Get smart

UNDERSTANDING HIV INFECTION

Swedish Physicians against AIDS
Noah’s Ark-Red Cross Foundation
To the memory of
Thomas Scott Croxson, MD.
Get smart

UNDERSTANDING HIV INFECTION

Swedish Physicians against AIDS (Föreningen Läkare mot AIDS)
Contributions to the association can be made through
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Noah’s Ark-Red Cross Foundation (Stiftelsen Noaks Ark-Röda Korset)
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Why publish a series of pamphlets about HIV, rather than about AIDS?

The disease that since 1982 we have called AIDS was first described in the summer of 1981. The Centers for Disease Control and Prevention in the United States of America (CDC) had noted a considerable increase in the number of cases of certain hitherto very rare diseases. There was an accumulation of cases of an otherwise rare form of pneumonia (PCP) and an uncommon tumour disease (Kaposi’s sarcoma) in young, previously healthy men. The common underlying factor of these cases was an impaired cell mediated immunity, characterised by a great reduction in the number of T-helper cells. From the very time when this syndrome was first recognised, it seemed likely that the immune deficiency of these young men was a consequence of an infection with a previously unknown agent.

Most of the cases reported during the first year were in homosexual or bisexual men. For this reason, the condition was initially termed “gay-related immunodeficiency (GRID)” – that is, an immune deficiency considered to be associated with the lifestyle of male homosexuals. Yet, among the patients described during
the first twenty months, there were persons who were not homosexual men. Some of these had used drugs intravenously; some had received blood transfusions or clotting factors for the treatment of haemophilia; some were men and women from Haiti. And importantly, some were persons who had had sexual relations with persons belonging to these groups.

**From GRID to AIDS**

For these reasons, it was apparent already in 1982 that the syndrome described needed a new name that did not imply that it was simply a consequence of sex between men. Therefore the term “Acquired Immuno-deficiency Syndrome” was introduced in the fall of 1982. The term “acquired” meant that the immunodeficiency was not inherited, as was the case with most of the previously known forms of immune deficiency, but acquired by a person whose immune system had previously been functioning normally. The term “immuno-deficiency” meant that the patients were increasingly unable to mount effective immune responses against infectious agents, which left them defenceless against different forms of infections and tumours. Syndrome (“runs together”) is a Greek word that is used in medicine to mean a number of symptoms which together are indicative of the same underlying cause. In everyday speech, the acronym “AIDS” came to be used about this condition.

During 1983 and 1984 the first articles were published describing AIDS in central- and east Africa. It became increasingly clear that AIDS was a sexually transmitted disease that can also be transmitted through blood. It also became increasingly evident that the underlying infectious agent was spread between men and women, as well as between men – though the recognition of this fact met quite a lot of resistance and denial. Women in Africa and several other parts of the world are afflicted by the disease to at least the same extent as men are. For this reason, many children are infected by their mothers prior to or during delivery, or when breastfeeding.

**The cause of AIDS is discovered**

As early as 1983, a group of French scientists found the underlying cause of the syndrome termed AIDS — a
previously unknown virus that was given the name LAV. This newly discovered virus was considered to belong to a group of viruses termed lentiviruses that were previously known to cause disease in animals, but not in man. In animals such viruses can damage the immune system and the nervous system. This also turned out to be the case with the new virus in humans.

In 1984, two American research groups each described and named a virus that they considered to be the cause of AIDS. One was called HTLV-III and the other called ARV. These viruses turned out to be the same virus that had previously been described by the French group. After a few years of disputes over who had really discovered the virus and what it should be called, it was agreed in 1986 that the virus causing AIDS should be termed “human immunodeficiency virus”, abbreviated HIV. “Human” because it causes disease in humans; “immunodeficiency virus” because it damages the immune system.

