SHORT REPORT

# Hepatitis C elimination in Pakistan is a distant dream unless government controls the health sector

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## Abstract

The World Health Organisation (WHO) has set an ambitious target to eliminate hepatitis C virus (HCV) by 2030. Pakistan is one of the focused countries because of the high prevalence of HCV. The prices of direct-acting antiviral drugs(DAA)have significantly reduced to between 11-25 dollars for a month's treatment. To achieve the 2030 elimination target, Pakistan has to provide treatment to one million HCV-infected patients every year, beginning from 2018. This short report highlights a key barrier to achieve this target,i.e. the unsafe practices by regulated and unregulated healthcare delivery system comprising trained and untrained healthcare providers who can continue to churn out new patients with their unsafe healthcare practices and increase the possibility of re-infection in those who have been treated. Only the government has the power and authority to regulate and control the healthcare delivery system. Elimination of Hepatitis in Pakistan will remain a distant dream unless the healthcare delivery system is tamed.

**Keywords:** Hepatitis C, Pakistan, health sector, risk factors.

**DOI: https://doi.org/10.47391/JPMA.384**

## Hepatitis C risk factors in Pakistan

Globally, Pakistan has the second largest burden of hepatitis C virus (HCV).[1] The national survey of 2008 reported 4.8% HCV prevalence,[2] while revised estimates of 2013 suggested that there were 7.0 million persons infected with HCV.[1] These are astounding numbers for a country where healthcare services are fragmented and patients are often not aware of the risks of disease transmission. One infected person has the potential to pass the virus to not only his/her immediate family but even beyond. Multiple studies have identified risk factors for hepatitis C in Pakistan. These risk factors include unsafe injection practices by both trained and untrained healthcare providers which include injections given with syringes used on multiple patients as well as injections prepared on unclean surface, medical and dental procedures carried out without adhering to infection prevention and control (IPC) practices, barbers using the same blade on multiple customers and unsafe/unscreened blood transfusion.[2-8] Unsafe injections have also been the cause of hepatitis and human immunodeficiency virus (HIV) outbreaks in South Asia.[9] A case control study of healthcare workers (HCW) in 2014 found that compared to controls HCV positive HCWs who reported a needle stick injury were prone to contracting infection (OR 4.39, CI 95) and those HCWs assisting in surgeries were at 1.7 times increased risk of getting HCV.[10] When a healthcare delivery system is plagued with so many risk factors the chances of acquiring an infection such as hepatitis C automatically increase several folds. A study in 2017 projected future burden of HCV in Pakistan and investigated conditions for HCV elimination. It concluded that HCV burden would remain high and majority of deaths from HCV in Pakistan would occur in people aged less than 50 years.[11]

## The health care delivery system

The healthcare delivery system of Pakistan has three levels-- tertiary care hospitals in urban centres, secondary level health facilities in rural and peri urban settings, and basic health units (BHUs) that provide primary healthcare (PHC) in rural areas. Primary healthcare is often considered the back bone of a healthcare system and good quality PHC not only improves the health of patients but it also eases the pressure on other levels, especially tertiary level facilities. Pakistan has a relatively large primary healthcare infrastructure. This includes 5,000 basic health units, 600 rural health centres, 7,500 other first-level care facilities and over 100,000 lady health workers providing services across Pakistan. These primary healthcare services are supported by a network of 989 secondary care hospitals, at tehsil and district levels, for referrals.[12] Some of the barriers related to utilising government PHC services include location of health facility, availability of staff, quality of services, gender-related issues and service hours.[13,14] These factors have led to a mushroom growth of a private and unregulated health sector in Pakistan. This unregulated health sector consists of untrained healthcare providers often posing as doctors and writing prescriptions as well as performing surgical procedures. These untrained providers often establish their health facility within the community and have flexible hours. As a result, the community prefers to go to them instead of government facilities. Although unsafe healthcare practices are not just

