

The Role of Healthcare Provider in Management Hepatitis C Patients

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Abstract: The current study aimed to examine the role of health care for patients with hepatitis C through the care of doctors, nurses, and dentists. With the introduction of direct-acting antiviral drugs, treatment for hepatitis C has become very effective and tolerable. However, patients' access to treatment remains limited in low- and middle-income countries due to lack of supporting health infrastructure and high cost of treatment. International bodies encourage poor countries to organize public health responses that will facilitate the dissemination of care and treatment at the national level. However, only a few countries have documented formal plans and policies. Here we outline the approach taken in Saudi Arabia to the public health framework for hepatitis C control and care within the WHO Hepatitis C Health Sector Strategy. This includes developing and implementing policies and programs, prevention efforts, screening capabilities, treatment services, and strategic information systems. We highlight the care of doctors, nurses and dentists for patients with hepatitis C. There has been a need to promote decentralization of care and integrate the management of hepatitis C into routine clinical services to provide better access for patients to diagnosis and treatment. Introducing rapid diagnostic tests into public healthcare facilities would help increase case detection. Increased funding is also necessary to support care and treatment services.

Keywords: Healthcare - Management - Patients -Hepatitis C

Introduction :

Worldwide, an estimated (71) million people, 1% of the global population, are chronically infected with hepatitis C virus (HCV). (1).

Its prevalence in sub-Saharan countries is significantly higher. In a meta-analysis of 1,151,337 individuals, the overall incidence was estimated at 2.7%, with regional variations (2).

The introduction of direct-acting antivirals has led to simplified treatment for hepatitis C and promising results. However, the number of deaths from this disease is rising globally (3).

For many low- and middle-income countries, the high cost of medicine, combined with the limited capacity of laboratories and health systems, prevents many from accessing and disseminating medicine. Treatment on a national scale (4).

Voluntary licensing agreements with manufacturers have allowed 101 countries, including Saudi Arabia, to obtain direct-acting antivirals at reduced prices. However, the cost remains prohibitive for most patients in low- and middle-income countries(13).

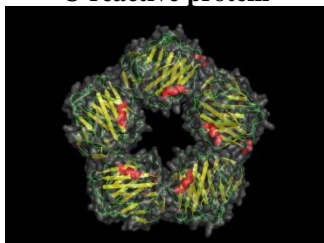
The Centers for Disease Control and Prevention encourages low- and middle-income countries to develop organized national responses to this disease (7).

However, to date, few reports describe the process of planning or implementing responses to HCV at the country level. Although 43 countries reported completing national plans to eliminate viral hepatitis, very few of these countries belong to low- and middle-income countries, and even fewer of these countries belong to sub-Saharan Africa. Saudi Arabia, a low-income country as classified by the World Bank, has well-established achievements in maternal and child health and the fight against HIV, tuberculosis, and malaria. It was also one of the few countries in sub-Saharan Africa to achieve most of the health-related Millennium Development Goals. Saudi Arabia has now increased its interest in the hepatitis C epidemic (9). We describe the framework for the comprehensive response to the epidemic in the Kingdom of Saudi Arabia within the proposed framework of the WHO health sector strategy for hepatitis C (7).

The focus is on five areas:

- (1) Information for focused work.
- (2) Interventions for impact.
- (3) Achieving equality.
- (4) Sustainability financing.
- (5) Innovation for acceleration. Many achievements and challenges in these strategic areas are highlighted. This information may inform the planning and implementation of national measures to combat hepatitis C by other low- and middle-income countries, as well as how to move forward to successfully combat the disease within Saudi Arabia(6).

C-reactive protein



Working in health care for patients with hepatitis C:

The prevalence of antibodies to hepatitis C virus was recently estimated at 10.3% within the total world population. While hepatitis C prevention efforts are increasing, we found no surveys or qualitative data on attitudes, knowledge, or Beliefs toward hepatitis C among the general population(7).

In addition, the causes of transmission of HCV are largely unknown, but are presumed to include past traditional medical practices, unsafe injection practices during and before the 1970s, and exposure to contaminated blood during Genocide in some countries of the world and blood transfusions before that (1999 - 2011)(8).

