

AIDS prophylaxis – achievements due to appropriate strategies

Nebojša Nikolić, IMHA

Faculty of Medicine, University of Rijeka, Croatia

ABSTRACT

Seafaring as an occupation possesses a special blend of conditions that is strongly influencing the spread of HIV and is making prevention programs difficult to succeed. Actual prevention programs in the shipping industry are not showing success. Social partners are in a unique position to promote prevention efforts, particularly in relation to changing attitudes and behaviours through the provision of information and education, and in addressing socio-economic factors. Together with major international organizations they have created an initiative named “Global Partnership on HIV and Mobile Workers in the Maritime Sector”, designed to be a project that is realistic, achievable, and focused on prevention among seafarers whose sustainability will be created through linking organizations with a long-term commitment and integration in the lives of seafarers with intergovernmental organizations. This new global prevention programme aims to address this challenge by making a series of interventions along the route of their migration. The identified problems of HIV prevention in the shipping industry addressed in its design are presented together with its structure and aims.

(Int Marit Health 2011; 62, 3: 176-182)

Key words: HIV/AIDS, seafarers, prevention, Global Partnership

INTRODUCTION

Each year, an estimated 340 million new cases of curable STIs, including about 5 million new HIV infections, are reported globally [1]. In 2009, the United Nations estimated that 33.2 million people worldwide were living with human immunodeficiency virus type 1 (HIV-1) infection and that 2.6 million people had been newly infected [2]. More than 80% of adults infected with HIV-1 became infected through the exposure of mucosal surfaces to the virus; most of the remaining 20% were infected by percutaneous or intravenous inoculations [3].

Approximately 7000 new infections occur daily. This alarming number speaks to the critical need for effective approaches to HIV prevention [4].

The modes of HIV-1 transmission are universally the same – through sex and blood, and from mo-

ther to foetus. Yet within the limits set by these restricted modes of spread, the expression of HIV-1 epidemiology in a particular area depends on an extraordinary blend of individual behaviours, social practices, and the date of entry of HIV-1 into a population. HIV-1 has entered and spread within various populations and subpopulations at different times and rates. The highly varied local, national, and global patterns of infection continue to evolve. It appears that several hundred million people around the world engage in behaviour that creates immediate vulnerability to this infection. Just as risk behaviour may vary greatly during a person's life, so cultural evolution, political unrest, and economic disruption may alter the social context within which risk behaviour and HIV-1 transmission flourish or recede [5].

Seafaring as an occupation possesses a special blend of conditions that strongly influence the spread of HIV and make prevention programs difficult to succeed. The conditions encountered during seafaring may increase vulnerability and risk to HIV/AIDS. Among the predisposing factors to HIV include decreased or lack of access to HIV information, health services, and means of HIV prevention [6]. Research also suggests that seafarers, as a group, have lower levels of knowledge about HIV transmission and risk factors than the general population [7–9]. At the same time, seafarers appear less likely than other occupational groups to voluntarily receive HIV counselling and testing, and more likely to engage in high-risk behaviours [10, 11]. As demonstrated in a number of HIV/AIDS studies, lifestyle and some other individual characteristics are significant predictors of sexual risk taking. Seafaring as an occupation attracts and actually demands individuals willing to take the risks of life on board. It is also plausible that some men are drawn to migratory occupations because of the expectation of certain psychological pay-offs [12]. Studies performed on students of maritime schools, comparing them with students of other (non-maritime) schools, confirm the thesis that populations selected for seafaring occupations have already come into the occupation with a risky lifestyle that will make them vulnerable once they step on board [13, 14]. In such cases, the overall level of risk taking would be determined by both individual and occupational characteristics. When conditions in the area of destination or deployment are unfavourable or unsupportive of migrants, physical, financial, and social insecurities wear down the caring and coping mechanisms of individuals and may result in high-risk sexual behaviour and sexual abuse. Furthermore, when these people are away from their families and spouses or regular partners for prolonged periods of time, they can get lonely and become much more vulnerable to peer pressure [6]. That peer opinion is very highly estimated among seafarers is a fact that is clearly showing where prevention programs were missing the point [15, 16]. The earliest events in acute HIV-1 infection determine not only the future health of the individual patient but also the extent of transmission in the general population [2]. The per-person probability of transmitting HIV-1 is most closely correlated with the viral burden in blood; each time the viral burden in an HIV-1-infected person increases by a factor of 10, the risk of transmission is expected to increase by a factor of 2.5 [17]. The risk of contagion from patients

