It is Time to Act Now!

Process Paper – A Living Document

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FOREWORD

by Ruth Dreifuss, former Federal Councillor and
Pr Michel Kazatchkine, former Executive Director of the Global Fund to fight AIDS, Tuberculosis and Malaria

Hepatitis B and C have now truly become mainstream issues in global health, following years of being eclipsed from the global health scene. More and more countries are now building specific national programs and mobilizing domestic resources to fight hepatitis. And more and more countries are developing integrated HIV and hepatitis programs. «Integrating» HIV, hepatitis and TB care and increasingly «decentralizing» services to primary healthcare preside over many of the programmatic discussions at the World Health Organization in Geneva today. Last September 2018, fourteen United Nations agencies committed to join forces to end the epidemics of HIV, tuberculosis (TB) and viral hepatitis – Europe’s deadliest communicable diseases.

As discussed in this document, significant progress has taken place in Switzerland since the establishment of the Swiss Hepatitis Strategy, five years ago, a multi-stakeholder initiative aimed at increasing epidemiological knowledge about hepatitis, increasing awareness in the general public and among health professionals, accelerating access to diagnosis and treatment and, ultimately, reducing morbidity and mortality.

«The Swiss Hepatitis Strategy is well positioned to help lead Switzerland towards elimination of hepatitis at national and European levels.»

Social determinants and individual behaviours that put particular groups of people at increased risk of HIV, TB and hepatitis largely overlap between the three diseases. A people-centered public health approach to the three diseases requires a focus on these at-risk, so-called «key affected» populations: people who inject drugs, men having sex with men, sex workers, prisoners and migrants. Here the hepatitis community can share its experience with that of the HIV community, which has a long history of commitment to addressing the specific needs of key affected populations.

The objective of eliminating a disease provides us with great opportunities, hope, and energy, but also invites a critical analysis of the medical and social challenges that it implies. The Swiss Hepatitis Strategy, as an inclusive partnership of stakeholders with a focus on most at risk populations and a strong background of collaboration between the hepatitis and HIV communities, is well positioned to help lead Switzerland towards elimination of hepatitis at national and European levels.

Both of us feel privileged to have been associated with the Swiss Hepatitis Strategy from its inception.
EXECUTIVE SUMMARY

Viral hepatitis B and C are chronic infections prevalent in Switzerland and they are placing a substantial burden on the national health care system. Viral hepatitis accounts for mortality rates five times higher than HIV. These silent diseases often progress with few symptoms, even in the later stages, causing considerable individual, social and economic harm. And even though highly efficient prevention and treatment measures are available, public awareness, detection and treatment of viral hepatitis remain unsatisfactory.

Driven by the concerns over this unresolved public health issue, in 2014 a private initiative was launched: the Swiss Hepatitis Strategy (later referred to as SHS, the Strategy or the network). Over 80 personalities from the medical field, the economy, peer group and patient associations, funding agencies and politics joined the project to combat viral hepatitis in Switzerland. 34 national and international organisations endorse it.

The project is led by a lean and cost efficient structure. The network members have contributed over 3,500 hours of voluntary work so far. The strategy’s course of action is based on a bottom-up approach called the «Governmental Learning Spiral» (GLSp). It is a multi-stakeholder process, in which those who develop something will also implement it. The association Swiss Hepatitis provides the legal framework for the Swiss Hepatitis Strategy. Together with the supervisory board the network with its five steering groups represents the strategic body of Swiss Hepatitis. At the operational level, a managing director is in charge, coordinating and managing all activities of the flagship projects concerned with communication and politics.

The vision of the Swiss Hepatitis Strategy is the elimination of viral hepatitis in Switzerland by 2030. In order to reach this ambitious goal, the strategy aims to first reduce the socio-economic impact of viral hepatitis on the individual, the community and the general public level, secondly, to decrease transmission of viral hepatitis B and C, and thirdly, to bring down morbidity and mortality rates caused by viral hepatitis. Clearly defined epidemiological target parameters allow an assessment of the strategy process.

Some of the key outcomes so far have been successful lobbying activities to achieve universal access to HCV treatment, growing awareness of viral hepatitis in the general population thanks to a strong and continuous media presence, the founding of a patient organisation and financial support from the national health authorities.
In comparison with other countries, the Swiss Hepatitis Strategy has allowed Switzerland to make up lost ground in the fight against viral hepatitis in the past five years. However, despite these encouraging outcomes, the network members are well aware that more efforts are needed to reach the goal of elimination. That is why they have announced further activities as flagship projects, such as implementing additional strategies to improve detection rates, involving general practitioners into hepatitis care, improving the cascade of care in prisons, and increasing follow-up appointments of treated patients. Raising awareness among the general public, among high-risk groups, but also within the medical profession has been defined as a high priority area. With the unwavering commitment of all stakeholders’ involved and strong political support, Switzerland has the potential to become a global leader in eliminating viral hepatitis.
1. INTRODUCTION

This document shows the updated outcomes of the Swiss Hepatitis Strategy, and what five years of voluntary work by its network members, to date over 3,500 hours, have achieved. The activities and aims of the Swiss Hepatitis Strategy extend over a period of 16 years, in a highly dynamic field regarding research and therapeutic and diagnostic developments.

Therefore, this Process Paper, the fourth version of its kind, is a «living document», which will be continuously adjusted as the strategy develops. This allows us to take new evidence and developments into account and to adapt the goals and the course of action accordingly. It serves as a guideline for the activities of all participants involved and it ensures that the network members, potential sponsors and other interested parties are up-to-date and kept abreast of all developments.
2. BACKGROUND

2.1. The hepatitis epidemic and its impact on public health

Today, hepatitis B and C are a serious global health threat, despite the highly effective new treatments available. Together they are responsible for over 1.34 million deaths every year. In comparison, 940,000 deaths are caused by HIV and 440,000 by malaria.\textsuperscript{1} Worldwide, approximately 328 million people live with viral hepatitis. Switzerland, which has one of the best healthcare systems in the world, is no exception: an estimated 40,000 people are infected with the hepatitis C virus (HCV) and 44,000 with the hepatitis B virus (HBV). Only about two out of three people living with viral hepatitis are aware of their disease (see Figure 1).

![Fig. 1: The so-called care cascade for hepatitis C in Switzerland in 2017\textsuperscript{2}](image)

Viral hepatitis is the predominant cause for liver transplants. Mortality related to hepatitis B and C in Switzerland is more than five times higher than HIV-related mortality (see Figure 2). While the mortality in HIV-infected patients, who suffer from a disease that cannot be cured, has been steadily decreasing over the years, hepatitis C-related mortality has been constantly high for more than 15 years, despite the availability of a cure since the 1990s. Mortality related to extrahepatic manifestations of hepatitis C like diabetes, cardiovascular disease and several malignancies have not even been taken into consideration in these figures.
Fig. 2: Comparison of the mortality rates of HIV, HBV and HCV in Switzerland, 1995–2014. In 2014 the graph shows a five times higher mortality for HCV than for HIV.³

Despite these alarming numbers, viral hepatitis has until recently received very little attention from the general public, policy makers, patients and health care professionals. The lack of political focus was often explained by the «class stigma» attached to hepatitis. High-risk groups for acquiring and spreading the disease are:

- people who use drugs (PWUD);
- children of infected mothers;
- professional sex workers;
- prison inmates;
- migrant populations; and
- men who have sex with men (MSM).