Some governments established a hepatitis control unit, and the goal was to develop a specific program for the prevention, care, and treatment of hepatitis C (13).

A technical working group has been established to care for patients with viral hepatitis, including specialists from the Ministry of Health, clinicians, nurses, dentists, academic researchers, laboratory experts, and implementing partners. Organizations, United Nations agencies, civil society representatives and the private sector. The group began meeting regularly to provide technical advice for program design and implementation(9).

At that time, a national policy for the prevention and management of viral hepatitis in Saudi Arabia was developed and published to provide specific guidance to healthcare providers and facilities on the implementation of clinical guidelines. A patient chart for the care and treatment of hepatitis C was prepared and implemented in paper form in hospitals receiving patients with hepatitis C virus. The aim was to support clinical decision-making in accordance with national guidelines and allow appropriate reporting of patient outcomes(10).

The work team also developed patient records that were implemented to track the total number of patients registered in clinical and laboratory services, starting with the approval of the action plan for the care of patients with hepatitis C and its inclusion in the integrated health management information system in the Kingdom of Saudi Arabia(11).

Interventions for impact:

The Kingdom of Saudi Arabia conducted several programs for blood donors to screen for Hepatitis C virus, introduced screening for hepatitis C virus, the blood safety program was emphasized in the country, and there was a decrease in direct transmission of hepatitis among large numbers of patients(12).

Hepatitis C virus testing for patients in the Kingdom of Saudi Arabia was developed using the latest methods, and was initially recommended for groups at risk, including patients who are intravenous drug users, infants of mothers infected with hepatitis C, and individuals who have received a transfusion. Blood or organs, and patients who have undergone organ transplants(14).

National health guidelines recommend testing everyone, and following up on cases at risk of hepatitis C infection by conducting periodic tests for groups most at risk, such as intravenous or nasal drug users, as well as health care workers and community health workers. Systematic testing is also recommended for pregnant women (17).

Currently, targeted screening campaigns are being conducted for all ages, healthcare workers, laboratory technicians, and prisoners(16). It should be noted that injection drug use is rare in Saudi Arabia, and is not considered the main driver of blood-borne epidemics(15).

The Ministry of Health has conducted routine public training and education for health practitioners on reducing the risks of therapeutic exposure to hepatitis C, including reducing unnecessary injections and increasing infection control measures in health facilities(20). Guidelines for HCV testing in Saudi Arabia include antibody testing using an enzyme-linked immunosorbent assay (ELISA) or a rapid diagnostic test, which is then confirmed by quantitative PCR-based viral load measurement(22).

Many hospitals nationwide have the ability to conduct an ELISA test for hepatitis C virus, and although many rapid diagnostic tests have been validated in the Kingdom of Saudi Arabia, there is no consensus on choosing or purchasing the product, and rapid diagnostic tests are not Currently available in public health centers. As part of established health services for hepatitis C virus, most hospitals have the capacity to perform viral load testing for hepatitis C virus using existing systems for testing for hepatitis C virus and its antibodies(27).

Blood samples are collected to test for hepatitis C virus in local health centers and hospitals in the Kingdom and analyzed using advanced equipment located in these centers and hospitals, and patients are provided with the results(25).

The Saudi Ministry of Health has developed the first national guidelines for the prevention and treatment of hepatitis C, which included instructions on methods for examining, diagnosing and treating it(29).

The guidelines for the health care protocol for patients have been updated to include details and instructions for treatment with direct-acting antiviral drugs and avoiding interferon-based treatment for patients. Untreated(17). Guidelines recommended treatment with sofosbuvir (400 mg) with ribavirin (1000-1200 mg) for 24 weeks; Sofosbuvir (400 mg) with ledipasvir (90 mg) for 12 weeks; Or sofosbuvir (400 mg) with daclatasvir (60 mg) for (12) weeks(32).

The choice of health care system for patients with hepatitis C depends on clinical indicators, in addition to the availability of medicines and the ability to afford them through the country for the patient(42).