with acute, early infection appears to be much higher than that from patients with established infection, at least in part because of the high viral load and the homogeneity of viral variants clearly capable of causing infection [18]. The reduced risk of contagion from patients with chronic infection probably results from the presence of neutralizing antibodies, which are not evident in acute infection. In communities subject to a new epidemic, early infections are held to be responsible for a considerable share of HIV-1 transmission, since a larger proportion of infected persons have acute or early-stage disease rather than late-stage disease [19]. In the context of the seafarer returning to a country with a low prevalence, that presents the greater risk of transmission. Sexual behaviour plays an important role in rates of infection, with high rates of partner change increasing the chances of contact with a person who has acute HIV-1 infection [2]. Seafarers frequent port areas where there are often large numbers of sex workers and they often carry large sums of cash, which makes them attractive customers for sex workers. In a study conducted in Malawi, in which both behavioural and biologic data were used, 38% of cases of HIV-1 were ascribed to sexual exposure to patients in the first 5 months of infection, even though there is a long-established epidemic in Malawi [20]. That suggests the presence of clusters of transmission, perhaps from patients with acute and early infection, which is particularly worrisome for the seafarers' environment knowing the common "rotation" of sexual workers to cater for the needs of the market in port cities.

Actual prevention programs in the shipping industry are simply not showing results [21]. Studies have shown that even when AIDS prevention materials are available in their working environment, their quality is in serious doubt as they are without influence to their behavior [15]. HIV testing on pre-employment medical examinations, which is still common in the shipping industry, also did not stop the epidemic among seafarers [21]. HIV is transmitted by personal behaviour and enforcing only testing to stop its spread does not influence the spread. Only the health promotional programs aimed at changing behaviour can do that. Social partners are in a unique position to promote prevention efforts, particularly in relation to changing attitudes and behaviours through the provision of information and education, and in addressing socio-economic factors. Seafarers represent a large and difficult-to-reach population. Their global mobility presents a challenge to any programme which aims to

'target' them for information and services: seafarers are, by their nature, a 'moving target'.

GLOBAL PARTNERSHIP MODEL

In this respect, the International Maritime Health Association (IMHA), the Joint United Nations Programme on HIV/AIDS (UNAIDS), the International Labour Organization (ILO), the International Organization for Migration (IOM), the International Transport Workers' Federation (ITF), the International Committee On Seafarers' Welfare (ICSW), and the International Shipping Federation (ISF) occupy a privileged position and have the potential and organizational infrastructure to underpin the global struggle against HIV/AIDS in the maritime community worldwide. They have created an initiative named "Global Partnership on HIV and Mobile Workers in the Maritime Sector" designed to be a project that is realistic, achievable, and focused on prevention among seafarers whose sustainability will be created through linking organizations with a long-term commitment and integration in the lives of seafarers with intergovernmental organizations. This new global prevention programme aims to address this challenge by making a series of interventions along the route of their migration. Its three-year Pilot Programme, named "HIV and Mobile Workers in the Maritime Sector: Filipino Seafarers", aims to contribute to a reduction in the number of new cases of HIV infection among the

roughly 230,000 seafarers originating in the Philippines. The Pilot Programme is composed of five projects, which together take a systemic approach to reducing the number of new cases of HIV infection among seafarers. The programme strategy was determined collaboratively by all members of the *Global Partnership* on the basis of a thorough assessment of HIV among the target population and existing interventions [22, 23].

The five main strands of this approach are:

- collecting information; designing interventions on the basis of this information; measuring the success of these interventions; and disseminating and replicating 'what works';
- directly influencing the knowledge and practices of seafarers;
- supporting improvements in the accessibility, quality, and number of HIV-related services available to those seafarers who may voluntarily seek them out;
- aligning those testing and counselling activities which form part of existing recruitment and other procedures with best practice in HIV Counselling and Testing (HCT); and
- creating an enabling an environment for sustained influence of key stakeholders to take ownership of interventions in the longer term [24].

