

drug users outnumber Heterosexual cases (Data not included from: West: Austria, Monaco, Sweden; East: Russia, Ukraine) [17].

Data collection of populations at risk

Voluntary blood donors, military soldiers, employment seekers, and periodic population-based sero-surveys may regard as representative of young population. Meanwhile the frequency of infection in this group likely is under-estimated.

Pregnant women were originally selected as a sentinel population for HIV surveillance as a way to monitor trends in a population group at low risk of infection. This population was selected because the coverage by prenatal clinics was high in most developing countries and because blood was already being drawn for other purposes [18-19].

Sentinel sites representing at high risk of HIV infection subjects are:

Injection drug users (IDUs) is probably the most universally marginalized of all HIV-related behaviors, and it is also almost universally illegal. Recent estimates of the number of injection drug users in Russia, for example, vary by a factor of 10 [20].

Other at-risk population are: Drug treatment centres, sexually transmitted infections (STIs) clinics, female sex workers prisoners, men who have sex with men (MSM), Tuberculosis (TB) clinics, Hospital wards, refugees, truck drivers, and in some society's barbers

In this group their spouses, and all intimate contact subjects, detention centres personnel, and the clinics they referred should be screened.

At-risk group for HIV infection and co-morbidities

A review selected of a total of 215 studies, included 43,170 patients, depicted the following prevalence of transmission of drug-resistant HIV in rank order: North America (12.9%), Europe (10.9%), Latin America (6.3%), Africa (4.7%), and Asia (4.2%). Nucleoside reverse transcriptase inhibitor resistance declined over time in North America ($p=0.03$), Europe ($p < 0.001$), and Latin America ($p < 0.001$). The decline in nucleoside reverse transcriptase inhibitor resistance reflects the improvement of treatment regimens in resource-rich settings. In contrast the resistance prevalence increased in Asia ($p=0.047$) and Africa ($p < 0.001$). This can be explained by the antiretrovirals becoming more available during recent years in these continents. Nonnucleoside reverse transcriptase inhibitor resistance rose over time in North America ($p < 0.001$), Europe ($p < 0.001$), Latin America ($p < 0.001$), and Asia ($p=0.01$). Changes include the more wide-spread use of antiretroviral drugs in developing countries and the development of therapies from low-active mono-therapies to highly active antiretroviral regimens in the industrialized countries [21].

HCV co-infection with HIV ranges from 5% to more than 30%, depending on the overall prevalence of HIV in the area [22]. A study conducted in KwaZulu-Natal Province in South Africa where HIV is predominantly a sexually transmitted infection and injection drug use is rare in this region. The prevalence of HCV was 6.4% and that of HIV, 40.2%. There was a significantly higher prevalence of HCV

of age concluded school curricula based on a comprehensive social-in uence model may delay progression to daily smoking and episodes of drunkenness [24,41]. Experimental trials of Project Towards No Drug Abuse (TND), a senior-high-school-based drug abuse prevention program is an e ective drug and violence prevention program for older teens, at least for one-year follow-up [42].

In Germany each general practitioner who has completed an additional training in addiction medicine is allowed to prescribe substitution drugs to opioid dependent patients. Also, in the development of research on health care services, guidelines and the implementation of quality assurance measures, implementing substitution treatment with concomitant e ects and treatment elements such as drug history-taking, dosage setting, co-use of other psychoactive substances (alcohol, benzodiazepines, cocaine), management of 'di cult patient populations', and integration into the social environment and psychosocial counseling programs adjuvant has been arranged successfully, there [24,43]. In a study of 26 former male inmates who had recently used drugs within correctional facilities in Vancouver, Canada showed the harms normally associated with drug addiction and injection drug use are exacerbated in prison. e scarcity of syringes has resulted in patterns of sharing amongst large numbers of persons. Continual reuse of scarce syringes poses serious health hazards and bleach distribution is an inadequate solution [24,46]. Harm reduction policies, such as needle exchange programs, injection centers, and substitution treatments, attempt to reduce the health and social damage associated with illegal drug use [24,47].

Harm reduction can be understood as "policies and programs which are designed to reduce the adverse consequences of mood altering substances without necessarily reducing their consumption"; it is consistent with the best traditions of both medicine and public health [24,48]. e success of harm reduction as a unifying concept will depend on its innovative application in both prohibitory and regulatory frameworks, and careful evaluation of its e ectiveness in a ti 3

in both predicting and tracking the course of the HIV epidemic in a given country. Within a larger monitoring and evaluation framework, however, data generated by regular surveillance systems can contribute to an understanding of the impact of the combined effect of the national response to HIV [60,63-66].

It is hoped that closer global cooperation from upstream basic research to downstream clinical trials will greatly speed better intervention and treatment strategies as well as the ultimate production of a successful AIDS vaccine [67-68].

In Table 1 our proposed surveillance form for recruitment and follow-up of HIV cases is depicted. In this table one may add other parameters of behavioural surveillance as about the sexual and drug-injecting behaviours, number of sexual partners, condom use, number of syringe use during one month. Also to assess other characteristics of infected subjects such as occupation and socio-economic state, other infections such as inactive hepatitis B carrier, viral hepatitis B, hepatitis C, anti-HDV, infections and cancers related to immune deficiency state, pregnancy, breast feeding, cirrhosis, hemodialysis, organ transplanted, coagulopathy and other hematologic disorders, recent surgical/medical procedure and seek the possible source of infection and possible transmission. However, we believe informed consent of tested person without their permission in high risk group may be obtained by local ethical/legal rules. Anyway, data of tests, results of biologic and behavioral surveillances, subjects who need to be screened, and feedback of drug abuse/ correction centers/treatment follow-up/ and other referral consult centers for high risk group should be keep secret and just only be accessible by other medical centers with certain precautions.

Lack of routine testing of at-risk populations, data registry screening programs and intervention strategies had lead to confronting HIV- infected subjects lately when presenting with co-morbidities such as advanced liver failure, tuberculosis and opportunistic diseases. It seems in developing countries more policy guidelines for testing, counseling and treatment, and modeling HIV control according to at-risk population such as the injecting drug users, male homosexual context is needed.

Regarding transmission of HIV infection from undiagnosed cases or by those neglecting treatment, it is necessary that prevention methods, receive of appropriate prophylaxis, practical use of recommendations, harm reduction policies, adjust treatment to changes in more dangerous drug use patterns, adverse drug side effects, treatment failure, and drug resistance followed and supervised regularly in each country. Track HIV infection trends, its biologic and behavioral pattern, implementing strategies according to certain mode of spread of infection, analysis of networking data by supervised epidemiologists are all necessary tools to control the infection.

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