The guidelines recommended that all patients with chronic infection should be considered potential candidates for treatment, and priority should be given to patients with advanced liver fibrosis (aspartate aminotransferase to platelet ratio index $> \geq 1.0$, or symptoms of cirrhosis), and to patients with co-infection. The Ministry of Health has officially permitted the use of sofosbuvir or sofosbuvir with ledipasvir to treat hepatitis C in the Kingdom of Saudi Arabia, as this service is provided free of charge to all citizens. There are now many doctors, nurses and dentists certified to prescribe direct-acting antiviral drugs in the Kingdom's hospitals, and the treatment plan includes achieving decentralization and expanding the scope of hepatitis C treatment, and establishing treatment capacity in all the Kingdom's hospitals. The Ministry of Health has launched media campaigns to raise awareness and reduce the incidence of hepatitis C(53).

The New Times, an English-language tabloid newspaper, published 29 articles on viral hepatitis from 2009 to 2015, with nine of these articles published in 2015, and for the first time, World Hepatitis Day was officially celebrated. C through a public march to call for the prevention and treatment of infection(55).

The Ministry of Health and the Biomedical Center of Saudi Arabia have committed to conducting an annual public campaign to raise awareness for community health workers, radio and television, and to provide mass screening information and link patients to care(48).

Care programs in the Kingdom focused on providing education about the methods of infection with hepatitis C to the general population and calling for periodic examination and receiving effective treatment.

The Kingdom has enhanced health care services for patients with hepatitis C by providing a more comprehensive set of these services in hospitals and health centers across the Kingdom through community health workers, especially doctors, nurses, and dentists, who work as a work team and platform to provide health care to these patients(40).

Clinical guidance for hepatitis C was integrated into the clinical guidance programme, and this included routine visits by expert doctors for theoretical and practical clinical teaching for doctors, nurses and dentists in hospitals and health centres, after their general training in the field of management and care of hepatitis patients.

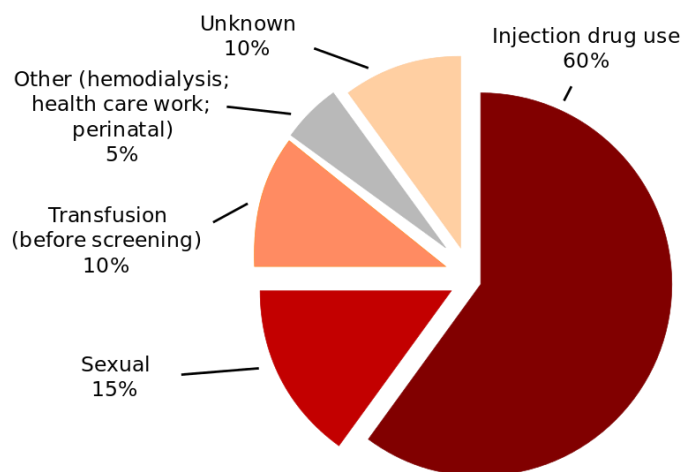
The Kingdom provides various health insurance plans. For everyone(39).

Financing for sustainability:

The technical work team developed and approved the national operational plan for viral hepatitis in the Kingdom of Saudi Arabia by identifying priorities for the main national activities and providing cost estimates for the various levels of coverage for screening, diagnosis and treatment of hepatitis C (20).

A comprehensive national program for the care of patients with hepatitis C was approved, and this is part of This would facilitate the treatment of hepatitis C for uninsured patients who do not participate in the health insurance program (23), which provides financial coverage for health care services for the majority of the population of the Kingdom of Saudi Arabia (24).

Regardless of this development, financing the care and treatment of patients with hepatitis C through national support is an urgent priority, unlike some countries of the world, where the costs of treating patients with hepatitis C still represent a major obstacle in most of these countries (25).



Innovation to Accelerate:

Several key elements have accelerated the success of the Saudi Arabia in building a comprehensive framework for the health care response to patients with hepatitis C in light of the Kingdom's unlimited support for the health of citizens and residents(52).