Each of these strands of the programme has been established as a separate project, with an overall coordinating mechanism to ensure that projects are

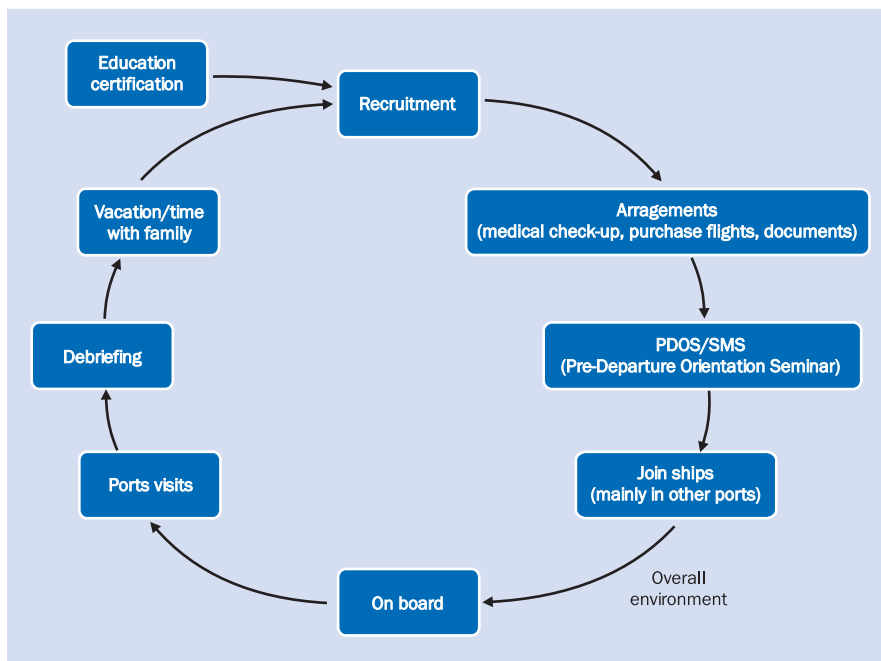


Figure 1. Typical migration process of a Filipino Seafarer

closely integrated with one another. The strategy builds on the combined comparative advantages of the various partners in the programme: representatives of the seafarers themselves; representatives of ship owners and of maritime doctors; and UN agencies with global field presence and with significant experience in HIV prevention programmes and of high-level advocacy. The Partnership has developed a robust institutional framework to manage this multi-sectoral, multi stakeholder approach and have undivided dedication to make a change to build for the first time a truly global fight against HIV/AIDS in maritime community.

Given the typical length of contracts, seafarers participating in the programme are anticipated to “cycle through” twice during the three-year project (Fig 1). At any one time, it is estimated that one third of the primary beneficiaries will be in the Philippines. In addition, the project will also provide services and support to additional beneficiaries, which will benefit directly from some, but not all, of the programme outputs. For this reason, they are classified as secondary beneficiaries. The Programme will collect data on these groups separately. In order to contribute to a reduction in the number of new HIV cases among the target group, the programme will also intervene to address the knowledge, attitudes, and practices of groups with whom seafarers from the Philippines interact along the route of migration, and whose behaviour has an impact on HIV prevalence among seafarers. As recipients of support from the programme, these groups are also important additional beneficiaries of the programme. They include: the spouses and families of seafarers, commercial sex workers, health professionals, and other service providers (e.g. ship visitors). In order to create long-term, systemic change, the programme also aims to catalyse regulatory and policy changes that will have an impact on the degree to which seafarers have access to a variety of services which may decrease their likelihood of contracting HIV during their voyage. These changes will require the support of legislators and of other groups such as ship owners. These groups, although not beneficiaries of the programme, should be regarded as advocacy targets.

The combined experience, reach, and skills of these partners allows for the creation of an ambitious programme. It also presents significant organisational challenges, which are compounded by the geographic scope of a programme which aims to work with a globally mobile population. For

this reason, members of the Global Partnership have considered, in some depth, not only *what* they are going to do, but *how* they are going to organise themselves to do it [24]. From conversations with other multi stakeholder partnerships in the development arena, the Global Partnership has established that:

- it is important to clarify, from the outset, who makes which decisions within the programme;
- it is also important to clarify how information is communicated across the partnership, and wherever possible to ensure that there is one clear communication path between different elements of the programme;
- it is unusual to get the perfect structure ‘first time’. Structures need to be critically assessed over the life of the programme;
- the behaviour of partners, and the degree of trust which exists between members, is as important to the success of the programme as the formal institutional structure;
- successful partnerships often require some changes in the internal culture of the partner organisations themselves.