These people have very little political leverage. For a long time, low levels of awareness have remained a significant barrier to respond efficiently to this growing epidemic.
Since the 1990s, the Swiss health authorities have more than once actively decided against giving viral hepatitis the same priority as for example HIV. The Swiss Federal Office of Public Health (FOPH) decided to focus its actions only on people who use drugs. And yet, they make up only about 50% of the HCV-infected population, even less when it comes to HBV.\(^6,7\) Despite the FOPH’s focus on people who use drugs, the cascade of care among these people is still unsufficient.\(^8\)

Fig. 3: Care cascade of people in opioid substitution therapy in the Swiss canton of Aargau: Despite clear directions to test everyone in opioid agonist treatment (OAT) programmes, huge gaps in the cascade of care for these people are a sad fact.\(^8\)

According to the Euro Hepatitis Index 2012 report\(^9\), which measures the effectiveness of prevention, screening and treatment instruments, Switzerland ranks only 12\(^{th}\), in the specific area of case finding and screening 17th. The prevalence of infections is estimated to be approximately 0.5% for both, HBV and HCV.\(^2\) The cost incurred by HCV alone amounts to an estimate of over CHF 100 million for healthcare expenditures per year.\(^10\)

With the development of Direct Acting Antiviral (DAA) therapy and interferon-free treatments (see Fig. 4), in 2014, a revolutionary new HCV treatment became a reality.\(^11\) In 25 years, the field of viral hepatitis advanced from the discovery of the virus to the dawn of the curative treatment era.\(^12\) While HBV has been a preventable disease by way of vaccination for decades and treatable to stop progression, HCV is preventable with appropriate measures and curable at last.
Fig. 4: Development, cure rate and complexity of HCV treatment – Interferon (IFN), Ribavirin (RBV), Pegylated Interferon (PEG-INF), and DAA.

Risk-based screening strategies as recommended by the FOPH today proved to be insufficient. This is revealed by a new study of the FOPH (see figure 5). The burden of viraemic hepatitis C can be reduced much faster with alternative screening programmes. But we need to know more first, before an efficient and feasible screening strategy can be determined.13

Fig. 5: Modelling of risk-based screening vs. universal screening
A new modelling study shows that significantly more efforts in testing and treating hepatitis C is needed in order to eliminate this dangerous infectious disease in Switzerland by 2030. If testing and treating are continued as before, 20,000 people would still be chronically infected with hepatitis C in Switzerland in 2030. The number of infected individual would decrease only by 50 percent, as 40,000 people are currently living with the virus in Switzerland. 4,400 people will have to be treated in 2019 alone to achieve the elimination goal. 3,000 patients have received treatment in 2030. With more efforts in diagnosis and treatment, the number of chronically infected individuals will drop to less than 4,000. This could prevent up to 1,200 deaths from hepatitis C till 2030 (see figure 6).

Fig. 6: Increase diagnosis and treatment would drastically reduce the burden of disease due to hepatitis and could save up to 1’200 lives till 2030 (source: Müllhaupt 2018 et al.)

After an increase in treatment rates, when the FOPH lifted the restrictions for the new treatments in October 2017, treatment numbers are declining (see figure 7).
2.2. Initiation of the Swiss Hepatitis Strategy

Despite the enormous individual, economic and social burden of viral hepatitis and despite the availability of all necessary measures to fight the epidemic, the situation was unsatisfactory on all levels of care. The current detection strategy of viral hepatitis with risk-based testing has proved ineffective. The high cost of hepatitis C drugs followed by prescribing restrictions had created a significant barrier to adequate care. Yearly hepatitis C treatment rates did not exceed the numbers of new diagnoses. Awareness on all levels was insufficient.

During this impasse, Swiss Experts in Viral Hepatitis (SEVHep) recognised the urgency to act and initiated a process to develop and implement a national hepatitis C strategy for Switzerland. In January 2014, SEVHep invited 35 personalities from different backgrounds and from all over the world to a first meeting in Berne to reflect on all major perspectives related to HBV and HCV. Among them were representatives of patient advocacy groups. Despite their different and sometimes contradicting points of views, a common understanding was reached among the participants: There is an urgent need and a positive political climate to take action by launching a strategy to combat and eradicate viral hepatitis in Switzerland.

At the international level, Switzerland has signed the 67th World Health Assembly declaration in 2014, promising to develop comprehensive measures for national coordination to combat viral hepatitis and limit its consequences. In May 2016, the 69th World Health Assembly had adopted the first global strategy on viral hepatitis. It recognises viral hepatitis as a global public health challenge, comparable to HIV, tuberculosis or malaria. Its goal is to eliminate viral hepatitis as a major public health threat worldwide by 2030. This global strategy has been adopted by Switzerland along with 194 other countries.
3. VISION, MISSION STATEMENT AND AIMS

The determination of the vision, mission statement and aims of the Swiss Hepatitis Strategy are the heart and the driving force of any activities related to this initiative.

*The vision of the Swiss Hepatitis Strategy is the elimination of viral hepatitis in Switzerland by 2030*

**MISSION STATEMENT**

The mission of the Swiss Hepatitis Strategy is to establish and maintain a network in Switzerland with stakeholders from all areas in contact with viral hepatitis. The network has a lean structure and uses existing channels, structures and institutions to achieve the vision of eliminating viral hepatitis in an efficient and cost-effective way. The Strategy is initiating and carrying out projects and studies needed to eliminate viral hepatitis.

**AIMS**

Based on the vision of the Swiss Hepatitis Strategy, the three following aims were determined:

1. *Reducing the socio-economic impact of viral hepatitis on the individual, the community and the general public*

   The high morbidity and mortality rates of viral hepatitis are accompanied by major public health, social and economic costs. Hepatitis C is still associated with stigma and discrimination. Raising awareness, improving detection rates and increasing treatment uptake as well as stepping up education in healthcare settings could help ease the burden.

2. *Reducing transmission of HBV and HCV*

   It is estimated that about a third of those infected with the virus have not been tested and are therefore unaware of the disease and their potential to pass it on to others. Significantly improving detection and treatment rates, stepping up prevention in those population groups that are most affected by on-going transmissions and finding and treating undetected infections in the general population must therefore be a primary goal of the Strategy. In addition, HBV transmissions can be reduced by a maximum vaccination coverage in the general population.

3. *Reducing morbidity and mortality caused by viral hepatitis*

   Among infected individuals, hepatitis-related morbidity and mortality is unacceptably high for a preventable and curable disease. Successful treatment can prevent disease progression, extrahepatic manifestations, and death. The systemic character of HCV infections, causing non-liver-related morbidity and mortality, should also be taken into account. With the availability of highly efficient and safe hepatitis C medicines, a feasible test-and-treat approach should be envisaged. To achieve this, the cost of medicines must be lowered concomitant with the cancellation of any prescribing restrictions. A broadly planned detection strategy accompanied by an awareness campaign for health professionals, high-risk groups and the general public must be implemented.
Target values are:

**1. Impact targets**

- New cases of HBV and HCV will be reduced by 30% in 2020, 60% in 2025 and 95% in 2030.
- HBV and HCV-related mortality will be reduced by 20% in 2020, 50% in 2025 and 95% in 2030.
- Viraemic cases of HCV will be reduced by 30 percent in 2020, 60% in 2025 and 95% in 2030.
- Liver transplants due to viral hepatitis-induced end stage liver disease will be reduced by 30% in 2020, 60% in 2025 and 95% in 2030.
- Liver cancer due to viral hepatitis will be reduced by 30% in 2020, 60% in 2025 and 95% in 2030.

