hepatitis and liver cancer.
2. Prevention measures must be offered, such as regular screening to high-risk groups, so as to detect viral hepatitis, cirrhosis and liver cancer.
3. Member States must implement vaccination programmes for hepatitis B and case finding programmes for hepatitis C as to prevent viral hepatitis from spreading.
4. Online communication tools for experts, healthcare professionals and policy makers should be created as to pool expertise and allow discussion on how their initiatives should best address viral hepatitis- and liver cancer-related issues.

II. Surveillance and screening

Facts

- Estimates of patients infected with hepatitis C as compared to the number of patients treated in Europe are alarming. For example, in Belgium there are approximately 73,000 patients infected with hepatitis C whereas only 3571, or 4.8 % are being treated; in France only 15 % are treated and in the UK only 3.3 %. In Germany, 1 million people are estimated to be infected with viral hepatitis but no official funding is available to address patients' needs due to a lack of recognition of viral hepatitis.
- The World Health Organization's Resolution on Viral Hepatitis urges Member States to implement and/or improve epidemiological surveillance systems and to strengthen laboratory capacity, in order to generate reliable information for guiding prevention and control measures.^{xli}
- Screening for Hepatitis B and C can significantly reduce mortality and morbidity.^{xlii}
- Together, viral hepatitis B and C have affected more than 2 billion people worldwide^{xliii} – 500 million of which are chronically infected; because these are largely asymptomatic, they often remain unnoticed until the infections develop into acute and chronic hepatitis^{xliv}
- The harmonization process of surveillance of viral hepatitis in the EU is one of the priorities for the European Centre for Disease Prevention and Control (ECDC)^{xlv}, which estimates that each year there are between 7000 and 8000 new cases diagnosed with hepatitis B and between 27 000 to 29 000 newly diagnosed cases of hepatitis C in the EU/EEA.^{xlvi}
- In Europe alone, hepatitis B kills 36,000 people every year.^{xlvii} Hepatitis B has a prevalence rate of 6- 8 % in Romania, and around 2-4 % in Bulgaria, Latvia and Greece.^{xlviii} On the other hand, hepatitis C has higher prevalence in Southern Europe, with a high prevalence rate of 3 % in countries such as Bulgaria, Greece, Italy and Romania.^{xlix}
- Japan introduced its screening programme for HCC patients in 1980, where the 5 year survival rate of an HCC patient was 5.1 %. Together with the screening programme and the advances made in treatments for HCC, and over a span of 15 years, the survival rate of HCC patients in Japan increased from 5.1 % to 42.7 %.ⁱ
- Screening of blood and blood products should be standard practice in national hepatitis B and C prevention programmes in the EU.ⁱⁱ

The ECDC has prioritised the harmonization of surveillance of viral hepatitis.ⁱⁱⁱ On the other hand, the WHO Resolution on Viral Hepatitis urges Member States to implement surveillance systems in order to generate reliable information for guiding prevention and control measures.ⁱⁱⁱⁱ It is now the responsibility of the EU and its Member States to take action and improve surveillance mechanisms which will eventually contribute to prevent viral hepatitis-caused diseases.

Governments often request data to start ambitious, wider programmes tackling viral hepatitis but, worldwide, there is still a lack of data concerning infected patients. This lack of data is often associated with differences between health-care systems, lack of stable surveillance mechanisms and stigmatization of patients.

Setting up specific patients' registries for viral hepatitis and liver cancer would allow for the collection of data that could facilitate surveillance, research and the overall management of these conditions. While it is important to better coordinate surveillance systems, providing patients with the treatment and care they need should be a key priority. Experts consider that even in the absence of this data, action should be taken: the most conservative estimates suggest that there are several million people infected with chronic viral hepatitis in Europe, only a minority of whom is aware of their infections.

Tools, including registries, must be put in place as to perform proper surveillance and gather the necessary data on viral hepatitis and the diseases it causes - but this should not slow down the development of holistic policies to address viral hepatitis, cirrhosis and liver cancer, nor prevent patients' access to the treatment and care they require.