In establishing the institutional framework, the Partners are attempting to create a structure which is able to execute the pilot programme effectively and efficiently, and which is also able to develop and implement future global activities. The structure will be reviewed annually. This structure is comprised of: **The Global Partnership Management Group** – composed of representatives of the seven Partner organisations, the management group takes all ‘strategic’ decisions around the pilot programme or the partnership. These are decisions regarding areas such as: Decisions are made by consensus, and all representatives have a veto. There are two scheduled meetings of the global management group per year. Partners can also call extraordinary meetings, as required; **The Project Technical Advisers** – who will be responsible for project design, and have decision making authority on the design of that project within the parameters of the strategy laid down by the Partnership Management Group; **The Secretariat** – The Secretariat is an employee of the partnership, hosted by IOM in Geneva and regulated by IOM terms and conditions. The Secretariat has – broadly – three interconnected roles: To provide support to the Partnership, to manage the programme on behalf of the partnership (including the management of funds), and to represent the Partnership and the programme to the outside world. In every country where the pro-

gramme has significant activities **Country Coordinators** will be appointed and they will report to, and are managed by, the Secretariat of the programme. Where the activities of the programme at the national level are too large to be managed directly by one person the programme will appoint **Project Managers** – national-level managers for each of the five projects, or for those projects which are of a scale to warrant the appointment of a manager. Managers will be full or part-time and will be hosted by member organisations of the partnership or their affiliates. Managers will report to the Country Coordinator.

PROBLEMS IDENTIFIED

Before the project was developed several problems were identified and addressed in its design:

- limited national policies addressing HIV for seafarers and the port communities with whom they interact;
- limited workplace policies, particularly among smaller sized companies;
- lack of knowledge among foreign seafarers: foreign seafarers usually have limited HIV knowledge and do not recognize the seriousness of the risk they may face while in southern Africa;
- limited behaviour and social change communication targeting foreign and local seafarers: The existing material is having a limited impact on behaviour change. For some migrants, language is a barrier as materials are not in their native language. This challenge is particularly acute for foreign seafarers who do not speak local languages;
- health and HIV services for seafarers are often limited in availability and accessibility, both at sea (on ships) and on land (in ports);
- also, service providers may face difficulties in actually targeting seafarers as they are on shore for relatively short periods of time and they are often preoccupied with other survival needs/concerns;
- lack of education, HIV awareness, and enduring stigma and misconceptions about HIV means that even if HIV prevention facilities are available some seafarers may not want to make use of them;
- time spent in “Hot Spots”: The areas surrounding harbours such as Durban and Walvis Bay are host to numerous bars, clubs, and liquor outlets and are well known as places frequented by sex workers. The high consumption of alcohol combined with the presence of sex workers makes for a high-risk environment in which condoms are not used as much as they should be;

- while reaching seafarers may be a challenge, targeting their families may present an even greater challenge, especially if the seafarers come from countries with low prevalence and little attention to HIV education. There may also be issues around HIV-related stigma present in these countries that exacerbate the difficulties;
- with the mobility of seafarers and truck drivers, ports are an important node in a regional and international web of risk behaviour. However, there is currently very little research on these sexual networks and the level of concurrent sexual partnerships that exist among sex workers, truck drivers, and seafarers, as well as very few interventions targeting port communities;
- funding is identified by most role players as a challenge in reaching migrants. Most programs are funded year by year so there is no certainty or continuity of effort.