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limited to untrained health providers and even the trained ones indulge in unsafe practices, field experiences suggest that the practices of untrained providers are worse, which is understandable. If someone has no knowledge of infection control or disease transmission she/he will not give attention to infection control practices and only focus on seeing as many patients as possible and making money. There are no correct figures available for the number of untrained healthcare providers in Pakistan. Anecdotal report estimates around 600,000 untrained health providers in primary and urban settings.[15]

## Decreased price of HCV treatment

The government of Pakistan (GOP) is cognizant of the problem of hepatitis B and C in the country. It is working hand in hand with WHO's Global Hepatitis Programme. WHO has set the target to eliminate hepatitis by 2030 and is urging member states to tackle hepatitis-related issues aggressively. Without intervention, many people living with HCV will go on to develop complications such as chronic liver disease, cancer and cirrhosis. This puts an extra and unnecessary strain on the healthcare system – which could be solved through an initial investment in direct-acting antiviral drugs (DAAs) to cure HCV. The good news is that HCV can be cured in more than 90% of cases using DAAs.[16] As a result of the efforts of GOP and other stakeholders the price of generic Sofosbuvir and Daclatasvir combination required for treating HCV have significantly come down and the cost of one month's treatment is between 11-25 dollars whereas only three years ago this combination used to cost 150 dollars which was out of the reach of many patients in Pakistan. In the absence of a registry there is a dearth of reliable treatment data but it is estimated that close to 250,000 hepatitis C infected patients have received treatment in Pakistan since 2016. Even though the cost of treatment has decreased, there is a huge gap to be filled. A modelling study has estimated that between 550,000 to 750,000 HCV infected patients require annual treatment if Pakistan has to achieve the 2030 elimination target.

## Increasing treatment coverage

Increasing treatment coverage requires concerted efforts. A study cited earlier suggested that to achieve hepatitis elimination target by 2030 the diagnosis rate for HCV in Pakistan needs to be one million per year and treatment 800,000 per year from 2018 onwards.[11] HCV treatment can be expanded by providing treatment at lower level health facilities,or what we can call a decentralised HCV treatment; however, treatment protocols will have to be standardised along with expansion of testing services.

## Controlling health sectors

Regulated and unregulated health sectors need to be controlled. Unsafe injection practices are common by trained as well as untrained healthcare providers. Regulatory bodies of the government have to take these issues seriously. Private practitioners are scattered and it will not be easy to visit each health facility and check their practices. However, training of general practitioners through bodies such as the Pakistan Medical Association (PMA), etc may help in increasing sensitisation and education -in this regard. Realising the seriousness of the situation, infection prevention and control, and injection safety should be made part of the training during hospital internship/house job period; it should also be part of the training of nurses and paramedics. Exemplary disciplinary actions against those who indulge in unsafe practices such as reusing injection equipment (syringe, needles or the IV line drip set) and propagating disciplinary action and instilling fear among those who intentionally indulge in unsafe practices may help. For untrained healthcare providers, there is no solution except to make them close their business. If they reappear, they should be prosecuted so that an example is set for others. Unregistered blood banks also need to be closed. Refresher courses for authorised blood banks are important to keep them abreast on issues related to screening, infection prevention and control, storage and cross matching. Only the government has the authority to prosecute healthcare providers who intentionally carry out unsafe injection practices. If unnecessary injections can be eliminated a significant proportion of risk factor can come down. Without making concerted efforts and taking concrete steps the elimination of hepatitis C in Pakistan will remain a distant dream.

## Raising awareness among the masses

Patients in Pakistan demand injections for illnesses that can be treated with oral medicines.[17] This idea is so deep-rooted that many patients believe that without an injection treatment is incomplete. It is one of the reasons that lead to unsafe injection practices by healthcare providers especially in settings where patients cannot afford to purchase a new syringe but insist on an injection when seeking treatment. Intense injection safety campaigns are required using different methods. Social media is one such tool which can play a key role. However, this requires developing robust messages in national and regional languages and disseminating them for longer periods.