**2. Service coverage targets**

- HBV vaccine coverage at the age of 16 will be increased to 75% in 2020, 85% in 2025 and 95% in 2030.
- HCV diagnoses will be increased to 70% in 2020, 80% in 2025 and 90% in 2030.

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<th>Target Area</th>
<th>Baseline 2016</th>
<th>2020 Targets</th>
<th>2025 Targets</th>
<th>2030 Targets</th>
<th>WHO TARGETS 2030</th>
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<td>Reduction of...</td>
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<tr>
<td>incidence (HBV and HCV)</td>
<td>40-50/year</td>
<td>30%</td>
<td>60%</td>
<td>95%</td>
<td>90%</td>
</tr>
<tr>
<td>mortality (HBV and HCV)</td>
<td>200/year</td>
<td>20%</td>
<td>50%</td>
<td>95%</td>
<td>65%</td>
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<td>viremic cases (HCV)</td>
<td>40'000</td>
<td>30%</td>
<td>60%</td>
<td>95%</td>
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<td>liver transplantations (HBV and HCV)</td>
<td>40-70/year*</td>
<td>30%</td>
<td>60%</td>
<td>95%</td>
<td>-</td>
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<tr>
<td>Liver cancer (HBV and HCV)</td>
<td>600/year**</td>
<td>30%</td>
<td>60%</td>
<td>95%</td>
<td>-</td>
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<td>Increase of...</td>
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<td>HBV vaccination coverage</td>
<td>70%</td>
<td>75%</td>
<td>85%</td>
<td>95%</td>
<td>90% (childhood vaccine coverage)</td>
</tr>
<tr>
<td>HCV diagnosis rate</td>
<td>24'000</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
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Fig. 8: The targets of the Swiss Hepatitis Strategy

* Corresponds to 30–40% of all cases\(^2\)

** Corresponds to around 60% of all cases of liver cancer\(^20\)
The Swiss Hepatitis Strategy's targets have been adapted to the matrix of the WHO targets of its global health sector strategy on viral hepatitis 2016–2021\textsuperscript{21}. Taking into account the situation in Switzerland, some of our goals are more ambitious. We added targets that will help reduce the disease burden in Switzerland and that are measurable (e.g. liver cancer and transplants). On the other hand, we do not have goals for some of the WHO’s service targets (e.g. injection safety, blood safety), as these have already been reached in Switzerland.

The vision and its related aims and target values reflect the debates among the network members of the Swiss Hepatitis Strategy so far. These statements are considered to be the guidelines, which the project activities have to be aligned with. During the process development they are being questioned and adjusted from time to time. In 2018 there was a first adjustment of the target values with added values for mortality and newly defined figures for 2025.

**How to implement the aims**

Taking into account the high disease burden of viral hepatitis in Switzerland, it should be treated at the same level as HIV and sexual transmitted infectious diseases (STIs). Existing structures, organisations and programmes for HIV and STIs should include viral hepatitis. This would allow an efficient and cost-effective approach to achieve the goal of eliminating viral hepatitis by 2030.

**Rationale:**

Resources in the health care system are scarce. In Switzerland, the cost of health care is a fiercely disputed issue. The members of the Swiss Hepatitis Strategy network are well aware that the strategy needs to be implemented in an efficient and cost-effective way.

At the international level, the WHO has set the goal of treating viral hepatitis on par with HIV and other STIs.\textsuperscript{22} Countries at the forefront of eliminating hepatitis C are doing the same, as the examples of France and Australia show.\textsuperscript{23}
4. ORGANISATION

4.1. Swiss Hepatitis

The Swiss Hepatitis Strategy started as a project, initiated by different associations (Swiss Experts in Viral Hepatitis SEVHep, Swiss Association for the Study of the Liver SASL, Swiss Association for Gastroenterology SGGSSG, Swiss Society for Infectious Diseases SSI, Swiss Hepatitis C Association SHCA, Global Health Program GHP and the Positive Council). It was run by a project board with representatives of these associations until 2017. The general assembly of the network served as the main decision-making body. The idea was to have a lean structure in order to be able to adapt the strategy process quickly to new challenges and to use the very limited resources as economically as possible.

As the strategy grew, it became clear, that firmer structures are needed to guide the process towards the goal of eliminating viral hepatitis. In 2017, the organisation Swiss Hepatitis was founded, as a successor of SEVHep. New members were appointed to the project board and it became the board of the newly founded Swiss Hepatitis. The members of the network Swiss Hepatitis Strategy agreed at the 2018 general assembly to automatically become members of Swiss Hepatitis too. Their yearly general assembly will therefore be the decision-making body of Swiss Hepatitis.

4.2. Method

The development and implementation of a private initiative in the public health sector, such as the Swiss Hepatitis Strategy, is a complex matter, and in many ways unknown territory. The points of view related to the issue at hand are numerous, multi-dimensional and often contradicting. Nobody knows all aspects and therefore the task cannot be delegated to a single authority or one expert. In relation to HBV and HCV more than 30 different perspectives that were identified initially will have to be considered in this multifaceted endeavour.

One approach that foresees such a broad and collaborative process is the Governmental Learning Spiral (GLSp)\(^2\). The method is a theory-based and practice-approved concept designed to initiate collective learning in order to develop and implement sustainable knowledge in a political setting. The SHS is therefore designed as a participative process in which those who develop are also the ones who implement. An important side effect of the approach is that it fosters a sense of social belonging among the participants, which leads to the convergence of different viewpoints and the creation of social networks. By doing so, a broader audience becomes involved, which in turn triggers feedback loops that lead to a continuous improvement of the strategy process. It is expected that the participants contribute their expertise as unpaid volunteers. Their return of investment are new insights from the other participants as well as the opportunity to influence the learning process as a whole.

The GLSp is designed and led by an independent facilitator, who oversees all aspects of event organisation. GLSp consists of a ten-stage learning process split into three distinct phases:
The process starts with the «framing phase», during which the governance challenge is defined and the existing experiences knowledge on the topic framed (conceptualisation stage). Different perspectives of that knowledge are determined and the knowledge holders selected (triangulation stage) and invited to take part in the learning process. To ensure that everybody involved gets an equal chance to participate in the process, trust has to be established among the participants through sharing of detailed information about the proceedings and communication rules (accommodation stage).

The second phase is the «reflection phase», which represents the core of the educational process during which the participants review the established knowledge frame according to their own professional perspectives (internalisation stage) and share their insights with the other actors (externalisation stage). By doing so they build a collective understanding and new knowledge respectively (re-conceptualisation stage), which guides the activities to solve the problem situation (transformation stage).

In the «projection phase», this new knowledge then gets documented and disseminated (configuration stage), so that all participants have the same information. This allows them to coordinate their actions in the implementation process. The planning and implementation process is monitored and evaluated (M&E) regarding output, outcome and impact (action stage). If the results are considered unsatisfactory, the knowledge has to be reviewed and renewed. By doing so it becomes the new knowledge frame for the next GLSp round (iteration stage).

Fig 9: The Governmental Learning Spiral process
As shown in figure 9, this ongoing procedure, during which in a real-time and multi-turn process knowledge is reviewed, renewed, and transformed into political action, can be illustrated as a spiral. Each of the ten stages is bound together in a cycle, which ends with the iteration stage and starts over with the configuration stage. The ten-stage template reflects the «ideal type» of process and needs to be continuously adapted to the given problem situation, as is done in the case of the SHS.

4.3. Structure of the Swiss Hepatitis Strategy

The association Swiss Hepatitis consists of a board, an office in Zurich (comprising general management and administration, total staff employed: 90%) and its members.