CONCLUSIONS

Despite considerable scientific and international achievements in the past few years, the global perspective forces a sober view of the HIV-1 problem. We are still in a complex pandemic whose future scope we cannot yet predict. It is relentlessly highlighting the weaknesses, inadequacies, and inequities of our health and social systems. It is much too early for complacency [5]. Several problems that have plagued late-stage HIV-prevention trials must be overcome. Future trials should include adequate planning to ensure community acceptance and sustainability of the intervention, should involve proper preparation of sites to ensure adequately trained staff and sufficient physical infrastructure, and should include reliable estimation of the rates of HIV infection, pregnancy, loss to follow-up, and non-adherence, to determine an adequate sample size and trial duration. Trials must be carefully monitored, with the use of event-driven timetables, and researchers must capture reliable information on adherence and risk-taking behaviour [25]. Fourth-generation HIV-1 testing, now available worldwide, will allow the diagnosis of infection in many patients and may lead to new treatments and opportunities for prevention, but is also to be expected that the implementation of these tests across the world, including the maritime environment, can be expected to dramatically increase the number of patients with acute HIV infection and change our perspective of its presence in the maritime industry. The need for effective HIV-1 prevention has never been greater. The estimates of

UNAIDS from 2007 suggest that in the 15 to 20 years it may take to develop and evaluate a highly efficacious vaccine, the world may be facing 20 million to 60 million new HIV infections [26]. Such projections emphasize the urgency of finding effective non-vaccine approaches to prevention. Since any such advances will probably be modest in magnitude or limited to particular subpopulations and settings, it is critical to learn how to optimize the use of multiple, partially effective biomedical and behavioural interventions in the maritime setting and how to make them most effective [25].

Identifying and implementing improved behavioural interventions to reduce the risk of HIV infection represent an important opportunity that has not been adequately exploited, in part because most of these studies have been too small to permit evaluation of HIV infection as an end point. The IOM report advocates integrating research on behavioural interventions into biomedical intervention trials by using factorial and other study designs. Such integrated strategies could be effective in reducing risky behaviour and promoting condom use, thereby enhancing the ultimate effectiveness of a biomedical intervention [27].

Relevant national line Departments or Ministries should facilitate policies that address HIV prevention for seafarers, and ensure HIV prevention services to both seafarers and the port communities with which they interact. Governments should explore ways to extend legislation and better regulate workplace programs to ensure that all employers (large, medium, and small-scale) provide access to HIV services for all employees, including casual workers.

Governments should enforce greater regulation over smaller/less formal employers or provide incentives for them to implement workplace policies and/or provide regular access for all their employees to other HIV-prevention services.

HIV education and condoms should be provided on board vessels for seafarers.

HIV education targeting foreign seafarers should be implemented in the appropriate languages and at accessible points for seafarers who only stay for short periods on shore.

An evidence-based behaviour and social change communication (BCC/SCC) strategy with appropriate communication messages and materials that are linguistically and culturally appropriate should be developed and implemented.

On ships, health services including information about HIV and AIDS and/or treatment for Sexually

Transmitted Infections (STI) should be provided to all workers.

On land, health and HIV services for seafarers that are accessible in terms of location, time of operation, and language/cultural appropriateness should be provided.

Condom distribution should be scaled up in all high-risk areas, including those in ports.

Creative programs to reach seafarers need to be implemented, such as utilization of peer educators at the sites they spend most of their time (on vessels and at entertainment venues on land).

Governments, the private sector, and NGOs/FBOs should establish alternative entertainment facilities at high-risk zones such as ports/harbours and implement programs to encourage healthy lifestyles and bring down the abuse of alcohol. Such facilities might include soccer fields, gyms or swimming pools, or establishments where seafarers may socialize or relax.

Specific effort should be made by national authorities and employers to reach families of seafarers in the places of origin. This may be particularly important in cases when the seafarers come from countries with low prevalence and little attention to HIV education. Such efforts should also take into consideration issues related to stigma and discrimination.

More research should be conducted on the various determinants of HIV among seafarers, and sedentary populations with whom they interact. Such research may assess the nature of sexual networks and the level of multiple concurrent sexual partnerships that exist in port communities.

Donors need to consider longer-term funding schemes (i.e. more than three years) for best-practice HIV programs that target migrant workers.

Non-traditional funding sources (e.g. private sector) should be explored

The challenges in HIV-prevention in the shipping industry are enormous, and even the best-designed trials and best designed prevention programs may fail. Yet a staggering number of new HIV infections are likely to occur before a highly effective vaccine becomes available and we win this war. With so many seafarers' lives at stake, it is imperative to prioritize the identification and implementation of more effective behavioural and non-vaccine biomedical interventions. It is equally important to learn quickly from past and current studies, and to design, fund, and conduct these trials and prevention programs in ways that give them the best chance of success.

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