



# Ten steps to eliminating hepatitis C in hospitals

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Only 12 high-income countries are on track to meet the World Health Organization's goal of eliminating hepatitis C as a public health threat by 2030, and micro-elimination opportunities in high-risk populations in settings such as hospitals are often overlooked. We propose ten steps to eliminate hepatitis C in hospitals.

In 2016, the World Health Organization (WHO) adopted its first strategy to eliminate the hepatitis C virus (HCV). It called on all countries to eliminate HCV as a public health threat by 2030 and set forth a series of targets to monitor progress. Few countries took heed. To date, although more than half of WHO's 194 Member States have their own elimination strategies, just 12 high-income countries are on track to eliminate HCV<sup>1</sup>, with these efforts being undermined by consequences of the COVID-19 pandemic. Most good practices have not become the standard of care and, even in easily identifiable populations with an elevated prevalence<sup>2</sup> of HCV infection, micro-elimination has not been achieved.

Although some HCV micro-elimination efforts focus on high-prevalence populations, others focus on providing services in certain settings, such as prisons or addiction centres, as a means of reaching these populations. Hospitals do not seem to be commonly designated as settings for these initiatives. In the most recent [WHO viral hepatitis strategy](#), approved in May 2022, hospitals are not discussed as settings for HCV elimination efforts. However, a 2022 study in Madrid, Spain, found that one in ten public hospital patients belonging to high-prevalence populations, such as people in haemodialysis programmes, people co-infected with HIV, people with advanced liver disease and people who inject drugs (PWID), had not been tested<sup>3</sup> for HCV. This finding prompted the relevant professional associations in Spain (Asociación Española para el Estudio del Hígado, Grupo de Estudio de Hepatitis Víricas, Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica and Sociedad Española de Patología Digestiva), a country on track to eliminate HCV infection, to consider how to expand the role of hospitals to accelerate progress.

Without such innovative approaches, it will be difficult to achieve the [WHO targets](#) in support of the 2030 HCV elimination goal. WHO calls for the number of

new HCV infections per year to be reduced to 350,000 overall by 2030, down from 1.6 million in 2020, and to 2 per 100 in PWID, down from 8 per 100 in 2020. Other targets call for new cases of cancer from HIV, viral hepatitis and sexually transmitted infections (STIs) to be reduced to <700,000 (down from 1.2 million in 2020), and for deaths from HCV infection to be reduced to 140,000 or 2 per 100,000 (down from 290,000 or 5 per 100,000, respectively, in 2020). There are also targets relating to achieving major increases in the percentages of diagnoses and cures among people living with HCV.

We propose ten actions to eliminate HCV in hospitals (BOX 1).

## Simplified diagnosis

Reflex testing, that is, performing the HCV antibody test (anti-HCV) and, if the result is positive, proceeding to test for active infection (HCV-RNA and/or HCV antigens) directly in the same sample, has shown benefits in linking to care<sup>4</sup> and is cost-effective<sup>5</sup>, even for mass screening strategies.

## Positive case notification system (alerts)

A clear and simple notification or alert system to ensure linkage to care must be put in place in the diagnostic service, which informs the requesting physician and the relevant specialists responsible for the treatment of HCV infection (hepatology and digestive, infectious diseases or internal medicine units) of positive results.

## Streamlined care circuit

It is essential to simplify care models by avoiding multiple referrals<sup>6</sup>. Ensuring proper coordination between community, primary care, mental health and drug addiction services has shown better linkage and adherence to treatment, which enables guaranteed referrals to specialized care for anyone diagnosed with chronic HCV infection.