The General Assembly is the decision-making body of Swiss Hepatitis. It consists of the members of Swiss Hepatitis, which are also members of the network Swiss Hepatitis Strategy.

The Executive Board is the strategic body of Swiss Hepatitis. It consists of representatives of the Physician’s Association (hepatologists, gastroenterologists and infectious disease specialists), who had launched the Swiss Hepatitis Strategy, and representatives of patient organisations. A representative of the FOPH is invited to the meetings.

Steering Groups (SG): In 2017, the six working groups that had existed from the beginning were transformed into five steering groups. Some of the tasks of the working groups were taken over by the general management of Swiss Hepatitis, e.g. awareness and politics. The steering groups consist of network members and have the task to ensure that their respective field does not miss any relevant developments and to identify any shortcomings in the pursuit of the goal of eliminating viral hepatitis. The five fields are «Prevention and Awareness», «Testing and Surveillance», «Access to Treatment», «High-risk Groups» and «Finances».

Projects Groups: At the operational level, project groups were established. Four flagship projects were operational. For more details see chapter 6.

The Swiss Hepatitis Strategy is the most important project of Swiss Hepatitis.
4.4. Meetings

The network members of the Swiss Hepatitis Strategy meet twice a year. These «network meetings» serve as a means to shape the process and analyse and, if necessary, correct the course of the strategy.

The strategy process started with the initial kick-off event, the First Swiss Hepatitis Strategy Network Meeting, which was held in January 2014. At this occasion, the project was formally constituted and an inventory of corner stones developed, defining what needs to be considered when developing a comprehensive hepatitis strategy.

Following the initial meeting, two Swiss Hepatitis Strategy network meetings have been taking place every year. In these events, past activities are shared and analysed, and future measures derived accordingly. This content-based course of action enables a flexible and effective process development, fully directed and monitored by the network members themselves. These network meetings are crucial to the process: the network members gather to present updates and make decisions on the future content of the strategy.

In the afternoon of the second network meeting of the year, a symposium is organised. These Swiss Hepatitis symposiums are platforms to share the latest knowledge on viral hepatitis and exchange new ideas on how to achieve elimination. National and international experts present the newest findings.
4.5. Monitoring/Evaluation and Surveillance

Initially, monitoring and evaluation was derived from statements collected via a survey among network members in the original fields of action. This system will be updated and adapted to the new structure of the Strategy.

We are currently planning a two-fold evaluation: feedback from network members and external surveillance of our progress.

For the first time, at the second network meeting in 2018, network members were asked five questions about the direction of the strategy. Parallel to this subjective feedback, an objective evaluation process based on the goals in the elimination process will be developed and implemented.

4.6. Resources

It was clear from the beginning that resources were scarce. An important achievement has been the voluntary work of the 80 network members. Every year, 1,000 hours of unpaid work are dedicated to the development and implementation of the Swiss Hepatitis Strategy. Without this commitment, the whole process would not have been possible. Furthermore, the Swiss Hepatitis Strategy seeks partnerships and alliances in order to implement further projects and carry out research. It is making use of existing structures and organisations, often established for combating HIV, rather than building parallel structures. To reach the elimination goals, existing know-how and resources should be used effectively.

But despite the impressive amount of voluntary work and the use of synergies, more money is needed. Core funding is a challenge. Contributors are mainly private companies in the health sector. Since 2017, Swiss Hepatitis also gets funding from the FOPH, albeit a rather modest amount. Project management intends to step up their lobbying for more funding from the national health authorities. After all, the Swiss Hepatitis Strategy can help to reach important public health goals without needing a great amount of resources. This should be in the interest of the FOPH. Furthermore, as more and more projects from the network members emerge, additional project funding will be needed from private foundations and other public contributors as well.

4.7. Communication and media

External communication and media relations

Viral hepatitis is often referred to as the «silent disease». This is due to a lack of awareness despite its large disease burden, which can be compared to HIV. From the beginning, media relations have therefore played a crucial role in order to reach the general public, health care professionals and decision makers.
Furthermore, the World Hepatitis Day (WHD) on July 28th was used to promote campaigns and intensify media relations. The first campaign was conducted in 2015. It introduced a web-based risk assessment tool, that let people assess their individual risk of having contracted viral hepatitis and could be asked to take a test. Partnerships and sponsorships with laboratories were established in order to spread the message even further. Over 10,000 people have completed the risk assessment so far. In 2017, a voucher for a free test at one of 11 laboratories and treatment centres throughout Switzerland was offered to those who were at risk. This alone resulted in 4,500 completed tests, with 300 making use of their voucher. The videos that are produced for the WHD every year reach tens of thousands of people, in 2018 it was viewed by 60,000.

Fig. 11: Celebrities such as the physician and comedian Fabian Unteregger or writer Pedro Lenz supported Swiss Hepatitis on World Hepatitis Day 2018.

Since the project launch, expert journals and magazines have published numerous articles and an ongoing dialogue with journalists has been established. The Swiss Hepatitis website www.hepatitis-schweiz.ch is available in German, French, Italian and English. Its news section is being updated regularly. Social media has also been used: the Strategy is active on Facebook and on Twitter and has its own YouTube channel.
5. STEERING GROUPS

5.1. Prevention and Awareness

Prevention: By prevention we mean primary prevention; the prevention of new infections. The Swiss Hepatitis Strategy aims to «reduce transmission of HBV and HCV».

The main activities are:

- To detect those who are not aware of the disease and are potentially transmitting the virus to others
  - among high-risk groups: treatment rates and prevention in populations that are most affected by on-going transmission and
  - among the general public: find and treat undetected infections in the general population
- To increase HBV vaccination, a very effective prevention tool. The targets set by the Strategy are to reduce new infections by 30% by 2020 and by 95% by 2030.

Today, a lot is being done to target high-risk groups:

- PWUD: «HepCare» (Flagship project 2) is closing the gaps in the care cascade by involving primary care physicians in HCV therapies, the focal point being on physicians who offer OAT (treating the high-risk group of PWUD). This project should also have an impact on the general population as it encourages GPs to test for HCV.
- MSM: «HCVree trial» tests and treats and prevents reinfection among HIV and HCV coinfected MSM.
  The micro-elimination approach to eliminate HCV in this sub-population.
- Prisons: The «HepFree» label is a project to improve hepatitis care in prisons (Flagship project 4).

Future activities and focal points:

**Awareness:** Viral hepatitis is still a «silent disease» and the level of awareness still not sufficient. Efforts to inform the general public and healthcare professionals will have to be continued. Viral hepatitis could be included in the LOVE LIFE campaign, a powerful awareness campaign to tackle HIV and STIs. This would be a cost-efficient and highly effective way.

**Female Sex Work FSW:** A new study shows gaps in the vaccination coverage among female sex workers in Switzerland. This could result in future transmissions. A pilot project should be launched regarding sex work and vaccination of HBV and coordinated with Steering Group 2 «Testing and Surveillance».
5.2. Testing and Surveillance

The steering group aims to define and communicate the most appropriate detection strategy for HBV and HCV and develop an appropriate surveillance instrument for the Swiss Hepatitis Strategy.

The main activities are:

• To conduct a feasibility study on a screening strategy for HBV and HCV (Flagship Project 1)
• To intensify testing activities in strongly affected population groups (PWUD or migrants, e.g. from Italy)
• To implement nationwide reflex testing
• To assess the need of a home test kit, finding collaborators
• To set up a surveillance system (e.g. in collaboration with «Let’s end hep C» and/or «Polaris Observatory» from CDA Foundation)
• To partner up with the FOPH, universities and Interpharma for continuous access to surveillance data

Future activities and focal points:

• To include HBV into the feasibility study on screening strategies.
• To optimise testing for all high-risk groups according to guidelines. Coordination is needed.
• To conduct a vaccination pilot (Steering Group 1). Testing should be included. In collaboration with Steering Group 1 «Prevention and Awareness».