**Disclaimer:** None.

**Conflict of interest:** None.

**Funding Sources:** None.

## References

1. Gower E, Estes C, Blach S, Razavi-Shearer K, Razavi H. Global epidemiology and genotype distribution of the hepatitis C virus infection. J Hepatol 2014; 61(Suppl 1): S45–57.
2. Qureshi H, Bile KM, Jooma R, Alam SE, Afridi HUR. Prevalence of hepatitis B and C viral infections in Pakistan: findings of a national survey appealing for effective prevention and control measures. East Mediterr Health J 2010;16(Suppl): S15–23.
3. Hashmi A, Saleem K, Soomro JA. Prevalence and factors associated with hepatitis C virus seropositivity in female individuals in Islamabad, Pakistan. Int J Prev Med 2010; 1: 252-6.
4. Saleha S, Kamal A, Ullah F, Khan N, Mahmood A, Khan S. Prevalence of hepatitis C virus genotypes in district Bannu, Khyberpakhtunkhwa, Pakistan. Hepat Res Treat 2014; 2014: 165826.
5. Janjua NZ, Hamza HB, Islam M, Tirmizi SF, Siddiqui A, Jafri W, et al. Health care risk factors among women and personal behaviours among men explain the high prevalence of hepatitis C virus infection in Karachi, Pakistan. J Viral Hepat 2010; 17: 317-26.
6. Safi SZ, Waheed Y, Sadat J, Solat ul Islam, Salahuddin S, Saeed U, et al. Molecular study of HCV detection, genotypes and their routes of transmission in North West Frontier Province, Pakistan. Asian Pac J Trop Biomed 2012; 2: 532-6.
7. Ver Hoeve E, Codlin AJ, Jawed F, Khan AJ, Samad L, Vatcheva KM, et al. Persisting role of healthcare settings in hepatitis C transmission in Pakistan: cause for concern. Epidemiol Infect 2013; 141: 1831-9.
8. Bari A, Akhtar S, Rahbar MH, Luby SP. Risk factors for hepatitis C virus infection in male adults in Rawalpindi-Islamabad, Pakistan. Trop Med Int Health 2001; 6: 732-8.
9. Altaf A. Unsafe Injection Practices by Medical Practitioners in South Asia Associated with Hepatitis and HIV Outbreaks. J Infectiology 2018; 1: 22-4.
10. Gorar ZA, Butt ZA, Aziz I. Risk factors for bloodborne viral hepatitis in healthcare workers of Pakistan: a population based case control study. BMJ Open 2014; 4: e004767.
11. Chhatwal J, Chen Q, Wang X, Ayer T, Janjua N, Kanwal F. Hepatitis C burden in Pakistan: crisis that could be averted. Poster reference number 140. World Hepatitis Summit 2017. [Online] [Cited 2019 Feb 20]. Available from: URL:http://www.worldhepatitissummit.org/docs/defaultsource/posters/140_jagpreetchhatwal.pdf?sfvrsn=2.
12. WHO EMRO website: Pakistan primary and secondary health care. [Online] [Cited 2019 Feb 20]. Available from: URL: http://www.emro.who.int/pak/programmes/primary-a-secoundary-health-care.html
13. Panezai S, Ahmad MM, Saqib SE. Factors affecting access to primary health care services in Pakistan: a gender-based analysis. J Dev Pract 2017; 27: 813-27.
14. Arshad S, Iqbal J, Waris H, Ismail M, Naseer A. Healthcare system in Pakistan: a review. Res Pharmacy Health Sci 2016; 2: 211-6.
15. DAWN website "Health the lure of quacks". [Online] [Cited 2019 Feb 20]. Available from: URL: https://www.dawn.com/news/1443342.
16. WHO Global Hepatitis Programme website "Pakistan's investment in hepatitis may see return within years. [Online] [Cited 2019 Feb 20]. Available from: URL: https://www.who.int/hepatitis/news-events/towards-hepatitis-elimination-pakistan/en/.
17. Raglow GJ, Luby SP, Nabi N. Therapeutic injections in Pakistan: from the patients' perspective. Trop Med Int Health 2001; 6: 69-75.