Hepatitis C screening, diagnosis, and treatment have been integrated into existing health programs and systems since previous periods, and healthcare systems in the Kingdom of Saudi Arabia cover the development of health policies and guidelines with the utmost care and quality, the provision of laboratory equipment, sample transportation, hospital and clinic infrastructure, training platforms, and a supply chain. Medications, training and clinical guidance(54).

This strategy has allowed the rapid implementation of the response to hepatitis C patients, and although there is a plan to achieve this strategy, challenges still exist in training sufficient numbers of health care workers and equipping laboratories to provide maximum access and equitable distribution of services(43).

Engaging the community and hepatitis C patient networks, especially in advocating for approval and access to direct-acting antiviral drugs, has been essential in Saudi Arabia's quest to provide new diagnostics and treatments quickly and efficiently(57).

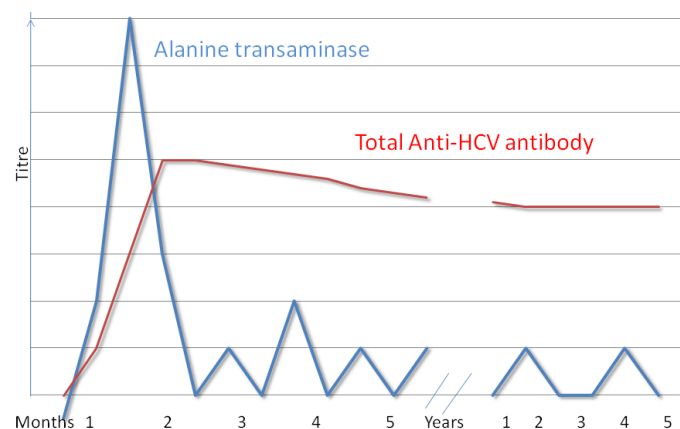
The health work team, represented by doctors, nurses and dentists, plays an important role in public awareness efforts. And caring for these patients through performing roles(50).

Partnerships have been established between the Ministry of Health and many global international organizations, including the World Health Organization and the Centers for Disease Control and Prevention(49).

These partnerships will benefit from technical, financial and operational expertise and experiences in the field of treating patients with hepatitis C(56).

The Ministry of Health has been active in building the main partnerships necessary to develop a rapid, informed and sustainable approach to a national program for treating patients with hepatitis C(58).

The Ministry has involved international academic institutions in training and research, and has By financing diagnostic tests, providing medicines, and purchasing direct-acting antivirals(41).



Conclusions:

A robust hepatitis C control program has been developed in Saudi Arabia, including key achievements in the areas of establishing health governance, developing the diagnostic capabilities of health workers, approving the use of the latest direct-acting antiviral treatments, training key staff, and strengthening Key strategic partnerships for technical support (Table 1) However, significant challenges remain, with the following key steps to be taken:

- The health care system for patients with hepatitis C needs to focus on developing a detailed framework for monitoring and evaluation and tools to monitor methods of diagnosing and treating patients with hepatitis C(11).
- The trend is towards increasing health care from the work team represented by doctors, nurses, and dentists in referral and hospitalization hospitals, with the integration of hepatitis management. C in routine clinical services to provide more effective access to diagnosis and treatment. Outstanding and effective(55).
- All necessary means of care and treatment were provided to effectively eliminate the epidemic and reduce its complications, and all forms of support were provided from funding sources. Successes were achieved and challenges were eliminated for this disease through the Kingdom of Saudi Arabia's rapid response by providing all modern medicines and training health system employees(47).
- To care for patients with hepatitis C by developing and accelerating efforts to eliminate this disease throughout the Kingdom(42).