5.3. Access to Treatment

This steering group deals with all aspects related to hepatitis treatments with the ultimate goal to prevent, whenever possible, the progression of liver disease, the incidence of extrahepatic manifestations and transmission of the virus.

The main activities are:

• To increase treatment uptake to get on track for elimination by 2030
• To set up an additional or alternative treatment setting where necessary (GP, addiction medicine, prisons)

Activities of the network today:

• Review of SASL/SSI treatment recommendations
• Involvement of GPs in Hep C treatment (Flagship Project 2 «HepCare»)
• Improvement of Treatment rates in prisons (Flagship Project 4, «HepFree label»)
Future activities and focal points:

- To improve access to treatment: access is still unsatisfactory. We are facing reimbursement problems for treatments following a relapse. A solution could be to seek legal advice and file a complaint.
- To lift existing restrictions: There are still prescribing restrictions for HCV treatments. Pharmaceutical companies should apply to lift any limitations.

5.4. High-risk Groups

To take care of the specific needs that high-risk groups have, including people who inject drugs (PWUD), MSM, sex workers, prison inmates and people with a migrant background.

The main activities are:

- To close the gaps in the care cascade among PWUD
- To improve HBV vaccination rates among sex workers
- To close the gaps in the care cascade among prisoners
- To improve access to treatment for migrants (using different approaches for different migrant populations)

Activities of the network today:

- PWUD: «HepCare» is focussing on OAT patients (Flagship project 2)
- Prison: «HepFree» label (Flagship project 4)

Future activities and focal points:

- PWUD: We know what to do. Let’s do it!
- Sex work: Sex workers should regularly be tested for HBV
- Prisons: More pressure is needed to have appropriate measures put in place.

5.5. Financing

The main activities are:

- To secure funding for Swiss Hepatitis and the projects of the Swiss Hepatitis Strategy
- To secure different sources to receive these funds from (authorities, sponsors, donations, foundations)
Activities of the network today:

• To develop a sponsorship plan

Future activities and focal points:

• For more balanced and sustainable funding for the Swiss Hepatitis Strategy, health insurance companies should be approached with funding requests.
6. FLAGSHIP PROJECTS

At their 9th network meeting in October 2017, the network members laid the ground for four flagship projects. By implementing these, the elimination target as envisioned by the Swiss Hepatitis Strategy should be reached.

The four flagship projects are:

6.1. HepCare – involving GPs in hepatitis care

Primary health professionals are crucial when it comes to testing and treating patients with chronic viral hepatitis infections. Aiming to increase the pool of physicians that offer hepatitis C treatment, information and training materials for GPs are being developed. A pool of specialists – in Switzerland, only infectious disease specialists, gastroenterologists and some addiction specialist doctors are allowed to prescribe hepatitis C treatments – will be put in place to advice GPs and to issue prescriptions for them.

The project will follow several implementation steps. First, the cantons will conceptualise and implement pilots. After evaluating and, if necessary, adjusting the process and materials, the overall implementation can begin.

The project will be developed in close collaboration with GP associations and practitioner networks.


The whole process will be evaluated by an external institute.

6.2. HCV screening strategy

In order to increase testing, a feasible and effective screening strategy is needed. A study will examine the risk-based testing approach recommended today and compare it with birth cohort screening. Primary care physicians will be asked to use either risk-based or birth cohort testing. They will then be asked questions on feasibility and effectiveness of the applied strategy. Patients will also be questioned in order to determine the most feasible and effective strategy.

Duration: 2018–2020

6.3. HCV follow-up

Patients with advanced liver disease have a higher risk of developing liver cancer even after being cured from a chronic hepatitis C infection. Follow-up care is therefore crucial to prevent liver cancer. In Switzerland, no coherent recommendations for follow-up care exist today. This project will develop such recommendations based on global and national evidence. The project consists of four steps:

...
Step 1: Swiss guidelines for patient-centred follow-up care after successful hepatitis C treatments, which help identify patients that need follow-up care and define the most effective way to implement and deliver it.

Step 2: Patient involvement projects (as carried out in the cantons of Basel and St. Gallen) assess patient preferences and identify enabling factors and barriers to follow-up care after achieving a sustained virological response (SVR).

Step 3: A retrospective Study (conducted in the cantons of Ticino and St. Gallen) evaluates the appropriateness of follow-up care delivered to successfully treated hepatitis C patients.

Step 4: A prospective Study (conducted in the cantons of Ticino and St. Gallen) evaluates the appropriateness of follow-up care delivered to successfully treated hepatitis C patients and looks at long-term outcomes and expected public health benefits of follow-up care for cured hepatitis C patients.

6.4. The HepFree label

In prisons, hepatitis C prevalence is higher than in the general population. Screening and enabling access to treatment are often challenging. This project wants to come up with solutions for prisons and develop a best practice label.

An action plan is envisioned, similar to the one for PWUD, consisting of four parts:

- Establishing micro-elimination in the prison setting
- coordination (command – control – evaluate)
- screening
- linkage to care
8. RESULTS

Over five years of operation, the SHS has delivered numerous tangible outcomes in the different areas of action:

Growing Awareness

With the ongoing campaigns run by the SHS, among them the very effective celebration of the annual World Hepatitis Day, viral hepatitis has achieved progressively more media coverage and receives increasing attention from the general public.\(^{26}\) Whereas up to 2014, viral hepatitis had rarely been discussed in Switzerland’s leading media, more than 150 articles and broadcasts have been published on the topic. Most of them were initiated by press releases issued by the SHS or by the network’s media connections.\(^{27}\) In 2017 the SHS website registered over 100,000 visits. In politics, thanks to the public attention and the network members’ political connection, the SHS received parliamentary recognition and several national and cantonal parliamentary initiatives were launched.\(^{28}\)

Universal access to HCV treatment

Due to the very high prices of the new HCV medicines, the FOPH limited access to patients with advanced liver damage only.\(^{29}\) The SHS initiated two round table discussions with the government officials responsible to elaborate the medical and ethical concerns of such restrictions. Meanwhile, the SHS set up a safe and legal pathway, which allowed patients who were affected by these restrictions to access generic HCV medicines made in India.\(^{30}\) They could legally import them via an Australian buyers’ club. In cooperation with one of the biggest Swiss health insurance companies, the costs for these generics could be covered.\(^{31}\) This temporary measure put huge pressure on the suppliers, eventually leading to a significant price drop and the lifting of the FOPH prescribing restrictions.

Support from the FOPH and the cantons

After reviewing epidemiological data of viral hepatitis in Switzerland\(^ {2}\), the FOPH decided in 2017 to support the project with a financial contribution. The results of this situation analyses served thereafter as baseline against which the impacts of the SHS’s activities were measured. At the request by the SHS, the FOPH has announced that, starting in 2018, it will publish yearly reports on hepatitis via its mandatory notification system. The FOPH has yet to officially endorse the strategy.