Screening should be accessible to the general population and specific attention should be given to high-risk groups. When countries include screening for viral hepatitis in blood donation programmes only^{iv}, those who do not donate blood (who constitute the vast majority of the population) are excluded from the screening programme.

Screening of patients has proven to be one of the most cost-effective ways to reduce the incidence of viral hepatitis, which can cause cirrhosis and liver cancer.^{iv} Successful screening programmes can stabilize or even decrease the incidence of HCC, as shown by the experience of countries like Taiwan, Japan and Singapore.^{vi}

Recommendations

1. In order to allow for a better understanding of viral hepatitis, the ECDC^{vii} should monitor the conditions viral hepatitis can lead to (such as cirrhosis and hepatocellular carcinoma (HCC)) if left untreated.
2. The EU and its Member States should encourage the sharing of best practices in terms of management of viral hepatitis and liver cancer.
3. Member States should implement holistic prevention strategies, and screening programmes for viral hepatitis, cirrhosis and liver cancer, then put in place an appropriate follow up of patients diagnosed with viral hepatitis, cirrhosis and liver cancer and prioritise funding for providing access to innovative treatment options.
4. The EU and Member States should support the setting up of specific patients' registries for viral hepatitis and liver cancer as to allow the collection of data that could facilitate surveillance, research and the overall management of these conditions.

III. Improving care and treatment

a. Shifting the paradigm in access to treatment

Facts

- Liver cancer caused by the hepatitis B virus is a major cause of cancer death among women, and is among the top three causes of death from cancer for men.^{lviii}
- The hepatitis B virus and the hepatitis C virus are the leading causes for hepatic cirrhosis (scarring of the liver) and primary liver cancer (HCC).^{lix} The inextricable link between HCC and viral hepatitis is a fact, but is not reflected in policy initiatives at the EU level.
- Managing viral hepatitis and HCC together through early detection and diagnosis, treatment and follow-up care can have drastic effects on patients and healthcare professionals. In Italy, an estimated 64 % of HCC patients have hepatitis C virus.^{lx}
- 78 % of HCC cases are attributable to viral hepatitis, of which the hepatitis B virus accounts for 53 % and the hepatitis C virus, 25 %.^{lxi}
- The mortality rate for people with chronic liver disease (13.8 per 100, 000 inhabitants) is similar to that for diabetes (13.6 per 100,000 inhabitants).^{lxii}
- Countries such as Germany spend over 6000 EUR on a person affected with HIV/AIDS as opposed to a mere 0.05 Euros on someone with viral hepatitis.^{lxiii}

Innovation in the fight against liver cancer is bound to change the treatment landscape – but the EU and its Member States must prepare for a real paradigm shift in the way liver cancer and its causes are being addressed

The EU and its Member States need to adopt a holistic approach towards improving the management and links between viral hepatitis, liver cancer and liver cirrhosis. Management of these conditions must be integrated into existing public health frameworks and ambitious social and employment-related policies are needed to ensure their success.

The link between viral hepatitis and its complications should be factored in a wide set of policy areas; these should include public health, but also employment and civil liberties as to address safety and ethics-related questions. It is notably imminent to integrate viral hepatitis management, including treatment, in cancer prevention strategies as a vast majority of liver cancers could be prevented or better addressed with appropriate management of viral hepatitis.

Governments and national health authorities do not recognize sufficiently the gravity of the situation of viral hepatitis-caused diseases. This results in incredibly low funding to address these diseases: while the WHO estimates that around 500 million people worldwide are chronically infected by Hepatitis B and C, funds dedicated to these are lower than those dedicated to other sexually- or blood-borne conditions such as HIV/AIDS that affect around 35 million.^{lxiv} Governments should start by recognising that viral hepatitis is a virus that can cause liver cancer and that appropriate strategies, funding, recognition and awareness are necessary to fight these.

Innovative policies, systems of care and funding schemes are required to enable prevention, early detection and access to future innovative treatments for liver cancer. Policies and strategies should be adapted to the reality and specific needs of each individual country – the EU can enable best practices sharing.