**What is AIDS?**

AIDS is a common term for the condition that arises when a person’s immune system has been severely damaged by HIV to the extent that the person risks contracting a large number of infections and tumours. The different diseases that together with a positive HIV test lead to a diagnosis of AIDS are enumerated in the present definition of AIDS, which was most recently revised in 1993. AIDS is a term that should not be used, except in national and global epidemic surveillance. The effective treatment of HIV, which almost totally blocks the replication of the virus, means that the immune deficiency of AIDS is no longer irreversible and that the immune system may recover. Today it is more reasonable to talk about HIV infection with or without symptoms. Some 15-20 years ago, an AIDS diagnosis implied imminent death. This is no longer the case for those who have access to treatment.

**What is HIV?**

Human Immunodeficiency Virus belongs to a group of viruses called lentiviruses (from Latin “lentus” which means “slow”). Lentiviruses have the ability to infect a large number of different cell types of the body. There
are two known forms of HIV – HIV-1 and HIV-2. Both cause AIDS, but HIV-1 is the one that has spread the most. The main reason for the spread of HIV, and for the natural course of the disease, is the fact that HIV infects different sorts of white blood cells, such as antigen-presenting cells and T-helper cells. Even in the absence of effective treatment, disease progression in lentivirus infection is slow. The time between the moment of infection and the occurrence of AIDS is, in the absence of treatment, approximately ten years. During most of this time, the infected person feels well and has no knowledge of his/her “disease” or contagiousness.

The white blood cells that are infected by HIV play an important part in the defence of the body against infections and some forms of tumours, particularly those that are caused by chronic viral infections – for instance lymphomas, Kaposi’s sarcoma, cervical and anal cancers. These white blood cells are present in our mucous membranes, lymph nodes, bloodstream, and practically all organs of the body.

The deceptive time lag of the HIV epidemic
It generally takes many years for the immune system of an HIV infected person to become sufficiently damaged for the person to become seriously ill. Since the disease is progressing during this time, and since the infected person may infect others during this period, it is imperative to recognize that HIV infection is a slowly progressing infectious disease, which can be passed on to others during a long period of time by infected people who generally do not feel ill.

HIV is primarily spread by regular human activities such as sexual intercourse. It is also transmitted from mother to child prior to or, mainly, during delivery, as well as through breastfeeding. These are qualities of HIV that make the HIV epidemic such a difficult adversary.

What is the origin of HIV?
Many viruses similar to HIV have been found among the apes and monkeys of Africa. The immune systems of these animals are very similar to that of humans. Some apes and monkeys develop illnesses from their viruses; others do not. Some ape and monkey viruses resemble HIV-1, others HIV-2. These viruses, along with their
considerable number of subtypes and recombinants between subtypes, cause the human HIV epidemic. Available data imply that HIV-1 was initially spread among humans in the decade following the First World War – that is, in the 1920s. Both HIV-1 and HIV-2 have probably been transferred from ape to man on several occasions. The epidemic was “discovered” in 1981, but subsequently several earlier cases of AIDS have been recognised. For instance, antibodies against HIV-1 were found in a frozen blood specimen sampled in 1959 in Kinshasa. The same year, an English sailor who had had sexual contacts in Africa died from AIDS. In the following years, up until the recognition of AIDS in 1981, several cases of AIDS have retrospectively been diagnosed. For further information about this, see Den Yttersta Plågan by Lars O Kallings from 2005. Other recommended reading is the lecture Where AIDS came from, presented by Paul Sharp at the 13th Conference on Retroviruses and Opportunistic Infections, Denver, February 2006. It is available as Abstract 70 on the website www.retroconference.org.

No matter where, how and when the epidemic started, it is clear that HIV will be with us for decades to come, even if a cure for those infected is found or a vaccine that will prevent infection is developed. There is little hope for the development of a preventative vaccine or cure in the near future. It is probable that we have until now only seen the beginning of the HIV epidemic.

Therefore, preventing the further spread of HIV is of the utmost importance and calls for individual and collective knowledge and efforts from all of us.
HIV infection is detected through analysis of a sample of blood. If a person is infected with HIV, the sample will contain antibodies to the virus and the person is said to be “HIV positive”.