This in contrast to the Cantonal Directors of Public Health: The Conference of the Cantonal Health Directors GDK decided to support ideally the Swiss Hepatitis Strategy and is currently a member organisation of the network.\(^ {32}\)
The network is growing

One of the key results and guaranteed formula for the success of the SHS has been the unwavering commitment of the working groups and the network members. Their willingness to work for free for our common cause over an almost five-year period is extraordinary. While in other comparable projects participation numbers drop, the SHS has steadily attracted more members. An important achievement of the initiative was the foundation of a new national patient organisation, the Swiss Hepatitis C Association (SHCA). A broad alliance of network members and organisations, currently 34 organisations, made it possible to implement national clinical guidelines, which is an important step towards micro-elimination of hepatitis C in specific populations, e.g. HIV positive MSM.

Micro-elimination among MSM

Preliminary data shows that approach of the «Swiss HCVree trial» of testing, treating and preventing reinfection among HIV and HCV co-infected MSM is effective.\(^{34}\) In the Swiss HIV Cohort Study, «HCVree trial» is currently testing all HIV-positive MSM for HCV and treating them. After the treatment with DAAs, a behavioural intervention is offered to those at high risk of reinfection. The behavioural intervention was developed specifically for this trial. Furthermore, the «HCVree trial» will help to better characterise the current epidemic in the HIV-HCV co-infected population among MSM.

Advocacy

Talks with politicians and other policy-makers and decision-makers, e.g. the Federal Commission for Sexual Health EKSG, are continuing. One of the goals of advocacy must be that viral hepatitis gets more attention still. Viral hepatitis needs to be tackled with the same urgency as HIV and STIs, since the burden of hepatitis is similar, if not higher.
9. CONCLUSIONS AND OUTLOOK

Despite impressive results, which were achieved with restricted resources, major challenges still lie ahead. Efforts to raise overall awareness, which is still limited, are imperative at all levels. The number of hepatitis C treatments is decreasing again, after it had peaked briefly when the prescribing restrictions were lifted. To eliminate viral hepatitis in the next decade, the still remaining shortcomings in overall awareness, in testing and in treatment uptake need to be addressed.

Risk-based screening strategies have proved to be insufficient, whereas growing evidence suggests that birth cohort or universal screening is more effective. But the feasibility of such additional detection methods still needs to be assessed. There remain major unresolved issues in some high-risk groups. Hepatitis care and prevention in prisons, where many risk factors such as migrant backgrounds, drug use or non-sterile tattooing come together, is far from satisfying. Large gaps remain in the hepatitis C cascade of care among people who inject drugs. Both groups are potential sources of infections, which could further fuel the epidemic. Furthermore, there are many in the general population who are infected with the virus but remain undiagnosed and therefore untreated. Ignoring a chronic viral hepatitis infection can seriously affect a person’s health and he or she could die as a consequence.

«It is therefore paramount that we take action and do not wait for any additional and more detailed evidence.»

It is therefore paramount that we take action and do not wait for any additional and more detailed evidence. What is needed now is a common goal that is shared by all stakeholders, including the health authorities. It is of the utmost importance, that the disease burden caused by viral hepatitis is finally acknowledged and that steps are taken accordingly. This would mean to grant viral hepatitis the same public health status as HIV and STIs. Viral hepatitis should be included in the national health programme against HIV and STIs and integrated into structures and programmes designed to combat HIV. Only if we manage to use existing structures and benefit from these synergies will we be able to achieve the goal to eliminate hepatitis C. Switzerland, a global leader in fighting HIV, can become a pioneer in the field of viral hepatitis too. So, let’s just do it!
A. ANNEX

Annex I: The first Concept Paper for a Swiss Hepatitis Strategy
Annex II: List of network members
Annex III: Steering Group List
Annex IV: Network Partner Organisations
Concept Paper for a Swiss Hepatitis Strategy

Viral hepatitis, a chronic inflammation of the liver due to infection with a hepatitis virus, is common in Switzerland, potentially deadly and largely underestimated. The World Health Organization (WHO) compares the hepatitis epidemic with a "viral time bomb" on the global scale.

The silent epidemic - Time to act now!

Chronic hepatitis infections are a pressing public health issue. More than 70,000 people are infected in Switzerland. Furthermore, the ageing of the infected population will in the near future be responsible for a considerable increase in patients who suffer from an advanced stage of liver cirrhosis or liver cancer. Worldwide Hepatitis B (HBV) and Hepatitis C (HCV) together account for the death of approximately one million people every year. In the western world HCV infection is the major indicator for liver transplantation and accounts for higher mortality rates than HIV.¹

The highest number of patients with cirrhosis and liver cancer will be reached between 2020 and 2025.² It is widely assumed that the majority of HBV or HBC infected people are not aware of their illness because chronic HBV and HBC infections produce almost no symptoms before the secondary diseases break out.³

Viral hepatitis today gets only little attention among the general population, policy makers, patients and health care professionals. This low level of awareness remains a significant barrier to efficiently respond to this growing epidemic.⁴ Knowledge about viral hepatitis and the harms of undetected and untreated infections is poor, even for individuals living with the virus. Reasons for this poor awareness include the lack of immediate symptoms, the slow progression of the disease and low political will to tackle the epidemic.

Infection, progression of the disease and mortality could be prevented in many cases. HCV can be cured. HBV can be efficiently prevented by vaccination and those infected can be treated in order to prevent disease progression. In order to reduce morbidity and mortality among infected people, it is paramount to identify them early and treat them as soon as needed. However, according to the “Euro Hepatitis Index 2012 Report”⁵, even many of the European countries, which in general have effective prevention, screening and treatment instruments in place, are still lacking concrete measures and strategies to combat the disease. This is despite the fact that an estimated 23 million people are affected by chronic hepatitis infections in Europe and 125'000 Europeans die of a hepatitis-related secondary illness every year.

According to the Euro Hepatitis Index Report, Switzerland is ranked 12th immediately behind Ireland but before Belgium. In the area of case finding/screening Switzerland is ranked 17th.⁶ Prevalence of infections is estimated to be approx. 0.3 % for HBV and approx. 0.7–1 % for HCV. The costs incurred by HCV alone amount to over 100 million Swiss francs for medical expenditures per year. In view of the aging infected population and the increasing numbers of advanced illnesses among risk groups such as migrants, sex workers, prisoners, etc. the numbers are likely to further deteriorate. The increased numbers of cases of advanced liver disease, the impending market launch of highly effective and well-tolerated treatments as well as the comparatively bad score of Switzerland in the European ranking indicate a need for a national hepatitis strategy.
A Swiss Hepatitis Strategy

The rising burden of this preventable and curable disease and the arrival of highly potent and well-tolerated treatments options give momentum to a national coordinated action to combat viral hepatitis in Switzerland. The Board of the Swiss Experts for Viral Hepatitis (SEVHep) has decided to take the initiative to develop and implement a Swiss Hepatitis Strategy with the active involvement of all concerned stakeholders in the field as well as the support of the Bliendarcher Borer Consulting Ltd. for operational tasks. The initiative will be financed from third parties. SEVHep will assure that the sponsor’s and supporter’s contributions will be unrestricted and will have no influence on the activities.

To launch the process SEVHep organized a Kick-off Meeting to develop a first comprehensive inventory of cornerstones of a Swiss Hepatitis Strategy. The event was held in Berne on January 16, 2014. The participants included thirty-five stakeholders covering all perspectives related to the topic. It was organized with the support of the Global Health Program (GHP) of the Graduate Institute of International and Developments Studies.

One of the key results of the meeting was that all participants, despite their different point of views, agreed upon the need of a national strategy. The event design was based on the methodology of the “Governmental Learning Spiral”\textsuperscript{9}. The same approach will provide the course of action of the forthcoming strategy development and implementation process.

