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EDITORIAL

Unsafe Medical Practices and the Continuing Transmission of Hepatitis: Lessons from Taunsa HIV Outbreak.

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Pakistan remains one of the world's most consequential hepatitis settings. Pakistan has the heaviest global burden of hepatitis C, with about 9 million people living with HCV[1]. WHO, in its recent report, estimated that Pakistan has more than 13.8 million people living with hepatitis B or C combined[2,3]. WHO and Pakistan's Ministry of Health further stated that roughly 110,000 people acquire HCV in Pakistan each year, and that unsafe medical injections, including blood transfusions, account for the majority of these new infections in Pakistan[4]. This means that hepatitis transmission in Pakistan is not just a problem of past neglect; it is being actively sustained by ongoing failures in everyday clinical care.

The recent Human Immunodeficiency Virus (HIV) outbreak among children in Taunsa Sharif, Punjab, is therefore not only an HIV story, but is also a warning about the same unsafe pathways that spread HBV and HCV: reuse of syringes and needles, contamination of multi-dose vials, poor sterilization, unsafe pediatric transfusions, and care delivered by unqualified or weakly regulated providers[5]. (Figure 1). Because HBV and HCV are transmitted through the same blood exposures, Taunsa should be understood as a sentinel event for ongoing hepatitis risk as well. The closest precedent is Larkana in 2019. In Larkana District, 30,191 people were screened, and 876 were HIV-positive; 719 of those positives, or 82%, were children. Among 211 pediatric cases investigated in detail, 99% had a history of injections or infusions in the preceding 12 months, and 17% had a blood transfusion[6]. Investigators also noted unauthorized blood banks and the use of non-WHO-prequalified blood screening kits. A case-control study among Larkana cases found concurrent evidence of HBV in 18.2% and HCV in 6.5% of participants[7]. This matters for Taunsa because it shows that Pakistan's pediatric HIV outbreaks are not isolated HIV-only events; they emerge from healthcare ecologies that are also capable of transmitting hepatitis viruses.

Pakistan's hepatitis problem is simultaneously old and current. Older national data, still widely used in the literature, found hepatitis B surface antigen prevalence around 2.5% and hepatitis C prevalence around 4.8% in the general population[8]. Later reviews concluded that prevalence in high-risk groups was substantially higher than in the general population. More recent WHO reporting updates the scale of the problem rather than contradicting it. Pakistan continues to carry an exceptionally large hepatitis burden, with especially severe HCV prevalence and substantial HBV burden. According to WHO data, people living with HCV in 2024 were 9 million. Prevalence in Punjab, Sindh, Balochistan, and Khyber Pakhtunkhwa provinces was 8.9%, 6.2%, 5.2%, and 6.5%, respectively[2]. At the same time, only about one quarter to one third of affected people know they are infected, which means many infections remain undiagnosed and untreated.

The burden of hepatitis is not evenly distributed. Repeatedly identified high-risk groups in Pakistan include people who receive frequent therapeutic injections, people exposed to surgical or dental procedures, multitransfused patients such as children with thalassemia major, patients on hemodialysis, and residents of low-income or rural communities that depend on poorly regulated private or informal care[9–14].

WHO's injection-safety guidance adds that using the same needle or syringe on more than one person, or reintroducing used injection equipment into a multi-dose vial, can transmit life-threatening infections[15]. In practical terms, this means that a single lapse in a clinic can expose many patients in sequence. Pakistan's problem is not only 'unsafe reuse'; it is also too many injections. Pakistanis receive around 5.1 therapeutic injections per person per year, among the highest rates worldwide[16]. WHO's broader injection-safety material explains why this matters: the more injections a health system gives, the more opportunities it creates for stock shortages, equipment reuse, contamination, and sharps injuries. In Pakistan, overuse is not incidental; it is part of the transmission ecology.

The provider-level evidence is equally concerning. In Karachi, private clinics serving slum communities, only 25.2% of practitioners reported using a new syringe for every patient, and a substantial fraction of practitioners were not formally qualified[10]. Unqualified and informal providers intensify every one of these hazards. In a large Sindh anti-quackery survey conducted after the Larkana HIV outbreak, 4,315 private practitioners were inspected, and 3,022, or about 70%, were found to be unlicensed[14]. WHO and Pakistani regulatory bodies have repeatedly linked outbreaks and unsafe injections to private practitioners and quacks operating outside reliable infection-prevention oversight. In hepatitis terms, 'quackery' is not only a licensing issue; it is a transmission mechanism.

A systematic review concluded that Pakistan's blood transfusion system is fragmented, demand-driven, and dependent on weakly regulated practices, creating a substantial possibility that transfusion-transmissible infections are contributing to the national HBV and HCV epidemic[13]. In transfusion-dependent β-thalassemia patients, investigators emphasized that improved

donor screening, voluntary donation, and asepsis during transfusion were essential to reduce HBV and HCV transmission[17]. Hemodialysis studies similarly describe HBV and HCV risk as amplified by frequent blood exposure, transfusions, hospitalization, surgery, and possible contamination of equipment[18].