There will be a need to allocate appropriate financial resources to ensure optimal access to viral hepatitis and liver cancer treatments, especially in areas where serious unmet needs continue to exist. Partnerships between policy makers and experts representing patients, academia and industry should be created to best allocate existing funds. If the number of patients with viral hepatitis decreases, it will be possible to reduce the number of patients with liver cancer.

b. Organization of care

Facts

- Recent studies on liver cancer compare needs for HCC control, across Europe. Results suggest greater public and political awareness, prevention, funding and education are the main priorities, and that there is scope for a European effort on HCC control that would take into consideration countries' individual needs.^{lxv}
- Medical innovation and appropriate management of viral Hepatitis and liver cancer can increase the survival rates: these could result in a significant reduction in mortality over the period of 2012 to 2021 and countries such as the UK could experience a 384 % decrease in mortality as compared to the current situation.^{lxvii}

Healthcare professionals from different spheres, including hepatology and oncology, must be supported as to collaborate more and discuss the best options for patients affected by viral hepatitis infections, cirrhosis and liver cancer. Each Member State needs to address particular issues according to national specificities. Many EU countries share a need for improvement in political- and public awareness, lifestyle risk factor management and national statistics – which suggest that a collaborative approach is needed.^{lxviii}

Early detection of liver cancer can substantially improve the chances of survival after initial diagnosis, also considering that the earlier liver cancer is diagnosed the more treatment- and care- options can be envisaged.

There is a common need to create of Centres of Reference and appropriate referral networks for viral hepatitis and liver cancer. Multidisciplinary teams including hepatologists, oncologists, gastroenterologists, radiologists, surgeons and pathologists are required to effectively manage viral hepatitis and liver cancer.

Referral networks should be adapted to national situations and a single framework cannot be transposed as such in every country. An EU action is needed to exchange best practices and promote a paradigm change in liver cancer management, but Member States will have to adapt these to their national reality.

The EU should also support Member States in developing European Reference Networks between healthcare providers and centres of reference in Member States, in accordance with the recently adopted Directive on Patients' Rights in Cross-border Healthcare (2011/24/EU). This would "facilitate the improvement in diagnosis and the delivery of high-quality, accessible and cost-effective healthcare for all patients with a medical condition requiring a particular concentration of expertise in medical domains where expertise is rare". Reference Networks and Centres of Reference should be set up and labeled in close consultation with stakeholders, including notably patients' representatives, academic experts and treating physicians. This process should be supported by the European Commission via the Public Health Programme and the Framework Programme for Research and Innovation^{lxx}.

Recommendations

1. A vast majority of liver cancer cases could be prevented with appropriate management of viral hepatitis B and C. Therefore, specific policy measures are required to ensure earlier detection of viral hepatitis, cirrhosis and liver cancer and therefore increase the chances for better health outcomes. Member States should address liver cancer patients' unmet needs by implementing holistic prevention strategies and prioritise funding for providing access to innovative treatment options.
2. Stakeholders should be consulted in setting up Reference Networks and labeling of Centres of Expertise, including, notably, patients' representatives, academic experts and treating physicians. The European Commission and the EUCERD, its advisory body on rare diseases, should include liver cancer in their work.

3. The European Commission, via notably the Public Health Programme and the Framework Programme for Research and Innovation, should support stakeholders in the developing of medical guidelines addressing the causes of liver cancer and developments in liver cancer management.
4. The EU and Member States should develop and implement an action plan to tackle viral hepatitis and cirrhosis and liver cancer, as recommended in the World Health Organization (WHO) Resolution on Viral Hepatitis.^{lxxi}
5. Member States, with appropriate support from the EU, should prioritise action on liver cancer and its causes in national cancer plans.
6. Actions in the field of cancer, including the European Partnership for Action against Cancer (EPAAC), and the European Code Against Cancer should encourage optimal management of viral hepatitis to prevent liver cancer.
7. The EU Health for Growth programme should encourage cooperation between the Member States and lend support to their action as to enhance cooperation between oncology- and hepatology-experts and ensure a better management of viral hepatitis, cirrhosis and liver cancer.

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