Based on the Kick-off Meetings results as well as international experiences the aims of a Swiss Hepatitis Strategy are as follows:\textsuperscript{10}

\textit{First, reducing transmission of HBV and HCV:} It is estimated that less than 50\% of those infected with the virus are tested and therefore aware of the disease and the potential to transmit it to others. Relevantly improving detection and prevention in the population groups most affected by ongoing transmission (users of illicit injectable drugs, migrants... etc.) must therefore be a primary goal of the strategy.

\textit{Second, reducing morbidity and mortality caused by viral hepatitis:} Among infected individuals, hepatitis related morbidity and mortality continues to grow. Successful treatment can prevent liver disease and death, and should be made available in priority for those most at risk and most likely to need treatment.

\textit{Third, reducing the socio economic impact of viral hepatitis at individual, community and population level:} The growing morbidity and mortality of viral hepatitis is accompanied by major public health, social and economic burdens. These costs can be prevented by rising awareness, detection rates and targeted treatment uptake.

Project Organization

To develop and implement a Swiss Hepatitis Strategy a lean and independent Project Organization is required. Its purpose is the realization of the project with the inclusion of all affiliated stakeholders and organizations. It is composed by the Project Board, the Project Management and a Project Task Force.

\textit{Project Board:} The project is coordinated by a board that is composed by SEVHep, the Swiss Association for the Study of the Liver (SASL), the Swiss Society for Infectious Diseases (SSD), the Swiss Society for Gastroenterology and Hepatology (SGGSSG) and the Global Health Program (GHP) of the Graduate Institute of International and Developments Studies in Geneva. Additional stakeholders or organizations, whose expertise is considered as complementary in a given time, can supplement it. This body has no legal status and its constitution and resolution depends on the will of the stakeholders represented. Decisions are made by majority rule. SEVHep will currently head this
body as primus inter pares and can cast the deciding vote. It is entitled to sign all legal contracts related to the project and is responsible for representing the body towards third parties.

Project Management: On behalf of the Project Board a Project Management will be in charge for the operational tasks such as building and maintaining a project office, develop and implement the project structure and time line as well as to support the Project Task Force and its Working Groups in their respective activities (see next paragraph). The Project Management will also search and give access to strategy related national and international experiences. It will furthermore be responsible for the fundraising, budgeting and accountability. For special tasks such as public relations it will seek for external support. The Project Management is currently composed by Philip Bruggmann (Chair SEVHep), Raoul Blindenbacher (Blindenbacher Borer Consulting Ltd.) and Nimoll Pek, (secretary of SEVHep).

Project Task Force and Working Groups: The practical development and implementation of the Swiss National Hepatitis Strategy will be the responsibility of the Project Task Force. The thirty-five participants at the Kick-off Meeting and approximately fifty additional individuals who expressed their interest to be actively involved in the project form this body (see list of network members). They were selected based on their expertise and represent all content and institutional perspectives related to the topic. This body remains open for additional individuals who can bring further viewpoints and expertise to the task force. The Project Task Force will decide upon its organizational structure and it is expected that it meets twice a year with the Project Board.

It is foreseen that the Project Task Force will create Working Groups, composed by its members, that will be responsible for the different selected fields of action (see following paragraph). The participation in these groups should be based on the individual’s expertise and/or organizational affiliation. At least one participant per group should be appointed to take the lead of the group and to assure the link to the other groups as well as the Project Management.

Fields of Action

Based on the results of the Kick-off Meeting the following six major fields of action were identified. It will be the task of the Project Leadership, in collaboration with the Project Task Force, to set the priorities and define the sequence of their implementation.

1. Prevention & Awareness
   - Education and awareness campaigns on viral hepatitis for people at increased risk, health care providers and general population.
   - Reduction of stigmatisation and discrimination of people living with viral hepatitis infection.
   - Improving incorporation of viral hepatitis in the curriculum of the education of healthcare professionals.
   - Pluridisciplinary care networks to promote awareness and prevention among vulnerable and high-risk groups.

2. Surveillance & Screening
   - Gathering further epidemiological data.
   - Establish an efficient and cost-effective detection strategy, adapted to the needs of different patient populations.
   - Closely monitoring newly diagnosed HCV cases and the prevention of liver cirrhosis and liver cancer
   - Study and build models to describe transmission patterns.

3. Access to Treatment
   - Directly referring patients to the appropriate specialized pluridisciplinary team and explaining the available treatment options upon diagnosis.
## Annex II: List of network members

<table>
<thead>
<tr>
<th>Name</th>
<th>Vorname</th>
<th>Organisation</th>
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<tbody>
<tr>
<td>Aebi-Popp</td>
<td>Karoline</td>
<td>FMH Gynäkologie und Geburtshilfe</td>
</tr>
<tr>
<td>Aysim</td>
<td>Yilmaz</td>
<td>Swiss National Science Foundation (SNF)</td>
</tr>
<tr>
<td>Balmer-Schiltknecht</td>
<td>Bettina</td>
<td>Fachärztin für Kinderchirurgie FMH und Kantonsrätin Zürich</td>
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<tr>
<td>Baumgartner</td>
<td>Lars</td>
<td>Positivrat</td>
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<tr>
<td>Bertisch</td>
<td>Barbara</td>
<td>Ärztin Innere Medizin und Infektiologie FMH</td>
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<td>Blank</td>
<td>Patricia</td>
<td>Roche Diagnostics (Schweiz) AG</td>
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<td>Blaser</td>
<td>Claudine</td>
<td>Argomed Ärzte AG</td>
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<tr>
<td>Blindenbacher</td>
<td>Raoul</td>
<td>Consultant</td>
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<tr>
<td>Bösiger</td>
<td>Christophe</td>
<td>Schweizerische Hepatitis C Vereinigung (SHCV)</td>
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<tr>
<td>Bregenzer</td>
<td>Andrea</td>
<td>Infektiologie und Spitalhygiene, Kantonsspital Aarau</td>
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<tr>
<td>Brogger</td>
<td>Urs</td>
<td>Departement Gesundheit, Berner Fachhochschule</td>
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<tr>
<td>Bruggemann</td>
<td>Philip</td>
<td>Swiss Hepatitis und Arud Zentrum für Suchtmedizin, Zürich</td>
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<tr>
<td>Bultery</td>
<td>Marc</td>
<td>World Health Organization (WHO)</td>
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<tr>
<td>Cerny</td>
<td>Thomas</td>
<td>Krebsforschung Schweiz (KFS) und Oncosuisse (OS)</td>
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<td>Cerny</td>
<td>Andreas</td>
<td>Epatocentro Ticino, Lugano</td>
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<td>Chatterjee</td>
<td>Bidisha</td>
<td>Gefängnisärztin</td>
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<tr>
<td>Classen</td>
<td>Oliver</td>
<td>Erklärung von Bern</td>
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<tr>
<td>Conen</td>
<td>Dieter</td>
<td>Stiftung Patientensicherheit (SPO)</td>
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<tr>
<td>De Gottardi</td>
<td>Andrea</td>
<td>Hepatologie, Universitätsklinik für Viszerale Chirurgie und Medizin, Inselspital</td>
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<tr>
<td>Dreifuss</td>
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<td>Eckmann</td>
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<tr>
<td>Egger</td>
<td>Matthias</td>
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<td>Montserrat</td>
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<td>Catherine</td>
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<td>Ghebreghiorghini</td>
<td>Tesfahlem</td>
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<tr>
<td>Gilli</td>
<td>Yvonne</td>
<td>Fachärztin Allgemeine Innere Medizin FMH</td>
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<tr>
<td>Goossens</td>
<td>Nicolas</td>
<td>Gastroenterologie et Hepatologie, HUG</td>
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<td>Gravier</td>
<td>Bruno</td>
<td>Konferenz Schweizerische Gefängnisärzte (KSG)</td>
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<tr>
<td>Grunder</td>
<td>Stefan</td>
<td>Klinik Hirslanden Aarau</td>
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<td>Grünig</td>
<td>Seraina</td>
<td>Schweizerische Konferenz der Gesundheitsdirektorinnen und -direktoren GDK</td>
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<tr>
<td>Gschwend</td>
<td>Adrian</td>
<td>Abteilung Nationale Präventionsprogramme, Bundesamt für Gesundheit (BAG)</td>
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<tr>
<td>Gutzwiller</td>
<td>Felix</td>
<td>Arzt und ehemaliger Ständerat des Kantons Zürich</td>
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<td>Gysi</td>
<td>Barbara</td>
<td>Nationalrätin des Kanton St. Gallen</td>
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<tr>
<td>Kaerpy</td>
<td>David</td>
<td>Positivrat und European Aids Treatment Group (EATG)</td>
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<tr>
<td>Hebling</td>
<td>Beat</td>
<td>Facharzt FMH für Gastroenterologie und Innere Medizin und Sekretär der SASL</td>
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<tr>
<td>Horowitz</td>
<td>Daniel</td>
<td>Schweizerische Hepatitis C Vereinigung SHCV</td>
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<tr>
<td>Hostettler</td>
<td>Ueli</td>
<td>Institut für Strafrecht und Kriminologie, Universität Bern</td>
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<tr>
<td>Houmard</td>
<td>Serge</td>
<td>Sektion Migration und Gesundheit, Bundesamt für Gesundheit (BAG)</td>
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<tr>
<td>Kazatchkine</td>
<td>Michel</td>
<td>former Executive Director of the Global Fund to fight AIDS, Tuberculosis and Malaria</td>
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<tr>
<td>Keiser</td>
<td>Olivia</td>
<td>Institute of Global Health, Universität Genf</td>
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<td>Viro pathology Unit, Divisions of Gastroenterology and Hepatology and of Clinical Pathology, HUG</td>
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<td>Zybach</td>
<td>Ursula</td>
<td>Public Health Schweiz</td>
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Annex III: Steering Group List