A further structural vulnerability is incomplete prevention at birth. Pakistan's Expanded Programme on Immunization gives hepatitis B vaccine as part of the pentavalent schedule at 6, 10, and 14 weeks. This leaves a six-week window during which newborns can become infected. Pakistan has introduced universal hepatitis B birth dose into the national EPI schedule, but it is still not properly implemented. A recent local delivery ward pilot study shows that timely newborn vaccination is feasible[19]. This matters because unsafe healthcare harms children twice: once through direct iatrogenic blood exposure, and again through missed opportunities to protect them from chronic HBV infection from birth onward.

Pakistan is not starting from zero. The country now has a National Hepatitis Strategic Framework for 2024–2030[20], a National Blood Transfusion and Blood Products Policy for 2025–2030[21] , Provincial Hepatitis Control Programs, and a Prime Minister's National Hepatitis C Elimination Programme launched in May 2026[4]. There is an official ban on conventional syringes in favor of auto-disable syringes. The blood transfusion safety acts of provinces require screening of donated blood for HBV, HCV, HIV, malaria, and syphilis; licensing of blood establishments; traceability from donor to recipient; reporting of adverse events; qualified personnel; and district blood safety inspectors[22]. The persistence of Taunsa-type outbreaks shows that policy existence and policy enforcement are not the same thing. Pakistan's hepatitis burden is perpetuated in the gap between what the laws require and what patients actually experience in clinics, hospitals, blood banks, and informal practices.

The hepatitis implications are, if anything, broader than the HIV implications. WHO notes that new HCV infections are usually asymptomatic, and hepatitis B infection is often asymptomatic in children, which makes silent spread easier to miss unless active screening is done. So a Taunsa-style cluster can generate a visible HIV outbreak while simultaneously seeding a much less visible pool of HBV and HCV infections. In analytic terms, Taunsa should be read as a warning that wherever one bloodborne pathogen is spreading through unsafe care, others are likely being transmitted as well.

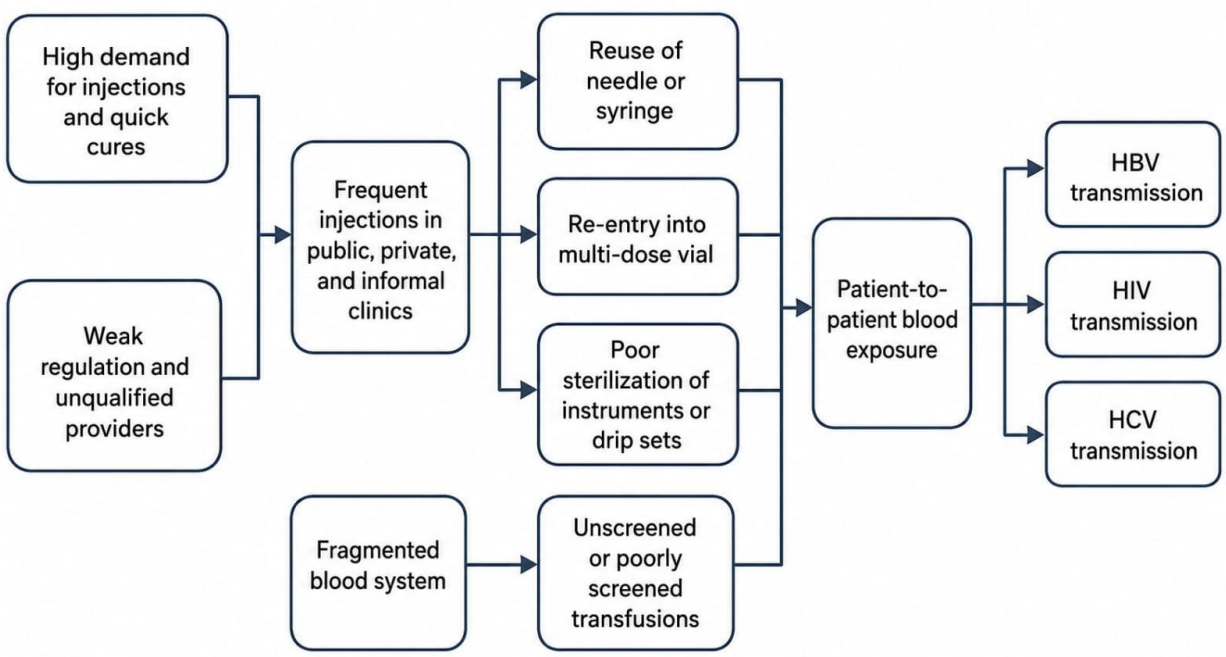

Fig 1. Inadequate healthcare regulations and unsafe clinical practices are the primary drivers of Hepatitis and HIV spread across Pakistan

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