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## **Substance Abuse in Pakistan: Clinical Issues and Research Opportunities**

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Substance misuse is a continuing global health challenge. Pakistan is the 5<sup>th</sup> most populous country (230 million), >55% below age 24. It shares borders with India, Afghanistan, Iran, and China. Substance use in Pakistan can be split into two types: illicit drugs (opioids, cannabis, alcohol (illegal in most circumstances) and legal addictive substances (cigarettes, non-smokable substances like pan, snuff/naswaanswerka, areca nuts, etc). Addressing these issues is hampered by the ease of access and social acceptance of these substances. At least 70% of the world's illicit opiate trade originates in the Afghanistan region, and up to 44 tons of heroin are consumed there each year in Pakistan. About 90 million Pakistanis use such substances at some point in their lives, and 7 million are dependent. There are only 96 rehabilitation centers in Pakistan with a bed capacity of ~200,000. The social and health system is under great pressure facing a consistent increase in drug abusers. Consequently, drug misuse is contributing to a surge in HIV, HCV, oral and lung cancer, and related health complications. Pakistan is the highest-burdened country with HCV patients - ~10 million chronic carriers - and >250,000 HIV victims. Oral cancer, mostly attributable to alcohol and tobacco use, is the second leading cancer in the country with 16,959 new cases reported in the year 2020. There is a need to understand and address these problems better, and to identify underlying genetic factors by conducting well-powered sampling of affected populations and subsequent molecular analysis.