Table (1)
World Health Organization hepatitis health sector strategy and Saudi Arabia response to hepatitis C

WHO			Saudi Arabia
Strategic Area ^a	Major Areas ^a	Actions	Next Steps
Information for focused action	Information for action	Viral hepatitis indicators established and elaborated. All patients on treatment monitored using standardized charts.	Incorporate indicators into national health management information systems platform. Develop detailed national monitoring and evaluation framework and tools. Design and collect data from epidemiology surveys.
	National plans	Health ministry hepatitis control unit established. National viral hepatitis policy and national strategic plan for viral hepatitis developed and published. National viral hepatitis technical working group and national hepatitis C treatment selection committee established and functional.	Viral hepatitis guidelines to be updated in 2018.
	Blood safety	Systematic screening of blood donors. Laboratory quality control measures established.	Link blood donors who screen positive to care via a reference system.
	Infection control	Injection safety policy and infection control guidelines available in all health facilities.	Implement infection control at community level through monitoring unsafe nonmedical and traditional practices.
Interventions for impact	Diagnosing infection	HCV testing recommended for target populations and universal testing. HCV antibody testing by ELISA available at all hospitals and PCR assay available too. All people living with	Procure and distribute rapid diagnostic testing for all health centres. Ensure PCR testing capacity for all district hospitals.
	Treatment and care	Clinical guidelines and policies for Care and Treatment Available at all Facilities. Direct-acting Antivirals established as Standard of Care, approved for use and available on Market. Several of Health-Care Providers Licensed at all Treatment Centers Countrywide.	Increase number of Treatment Centers to include all District Hospitals.
Delivering for equity	Adapting services	National coverage for referral network for hepatitis C treatment achieved. Screening and testing done at hospitals from multiple entry points (including antenatal care and blood transfusion centres). Individuals testing positive linked to care. - All health centres and hospitals a health-care provider	Educate community health workers on basic knowledge of viral hepatitis prevention. Establish quality improvement and monitoring of hepatitis services. Strengthen linkages with blood transfusion centres and maternal and child health, noncommunicable diseases, and mental health services. Develop and implement district operational plans.

WHO			Saudi Arabia
Strategic Area ^a	Major Areas ^a	Actions	Next Steps
Human resources		trained management of viral hepatitis.	
	Human resources	Training for physicians, nurses, Dentists, laboratory technicians, pharmacists and nutritionists conducted in all 30 districts. Hepatitis C integrated into clinical mentorship programme on infectious diseases for health-centre nurses. Routine training for health-care personnel on infection control.	Implement continuing education on hepatitis C for nurses, Dentists and physicians nationwide.
	Access to medicines, diagnostics, and other commodities	Centralized procurement of hepatitis C diagnostics and medication via the ministry of health.	Obtain Hepatitis C medication free.
	Enabling environment	Political commitment to support hepatitis viral programme strengthened. Saudi Society for Liver Diseases and Transplantation. World Hepatitis Day, media attention, advocacy groups, and outreach campaigns established. Youth education on viral hepatitis prevention by health professionals. Access to viral hepatitis services ensured, regardless of Gender.	Develop broader hepatitis C messaging and mass-media campaigns.
Financing for sustainability	Financing for sustainability	National operational plan implemented, with costing of diagnosis and treatment at various access levels. Current diagnostics and treatment obtained free.	Community-based health insurance to provide coverage for hepatitis C-related costs. Understand and monitor government health expenditures related to hepatitis C care and treatment.

Physicians' health care for patients with hepatitis C:

- Examination and diagnosis: Doctors examine and diagnose cases to detect hepatitis C according to their infection status (old - recent)(53).
- Medical examiners diagnose hepatitis C virus infection in two stages:
 1. Screening for antibodies to hepatitis C virus using a serology test identifies people who have been infected with the virus(39).
 2. If the test results confirm the presence of antibodies to hepatitis C virus, it is necessary to perform a nucleic acid test to detect the presence of hepatitis C virus RNA in order to confirm chronic infection and the need for treatment(41).

This test is important because about 30% of people infected with the virus spontaneously clear the infection thanks to a strong immune response without the need for treatment. Although these

people have cleared the infection, their hepatitis C antibody test results remain positive. Nucleic acid testing to detect the presence of hepatitis C virus RNA can be performed in a laboratory or using a simple point-of-care machine within a clinic(37).

3. Innovative new tests are being developed as diagnostic methods such as the hepatitis C core antigen test, and these tests will allow the diagnosis of active hepatitis C infection at a single stage in the future(30).