**Group 1: Prevention and Awareness**
**Liaison person**
Jan Fehr

**Members**
Christophe Bösiger
Seraina Grünig
Catherine Gasser
Ueli Hostettler
Daniel Lavanchy
Andrea Rinderknecht
Daniel Schröpfer
Benedikt Zahno

**Group 2: Testing and Surveillance**
**Liaison person**
Gilles Wandeler

**Members**
Patricia Blank
Montserrat Fraga
Claudine Kocher
Andri Rauch

**Group 3: Access to Treatment**
**Liaison person**
Beat Müllhaupt

**Members**
Daniel Horowitz
Olivia Keiser
Patrizia Künzler-Heule
Dunja Nicca

**Group 4: High-risk Groups**
**Liaison person**
Claude Scheidegger

**Members**
Barbara Bertisch
Andrea Bregenzer
Bidisha Chatterjee
Andreas Lehner
Dominique Schori

**Group 5: Financing**
**Liaison person**
David Haerry

**Members**
Andreas Cerny
Andreas Schiesser
Ralph Torgler
Annex IV: Network Partner Organisations
Figures

Figure 1: The so-called care cascade for hepatitis C in Switzerland (Bruggmann P. et al, J Viral Hepat. 2014)

Figure 2: Comparison of the mortality rates of HIV, HBV and HCV in Switzerland, 1995–2014. (Keiser O et al. J Viral Hepat. 2018;25(2):152-60)

Figure 3: Care cascade of people in opioid substitution therapy in the Swiss Canton of Aargau (Bregenzer A et al. Swiss Med Wkly. 2017;147:w14544)

Figure 4: Development, cure rate and complexity of HCV treatment

Figure 5: Modelling of risk-based screening vs. universal screening

Figure 6: Increasing diagnosis and treatment would drastically reduce the burden of disease due to hepatitis and could save up to 1’200 lives till 2030 (source: Müllhaupt B et al. 2018)

Figure 7: Monthly treatment numbers 2015–2018, actual and forecast

Figure 8: The target values of the Swiss Hepatitis Strategy

Figure 9: The Governmental Learning Spiral process

Figure 10: Organisation chart Swiss Hepatitis

Figure 11: Celebrities such as the physician and comedian Fabian Unteregger or writer Pedro Lenz supported Swiss Hepatitis on World Hepatitis Day 2018
**C ABBREVIATIONS**

- AIDS Acquired Immune Deficiency Syndrome
- CHF Swiss francs
- DAA Direct Acting Antiviral
- EKSG Federal Commission for Sexual Health
- FOPH Federal Office of Public Health
- GDK Conference of Cantonal Health Directors (Konferenz der kantonalen Gesundheitsdirektorinnen und –direktoren)
- GHP Global Health Program
- GLSp Governmental Learning Spiral
- GP General Practitioner
- HBV Hepatitis B virus
- HCV Hepatitis C virus
- HIV Human immunodeficiency virus
- IFN Interferon
- M&E Monitoring and Evaluation
- MSM Men who have sex with men
- OAT opioid agonist treatment
- PEG-INF Pegylated Interferon
- PWUD People Who Use Drugs
- RBV Ribavirin
- RNA ribonucleic acid
- SASL Swiss Association for the Study of the Liver
- SEVHep Swiss Experts in Viral Hepatitis
- SGGSSG Swiss Society for Gastroenterology
- SG Steering Group
- SHCA Swiss Hepatitis C Association
- SHS Swiss Hepatitis Strategy
- SSI Swiss Society for Infectious Diseases
- STIs Sexually Transmitted Infections
- TB Tuberculosis
- WHA World Hepatitis Alliance
- WHD World Hepatitis Day
- WHO World Health Organization


9See: http://www.hep-index.eu


https://doi.org/10.1371/journal.pone.0209374

15Adjusted patient evolution and forecast based on IQVIA Solutions GmbH Market Units (APO + SD + SPI Channel, Jan15-Jul18


17See: Concept Paper for a Swiss Hepatitis Strategy, 2014

18See: http://www.wpro.who.int/hepatitis/wha67_r6-en.pdf

19See: http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_32-en.pdf?ua=1


22WHO jointly developed three global health sector strategies 2016-2021 for HIV/AIDS, STIs and viral hepatitis. All three strategies were endorsed by the Sixty-ninth World Health Assembly on 28 May 2016. For more information see: https://www.who.int/hiv/strategy2016-2021/en/

23The French research institute ARNS, initially founded to fight HIV/Aids, included viral hepatitis already in 2015.


25For Let’s End Hep C see www.letsendhepc.com/ and for Polaris Observatory see http://cdafound.org/polaris/


28 See e.g.: Anfrage Christine Häsl er, 15.3.2018: Integration von Hepatitis C in die HIV-Präventionskampagne; Anfrage Bea Heim, 8.3.2018: Stand der Umsetzung der WHO-Resolution zur Eliminierung von Hepatitis C

29 Flubacher R. Ein Geschäft fast ohne Konkurrenz. Tagesanzeiger. 1.2.2015.


31 See Press release, 16.2.2017: Die CONCORDIA beteiligt sich ab sofort an den Kosten von Hepatitis-C-Medikamenten aus Indien

32 See https://www.hepatitis-schweiz.ch/en/network