- Antibodies against HIV do not imply that a person has had HIV and is now protected against infection. On the contrary, the person has an ongoing infection and can also be infected by further HIV strains. A positive antibody test means that the person is infected with HIV and can infect others with the virus, even though the risk of transmission may be said to be relatively low.
- Most HIV positive people remain healthy for many years. Therefore, being HIV positive and having AIDS is not the same thing. Please note: this is true also in the absence of treatment.
- The time lapse from the moment of infection to the point when the immune system has been sufficiently damaged for the individual to contract life-threatening illnesses is usually about ten years. In other words, even in the absence of treatment, about half of those infected do not get life-threatening symptoms within the first ten years of infection.
- Consequently, a person may be HIV infected for many years without knowing. An HIV test is the only way to find out for certain whether or not a person is infected.
- The number of known HIV infected people in the world is therefore not the same as the actual number of people infected with HIV. There are always more people infected than the number of patients tested who have been shown to have a positive HIV test.
- Infected people who have not had an HIV test are not aware of their infection.
• Once a person has been infected with HIV, he/she will probably remain contagious for the rest of his/her life. The degree of contagiousness varies over time, and there is no way of knowing when a person is more infectious or less infectious. Effective HIV treatment probably decreases contagiousness considerably, but certainly does not eliminate it. The presence of other sexually transmitted diseases can greatly increase the amount of HIV virus in genital secretions and in mucous membranes. This can be the case without any change in the levels of HIV virus in the blood.

• There is a high degree of international consensus today regarding the treatment of HIV infection. Treatment should be given upon the presence of symptoms that are considered to be caused by HIV, or when the number of CD4-positive cells (T-helper cells) has dropped below 350-250, and definitely when they have dropped below 200. The time from the moment of infection to the need for treatment initiation is on average approximately seven years.

• HIV is not transmitted through everyday social contacts. A high degree of intimacy is required in order for HIV to be transmitted; the sort of intimacy that is generally connected with sexual intercourse. Therefore, there is no need to worry about being infected through social contacts.

• There is no vaccine against HIV. Despite extensive research, it seems unlikely that an efficacious vaccine will be in general use within the next ten years.

• Nor is there a cure for HIV. Combination treatment with three or more drugs powerfully inhibits the replication of the virus. This effect can be maintained for many years. Such combination treatment with several drugs has been available since the mid 1990s, and has drastically decreased the morbidity and mortality of HIV infected patients with access to the treatment.

• During the past few decades, doctors have gained greater knowledge on how to treat the complications of HIV infection – the so called opportunistic infections and tumours. As a result, even people who were not aware that they were HIV infected and have developed AIDS can be treated for most HIV complications. These patients also benefit from HIV treatment, which allows the immune system to recover. However, all complications
of HIV are not curable or even treatable. Therefore it is important that all patients with HIV infection become aware of this and initiate treatment before they develop HIV complications.

- Effective treatment of HIV infection is associated with a risk for certain side-effects – mainly long-term – with varying levels of seriousness.

How is HIV transmitted?

When the HIV virus comes into contact with cells that it can infect (target cells), there is a risk of transmission. Target cells for HIV are present in all our mucous membranes, in lymph nodes, in the blood and in practically all organs of the body. Regarding sexual transmission of virus, which is the most common mode of transmission, target cells in the mucous membranes are of primary importance.

The skin forms a barrier to most infectious agents and intact skin also forms good protection against HIV. However, intact mucous membranes (that is without ruptures or ulcerations) do not sufficiently protect the body from HIV, for reasons that are explained below.

When a person is given a transdermal injection or a blood transfusion, the protecting barriers formed by the skin are penetrated and there is a high risk of infection if blood containing the virus is injected.

The most common mode of transmission, however, is sexual intercourse. Therefore this is the main focus of the information that follows. Furthermore, the accompanying pamphlet *Keep it safe – protecting oneself and others* mainly deals with the sexual transmission of HIV, and how one can protect oneself and one’s partner against such transmission.