After a person is diagnosed with chronic hepatitis C virus infection, the degree of liver damage (fibrosis and cirrhosis) is assessed. Liver damage can be assessed by taking a liver biopsy or through a variety of non-invasive tests(46).

Evaluation of the degree of liver damage is used to guide decisions about treatment and management of the disease. Early diagnosis can prevent the emergence of health problems that may result from infection and prevent transmission of the virus(39).

The World Health Organization recommends testing people who may be at higher risk of infection. In contexts that witness high seroprevalence rates of hepatitis C virus antibodies in the general population, the World Health Organization recommends screening blood donors and conducting focused or targeted tests for specific groups at high risk of contracting the disease, including citizens, residents, health care workers, injection drug users, and prison inmates. And other closed places and people infected with HIV(40).

The organization recommends that hepatitis C detection tests be made available to all adults and suggests that they be linked to prevention, care and treatment services. treatment: Effective treatments are available against hepatitis C. The goal of treatment is to cure the disease and prevent long-term liver damage(50).

Antiviral medications, including sofosbuvir and daclatasvir, are used to treat hepatitis C. Some people's immune systems may fight the infection on their own and new infections do not always require treatment(32).

Treatment is always necessary in the event of chronic hepatitis C infection. People with hepatitis C can also benefit from lifestyle changes such as avoiding alcohol use and maintaining a healthy weight. Many people can recover from hepatitis C infection and become healthy with appropriate treatment(44).

The organization recommends that treatment with direct-acting antivirals targeting all genotypes be provided to all adults, adolescents, and children up to 3 years of age with chronic hepatitis C infection. Short-term oral cures with direct-acting antivirals have few, if any, side effects(42).

Treatment with these antibiotics can cure most people infected with hepatitis C virus, and the duration of treatment is short (usually between 12 and 24 weeks) and depends on the presence or absence of cirrhosis. In 2022, the organization included new recommendations for treating adolescents and children using the same treatments targeting all genotypes used to treat adults(22).

- Direct-acting antivirals that target all genotypes remain expensive in many high- and upper-middle-income countries, but prices have declined significantly in many countries (mainly low- and lower-middle-income countries); Start using generic

alternatives to these medications. Sofosbuvir and daclatasvir are the most widely used and least expensive direct-acting antiviral treatments that target all genotypes. Curative treatment is available for less than US\$50 in many low- and middle-income countries(45).

Providing care and services:

Until recently, the provision of hepatitis C testing and treatment in many countries relied on specialist-led models of care (usually hepatologists or gastroenterologists) in hospitals to administer complex treatments(33).

As short-term curative oral direct-acting antivirals targeting all genotypes begin to be used to treat hepatitis C, which have few, if any, side effects, a minimum level of experience and monitoring is now required(29).

WHO recommends that trained lay doctors and nurses can provide testing, care and treatment for people with chronic hepatitis C infection, using simplified service delivery procedures that include decentralization, integration and redistribution of tasks(51).

Testing, care and treatment services can now be provided safely in primary care facilities and harm reduction settings, which is more accessible and convenient for patients. protection:

- There is no effective vaccine against hepatitis C, and the best way to prevent the disease is to avoid exposure to the virus(48).
- Extra caution should be exercised in health care facilities and among people at high risk of infection with hepatitis C virus(33).
- People most at risk of infection include people who inject drugs and those infected with HIV Among the methods of preventing hepatitis C approved by doctors are the following:

- Safe and appropriate injection practices in health care.
- Safe handling and disposal of needles and medical waste:
- Providing harm reduction services to people who inject drugs, such as needle exchange programs, substance abuse counseling, and the use of opioid agonist therapy(57).
- Testing donated blood to detect hepatitis C virus and other viruses(46).
- Training newly graduated doctors on diagnosis, treatment, care and prevention(37).

Nursing care for patients with hepatitis C:

Nursing care for hepatitis C patients has emerged in remote areas, and nursing care can provide safe and effective diagnosis and treatment in the resource-poor setting of rural areas(46).

The pilot project, led by nurses, was implemented by Doctors Without Borders in cooperation with the ministries of health in some countries(11).

