POPULATION MOVEMENTS AND STD/HIV HAZARDS

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Migratory flows have always been associated to human societies.

Despite common occurance of conflicts between old and new establishments, migratory flows have contributed significantly to human development. Nowadays there is no single country in the world which is not interested by either immigratory or emigratory flows, due to environmental (climate, geological disasters), political (wars, repression), and economic (job offer and demand) reasons. According to recent estimates of migratory flows of the United Nations there are at least 130 million people living in foreign countries, and 4 million people cross the boundaries each year. In addition, there are at least 23 million refugees worldwide, while the numbers of clandestines is actually unknown (1). As the world population grows differential pressure on ecosystems will invariably lead to larger and larger population movements. Population policies, environmental protection and economic development may provide the long term answer to many problems brought about by migration. In the short term, however, we need to face and solve current health problems arising from population movements.

The migration process interferes with human sexual practices and therefore with the risk of acquiring or transmitting communicable agents through the sexual route. The history shows that STD may travel with man and therefore affect populations in which they were virtually unknown before: the syphilis epidemics in the Middle Age were strongly influenced by the discovery of America and the opening of the trade channels with South East Asia. A similar model has been proposed for the role of human movements on the diffusion of the HIV epidemic. The heterogeneous distribution of STD in the world is very well documented today: estimated prevalence rates of curable STDs among adults is of 120 million and 53 million cases in the South East Asia and sub-Saharan Africa respectively, compared to 8 and 10 million in the North of America and Europe respectively (2). Little is known, on the contrary, on the distribution of viral STDs.

The human kind is not a passive carrier of STD. Moving away from the familiar environment breaks established links, by splitting fixed sexual partnership, and remove many social taboos which strongly affect human sexual habits. Settling in a new environment may expose to adverse conditions of cultural isolation which facilitate the establishment of casual sexual relationships. The motivation for travel, the length of stay outside the native environment, and the type of the hosting environment strongly affect the risk of STD acquisition and transmission.

Below we review epidemiological data of STD prevalence and risk in three heterogeneous groups of travellers, namely migrants from southern to northern countries, and either long and short term travellers from northern to southern countries. The identification of such groups is largely artificial, but may help in defining different risk patterns and possible control interventions.

We will not examine in this contest the problem of internal temporary migration within countries of the Southern hemisphere, though this phenomenon is very likely to play a significant role in the dynamics of the HIV epidemic. One well established example of such situation is represented by temporary labourers movements in large parts of Africa. In Uganda a longitudinal cohort study at population level over a 3-year period showed an increasing trend of HIV prevalence from 5.5 to 11.5 and 16.3% among subjects who did not leave the village, those who travelled away, and those who moved into the village during the study period respectively (3). The reported numbers of lifetime sexual partners were higher in those who changed residence (3). A similar association

between HIV seroprevalence and travel has been reported from Senegal, related to both movements within the country (4) and outside the country (5).

Migrants and refugees into Northern countries

Wars, political unrest, poverty and unemployment are the major motivations for migration into northern countries of people coming from the tropical belt or, more recently, from Eastern Europe. The living conditions of migrants in the host country are usually unfavourable: they experience cultural and social marginalisation and occupy the poorest fringes of the society. Although migrants may soon start the process of integration into the host society, a situation of disadvantage may last for long periods and represent the roots of ethnical marginalisation in multiracial societies like in the USA (6). Low socio-economic standards, discrimination and marginalisation facilitate use of illegal drugs and casual sexual contacts with sex workers (7, 8).

The sex industry itself sometimes represents the specific reason for migration. This is an expanding phenomenon in many European countries, where the offer of cheap sexual services encounters an expanding demand. Immigrant commercial sex workers present a risk of acquiring STD and HIV which is significantly higher than that of local sex workers. For example, a significant proportion (28%) of Romanian female sex workers in Turkey were first time in prostitution and had little knowledge and awareness on the exposure to STD/HIV and the measures to avoid infection (9). In Italy, in the contest of the recent phenomenon of massive immigration, the number of female immigrant prostitutes significantly increased: most of the women started the activity after moving to the host country in order to survive, or at the very time of immigration being part of a true trading system (10).