To sum up, HIV can be transmitted in the following ways:

1. Unprotected sexual intercourse. Coitus with the penis in the vagina or the rectum carries a risk of HIV transmission. Unprotected anal intercourse is particularly risky for the person that receives the penis. This is because the number of target cells for HIV is particularly large in the mucous membrane of the rectum, which also contains cells that transport the HIV through the mucous membrane into the proximity of target cells in the underlying layer. Such transporter cells
are not present in the mucous membranes of the mouth or the vagina. The risk associated with anal intercourse is further increased by the fact that seminal fluid, as well as so-called “precum”, that is secreted by men when they have an erection prior to ejaculation, generally remains in the rectum until absorbed by cells in the rectal mucous membranes. The rectal mucous membranes have an adsorbing ability that is absent in the vagina.

2 Unprotected oral sex (sucking or licking the genitals of one’s partner without protection) can transmit HIV. However, the risk does not appear to be as great as in unprotected sexual intercourse, at least for the person who is licked or sucked. The risk of being infected by the virus when licking another person’s anus, or when one is licked, cannot be ruled out, but is probably very small.

3 The risk of HIV transmission through blood, blood products and transplanted organs is exceedingly small with the routines for testing applied in Sweden. In some parts of the world however, blood transfusions are a source of HIV transmission. HIV can be transmitted through sperm donations.

4 All over the world, HIV is spread when intravenous drug users share injection tools and thereby inject blood from one to the other. This mode of transmission plays an important role in the spread of HIV from young men to women of the same age, who may later bear children. Examples of this are seen today in the former Soviet Union and in China. The consequences of this are evident through the next mode of transmission.

5 Mother-to-child transmission. An HIV infected woman can infect her child while in the womb, but primarily during delivery and through breastfeeding.

**Why is HIV transmitted through sexual intercourse?**

In unprotected sexual intercourse, the conditions for HIV transmission are fulfilled; the virus from an infected partner can come into contact with the target cells of an uninfected person.

In an infected person, HIV can be detected in the following body fluids connected to sexual intercourse: vaginal secretions, seminal fluid and “precum” (the fluid
that is secreted into the male urethra in sexual arousal and erection). Furthermore, it seems probable that infected cells, both in secretions and in the mucous membranes, play a role in the sexual transmission of HIV – a role that is greatly increased when other sexually transmitted diseases are present.

One can almost always find HIV in the blood of patients that are infected and are not treated.

The virus is not so commonly found in saliva. Saliva contains substances that seem to inhibit HIV. It is, however, clearly documented that a person receiving a “blow job” (getting his penis sucked) by an HIV positive person can be infected by HIV in saliva.

HIV can also be found in tears and in breast milk. Neither plays an important role in ordinary sexual contacts.

Thus, our mucous membranes do not form a barrier against HIV infection, not even when they are intact, without ruptures or ulcerations. This is because they lack the protective corneal layer characteristic of skin. We have mucous membranes in our mouths, our eyes, on our genitals (in the vagina of women and at the urethral orifice of men), and in the rectum (inside the transitional zone from skin to mucous membrane). If the HIV virus is transmitted to any of these membranes, it may find target cells to infect. A mucous membrane does not have to be ulcerated or ruptured for infection to take place. Other sexually transmitted diseases, which result in ulcerations or discharges, increase the risk of HIV transmission.

The skin on the inside of the prepuce (the part that can only be seen when the foreskin is retracted), is similar to a mucous membrane, insofar that it lacks a proper corneal layer. Target cells in this part of the foreskin play an important role in the sexual transmission of HIV – primarily for the male, but also to a certain extent for his partner. This has been demonstrated in sexual contacts between men and women, but is probably also the case in sexual intercourse between two men.
The course of HIV infection
As previously mentioned, being HIV infected is not the same as having AIDS. To be infected with HIV means having an ongoing infection from a virus that generally takes a long time to cause serious damage – often many years.