Nursing staff in several health centers were trained to identify signs of cirrhosis and provide treatment for hepatitis C virus(43).

Patients who did not suffer from decompensated cirrhosis or any other comorbidity were started in the health centers on combined treatment with sofosbuvir, 400 mg/day(55).

Daclatasvir, 60 mg/day, orally for 12 weeks. Then, the evaluation of adherence to the treatment and its effectiveness began during follow-up. The treatments achieved a sustained virological response after (12) weeks of treatment, depending on the patient subgroups(44).

This response ranged from (89% to 100%) Only two negative events were recorded; Both were determined to be unrelated to treatment. Given the safety and effectiveness of current direct-acting antiviral therapies for HCV infection and the validity of rapid point-of-care testing, several implementation studies have evaluated simplified models of HCV care delivered in decentralized settings that involve significant shifting of tasks to less specialized staff (e.g. treatment initiation Follow-up by the nursing staff)(43).

Nursing care for patients with hepatitis C has allowed for testing care, diagnosis on the same day, and perhaps the start of treatment on the same day, as diagnosis, treatment and follow-up are provided in one place, with specialized referral for patients with cirrhosis, and then implementation of hepatitis C treatment models. Nurse-led internationally in a variety of contexts, including community, hospital and custodial settings (9-12 days), this was done in high-income countries with well-developed HCV elimination programmes, and all countries included are on track To achieve the World Health Organization's (WHO's) global goals for eliminating hepatitis C (13).

Evidence is still needed on the effectiveness of nurse-led models of direct-acting antiretroviral therapy initiation in low- and middle-income countries(22).

Dentists' health care for patients with hepatitis C:

Hepatitis C greatly affects the teeth and gums, and the patient must receive appropriate oral treatment before any problem worsens later(52).

Dentists care for patients with hepatitis C to preserve their teeth through the following: - Use medical floss between the teeth at least twice a day(33).

- Stay away from hard toothbrushes and replace them with a brush with soft bristles to avoid bleeding gums(49).

- Use large electronic brushes with vibrations to clean teeth and gums. - Use a tongue brush to get rid of any particles that can cause bad breath(56).

- Use toothpaste containing fluoride to preserve the enamel layer(43).

- Follow a balanced and healthy diet, because malnutrition weakens the teeth and gums(30).

- If the dentist is infected with the hepatitis C virus, it may be necessary for him to stop working in the clinic, as the virus is transmitted through bodily fluids such as blood and saliva, and can expose patients and the clinic staff to the risk of infection with the virus(28).

Therefore, the dentist who suffers from the infection must adhere to the necessary treatment, rest, and take all timely appropriate preventive measures until he recovers and does not transmit the virus to others(50).

Dentists carry a high risk of acquiring blood-borne disease-causing agents, such as the hepatitis C virus, and researchers found that the frequency of non-response to treatment is higher with smoking and alcohol abuse(39).

Organized responses:

The Global Health Sector Strategies recommend that countries take joint, disease-specific actions that are supported by other actions taken by WHO and partners(35).

These strategies consider shifts in pre-epidemic years, technology and context, enhance learning opportunities across endemic areas, and provide opportunities to leverage innovations and new knowledge for effective disease response(38).

It calls for expanding the scope of prevention, detection and treatment of viral hepatitis diseases, focusing on reaching the population groups and local communities most affected by each of these diseases and most at risk of contracting any of them, and to filling the gaps and addressing the inequities in combating them(50).

It enhances synergies within the framework of achieving universal health coverage and primary health care and contributes to achieving the goals of the 2030 Agenda for Sustainable Development(43).

The organization organizes an annual campaign on the occasion of World Hepatitis C Day (as one of its nine main health campaigns organized annually) to raise awareness of preventing infection with this virus and enhance understanding of it(36).

On the occasion of World Hepatitis C Day 2023, the organization focuses on the theme "One Life, One Liver" to highlight the importance of the liver in order to live a healthy life and the necessity of expanding the scope of hepatitis C prevention, testing, detection and treatment with the aim of preventing liver disease and achieving the goal of eliminating it By 2030(58).

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