Even if prostitution is not illegal in many countries, however, most women have no access to the health security system of the host country. They are excluded from STD/HIV preventive efforts channelled through standard education campaign for cultural reasons, and may find it difficult even to get curative services unless when in emergency situations (11). The same curable STDs which have almost disappeared from high resource countries may re-emerge in these population fringes which cannot share the benefit of the economic wealth with the local population. As a whole, STD prevalence and incidence rates in migrant sex workers reflect much more the standards of living in the host country, rather than the STD prevalence rates in the home country (8, 12).

Migration per se may increase the risk of acquiring the HIV infection regardless the country of origin of the immigrant (13). In Italy, the sentinel surveillance system for STD in migrants suggests that 77.5% of new HIV infections in this population are acquired in the host country (14).

Log term travellers to southern countries

Most available observations on this category of travellers refer to personnel of voluntary organisations employed in countries of the tropical belt. Exposure to STD/HIV in likely to occur in this setting. About 60% of 1080 American peace corp volunteers reported sexual relationships with at least one new partner during the stay abroad (15). About 40% of them had a local partner and only a third of them reported using condom. Regular use of condom was inversely associated to alcohol abuse among male volunteers, and inversely associated to the number of new partners among female volunteers (15). In this instance, effective protective measures were actually adopted by those who mostly needed them, possibly due to a higher level of awareness of the risks of sexual exposure.

Soldiers on military service abroad represent another group at increased risk for STD/HIV. Among recruits of a Dutch battalion posted in Cambodia for a period of 6 months almost half reported having sex with local female commercial sex workers (16). From one side, these recruits reported very high rates of regular condom use, possibly as a consequence of specific information and education campaign targeted to the group. On the other side, however, almost one third of regular condom users reported failure of the barrier method during one or more acts: either the condom slipped off or broke. This observation reminds that recommending condom use is not enough, and underlines the importance of explaining the correct use of condoms to those staying abroad.

Expatriates residents in southern countries for long periods are also likely to be at increased risk of STD/HIV but data are scanty. Thirty one percent of the male and 13% of the female German expatriates reported casual sexual contacts while staying abroad, of whom, only a quarter used condom (17). More than 50% of Belgian expatriates in Central Africa reported extramarital sex, and one third reported regular contacts with commercial sex workers (18).

Short term travellers

Increased sexual promiscuity is likely to occur during short term travels, and, sometimes, sex is the specific purpose of the travel (sexual tourism). During tourist travels people have the opportunity to escape standardised behaviours commonly regarded as acceptable by the society. An increased sexual demand by tourists often matches an increased offer of sexual services as these, in many low income countries, represent a way to increase the revenues and may contribute significantly to the family survival. In a recent questionnaire study on Swiss tourists to tropical countries, 30% reported casual sexual contacts during the holiday period (19). Males were more likely to practice casual sex abroad and more often reported sex with local females, while travelling women were more likely to have casual sex abroad with other foreigners (20).

The travel usually amplifies specific individual behaviours. Practicing casual sex in the home country has been independently associated to casual sex abroad. Among Swiss tourists, the proportion of subjects reporting casual sex during last travel was 18% in those practicing casual sex at home compared to 1.6% of those who did not (20). Casual sex abroad among Swedish women was associated with several behavioural characteristics: earlier coitarche, a higher number of lifetime partners, more frequent alcohol abuse, and more frequent extramarital sex (21).

These observations may be important: education and counselling may represent effective tool to decrease unsafe sexual behaviours, but they need to be targeted to the subgroup of travellers who are actually likely to engage in risky behaviours.

Prevention and control

A travel is a situation in which the risk of acquisition or transmission of an STD is specifically increased, and people living for sometime away from home country may be at persistently high risk. The rationale and options to prevent STD are not different from the standard ones: primary prevention is based on information, education and condom promotion, while prevention of sequelae and complications (as well as further transmission of the infection) may be achieved by means of early recognition of infection and effective treatment. Since some of the STD are presently incurable, such as HIV, HBV, and HPV infections, primary prevention may represent the only effective option.

The strategies used to translate into practice the general principles specified above, may actually vary.