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**Box 1 | Ten required actions to eliminate hepatitis C in hospitals**

1. Implement reflex testing within all diagnostic services
2. Adopt an effective system for notifications or alerts of positive cases, both to the requesting physician and to the service(s) responsible for hepatitis C virus (HCV) treatment
3. Establish direct referral to specialized care for any patient diagnosed with a chronic HCV infection
4. Identify all patients lost in the system through a retrospective search for positive cases from at least 2015 onwards and periodically every 2 years after
5. Simplify pre-treatment evaluation in patients with chronic HCV infection, with or without compensated cirrhosis
6. Simplify the dispensing of treatment, promoting complete delivery in a single visit, and facilitating its monitoring
7. Implement universal screening in high-risk patients
8. Establish screening in certain selected groups of patients by risk factors: pregnant people, patients admitted to the emergency department, during the pre-anaesthesia evaluation and/or those admitted to any hospital unit
9. Implement a decentralized and simplified diagnosis to facilitate approaching vulnerable populations
10. Implement coordination with harm reduction centres linked to hospitals

**Retrospective search protocol for positive cases**

Searching for and finding patients who are positive for HCV is essential to re-link patients lost to follow-up to care and treatment<sup>7</sup>. In Spain, there are no ethical impediments to the implementation of such an approach.

**Simplified evaluation prior to the start of treatment**

It is recommended to carry out the baseline evaluation of patients in a short and simplified way. The only essential information to start treatment in patients with chronic hepatitis C (with or without compensated cirrhosis (Child–Pugh A)) is the presence of HCV-RNA or HCV core antigen, and to assess possible drug interactions. The presence of liver fibrosis is not necessary to start treatment, although it is highly advisable to perform a fibrosis assessment using elastography or non-invasive markers, such as the Fibrosis-4 or aspartate aminotransferase-to-platelet ratio index<sup>8,9</sup>.

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**Simplified treatment**

Wherever possible, treatment should be dispensed completely in a single visit, during which the treatment will be explained to the patient and education and referrals relating to prevention of reinfection will be provided as warranted. Given the simplicity of treatment, and the support of new technologies, physical monitoring might not be necessary, other than in cases associated with exceptional situations such as those who are institutionalized or otherwise as determined by the clinician.

**Universal screening**

Universal screening is recommended in the following groups<sup>2</sup>: patients undergoing or who have undergone transplantation, both solid organ and haematological; patients with chronic kidney disease and/or on haemodialysis; patients living with HIV; patients with liver cirrhosis of any aetiology; patients with bleeding disorders who require (or who have required) transfusion of blood products; patients with STIs; PWID; patients diagnosed with a serious mental health disorder; and migrant patients from countries with a high HCV prevalence.

Patients included in these groups must have an anti-HCV detection test completed at least once in their lives. If the result is negative and they continue to be exposed to risk factors, the detection of antibodies should be carried out periodically.

**Screening in certain selected groups of patients for risk factors**

Selected groups of patients warrant HCV screening<sup>2</sup>: pregnant people with a history of exposure and/or in a high-risk situation; people seeking emergency care (it is recommended to establish screening criteria in the triage that is carried out in most emergency services — there are multiple examples that show that the emergency service is the only contact with the health system for certain vulnerable populations); people undergoing pre-anaesthetic assessment; and patients admitted to any hospital unit with risk factors (for example, injecting drug use, migration from countries with a high HCV prevalence, living with HIV and/or other STIs, serious mental health disorders).

Systematic screening is recommended for all patients who come to the emergency room, during the pre-anaesthetic evaluation and/or for those who are admitted to any hospital unit if they present any of the risk criteria for HCV infection. For this reason, we recommend that the protocols of emergency units, pre-anaesthetic evaluations and/or any hospital unit include the systematic search for risk factors for hepatotropic viruses and/or HIV infection.

**Decentralized and simplified diagnosis**

Access to vulnerable populations should pivot on the decentralization of diagnosis<sup>10</sup>, through actions aimed at implementing the processing of new samples for the detection of viraemia (for example, dried blood spot testing) and the capacity to record point-of-care tests carried out in the hospital units or centres within or linked to a hospital (for example, harm reduction centres) where these patients are cared for.

### Coordination with harm reduction centres

It is recommended to ensure coordination with harm reduction centres linked to hospitals to facilitate and simplify the process of both screening and treatment of patients from high-risk populations (for example, PWID).

Eliminating HCV is within humanity's reach. Leveraging opportunities to diagnose and treat more people living with HCV when they enter inpatient hospital care for other reasons is an important way to contribute to reaching the WHO elimination targets and ensuring that this virus ceases to be a public health threat within the decade.

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