Primary prevention requires changes in human behaviours. Passing information and providing educational messages may not actually result in modifications of behaviours in the target population and safe sexual behaviours may perfectly be understood but not put into practice. Whether or not a specific educational message will be put into practice by the recipient basically depends on three factors: a) perception of personal susceptibility to the specific hazard b) perception of the true consequences of the hazard; c) individual elaboration on how difficult to apply the new behaviour and how great the benefits this can determine (22). In a recent study medical advice concerning proposed behavioural changes were followed by only 40% of the recipients (23). When sexual behaviours are concerned, this rate is likely to decrease further, as sex behaviours are guided by emotions rather than a rational choice. The content of information and education in the field of STD/HIV prevention is very well defined. Where we need to be much more effective is in the identification of tools which facilitate behavioural modifications. As far as travel related STD/HIV hazard is concerned, the very heterogeneous conditions of the different groups of travellers require specifically tailored interventions.

Migrants and refugees

Levelling of the STD/HIV risk can ultimately be achieved only by the integration in the host country. However, specific interventions have been proposed and implemented in the health sector. First, preventive an curative services should easily be accessible to all subjects. This requires that people be entitled to care, even beyond the limits of juridical recognition. Even more important, effective care requires recognition of the cultural diversity, and may imply the existence of specialised services. Stigmatisation is a specifically important barrier to the management of STD/HIV infections, and should carefully be avoided when delivering STD services. Counselling, an extremely important component of case management, requires optimal ways of communication between the health care provider and the client, in both linguistic and cultural terms.

Preventive messages may need to be targeted to ethnic minorities and specific population groups.

Long-term travellers

Travellers who belong to international organisations, the army, or non-government organisations should receive specific information and education. As mentioned above, the content is not a problem, but the way it is passed to the recipient is frequently inappropriate. Adequate time should be allocated to STD/HIV prevention during pre-travel advice in order to discuss with the traveller any possible barrier against the adoption of safe sexual behaviours.

The regular availability of condoms, especially in the case of private companies and camps, should be ensured by the organisation itself.

HBV is the only STD which is currently a vaccine preventable infection. The incidence rate of HBV among European expatriates has been estimated to be in the range of 80 to 420 cases per 100,000 per month (24). HBV vaccination should be recommended for long term travellers. In this setting, it would be essential to strengthen the concept that other STD, like HIV, are not preventable in the same way, in order to avoid false feelings of being protected.

Short term travellers

Sexual behaviours during short term travels are strongly affected by usual sexual behaviours in the home country, therefore, continual sexual education is important to prevent STD hazard during travels abroad. Leaflets to inform about STD hazard have been proposed and used for short term

travellers. Recent observations demonstrate that leaflets are consulted significantly more frequently by subjects who will thereafter practice casual sex during travel compared to those who do not (20). In addition, in a questionnaire study, the large majority of travellers stated, at departure, they would use condom during casual sex, but the proportion of actual users declined dramatically upon return. Both observations indicate that informing does not imply changing behaviours, and that intentions not always translate into practice (20).

Contrary to long-term travellers, the provision of pre-travel counselling on STD preventive practices to all short term travellers seems to be unfeasible. There are indications that travellers at increased risk may be identified in order to restrict the target for counselling activities (25). The information package should include discussions on the nature and consequences of STD, the way to prevent them, and the factors which may create obstacles to the adoption of safe behaviours. The effects of alcohol and other drugs abuse on self-control should be discussed. Demonstration of correct condom stocking and use should be included. Condom use during commercial sex is usually determined by the client decision if the client is a male (26); in the case of female clients condom use is much more likely to be bargained. The female condom, which is less known and less widely available but as effective as the male condom can be proposed as an alternative. The sex worker preference has a major role also in the case of men who have sex with men (27); this make it possible to have educational campaign on both the side of the traveller and that of the sex worker in the home country.

Curative services should be in place for travellers as secondary prevention measures. The case management of long term travellers of big organisation may be done at travel clinics where appropriate case management, following the syndromic approach, would need to be implemented. Screening for STD upon return from international travels may be proposed but is largely unfeasible.

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