Acute or primary HIV infection
Within a few weeks of HIV transmission, a number of those infected with the virus (what proportion is unknown) develop symptoms that are typical of an acute viral disease: fever, sore throat, headache, and sometimes a skin rash or swollen lymph nodes. The symptoms range from mild to severe enough to require hospital care. Sometimes the symptoms only last for a few days. Generally, however, they last for one or two weeks. This acute disease, which is caused by a heavy viral replication following infection, before an immune response has been developed, is termed acute or primary HIV infection. For a long time, primary HIV infection was considered to be an indication for acute treatment of HIV. I do not think that this is the case any longer, if the primary infection follows an uncomplicated course.

Asymptomatic stage
After a possible primary infection, the infected person usually does not experience any HIV related health problems for many years. This is not because the HIV virus is resting or latent, in the sense that it is not replicating. Viral replication takes place in most patients, albeit at different rates. The immune system, however, has wide reserve margins. Furthermore, the immune system of most infected people is able to partially control viral replication over a long period of time. Exactly by what mechanisms the immune system is damaged by HIV has not been fully clarified. When sufficient damage has occurred, symptoms of a failing immune system occur, in the form of infections and tumours that do not affect people with normal immune functions. With the treatment for HIV that has been available since the middle of the 1990s, even an immune system greatly affected by HIV can recover. Therefore the risk of opportunistic infections and tumours may be greatly diminished, and often disappears completely.
HIV in the world and in Sweden

The global situation

In the six previous editions of this pamphlet, the number of HIV infected and the number of AIDS cases have been given in cumulative numbers – that is in terms of the number of cases reported or assumed to have occurred since the known “beginning” of the epidemic in 1981. Now that the epidemic has a history of a quarter of a century behind it, it is high time to normalise the mode of reporting the spread of the epidemic; this not least due to the fact that the epidemic had been around for many years before it was recognised. Just before World AIDS Day, December 1, 2005, UNAIDS began reporting their statistics on the HIV epidemic in the way that is normal to epidemiology – that is in terms of prevalence and incidence.

The prevalence is the proportion of a population that have an infection at a given point in time. The incidence denotes the number of new cases during a given period of time. Prevalence is a cross-sectional term that can be assessed in different ways at a given point in time. Incidence indicates the rate of change during a given period of time, and therefore demands measurements on at least two separate occasions.

We would like to highlight this change in the mode of reporting, as it makes it hard to make direct comparisons with figures given in earlier editions of Get Smart.

Figures and comments by UNAIDS from November 2005

Despite a decreased prevalence in some countries, the number of persons with HIV infection or AIDS continues to increase all over the world, except in the Caribbean. In 2005, a further five million people became infected
with HIV. Globally, approximately 40 million people are estimated to be living with HIV. More than three million died from HIV related disease in 2005; more than half a million of these were children.

The greatest increase in 2005 was seen in Eastern Europe and in Central Asia – in the former Soviet Union – where the number of cases increased by 25% to a total of 1.6 million HIV infected. Africa south of Sahara remains the part of the world that is most afflicted. 64 percent of all new cases (more than three million people) live in this region.

People infected every day
Each day in 2005, approximately 14,000 persons were infected with HIV. More than 95 percent of those infected live in low or middle income countries. Almost 2,000 young people under 15 years of age were infected every day; almost all of the remaining 12,000 were between 15 and 49 years of age. Approximately half of these are between 15 and 24 years old. Almost half of those infected are women.

Access to treatment and information
Access to treatment of HIV infection has improved in low and middle income countries; therefore more than one million HIV infected people are living better and longer lives. It is estimated that between 250,000 - 300,000 deaths were avoided during 2005, due to treatment of HIV infection. Many more are in need of treatment, however. The WHO target of three million people in low and middle income countries having access to treatment by the end of 2005 was not attained. However, considerable experience of making treatment of HIV infection available in resource-poor settings have been gained. Furthermore, it is increasingly clear that access to effective treatment increases the motivation to test for HIV infection, and to discuss preventive measures, including testing of the partners of HIV infected persons. An insight of the necessity of treatment and preventive measures is apparent in the report of UNAIDS. Knowledge of HIV and on how to protect oneself – and one’s partner – is still poor in many countries, including those with an increasing or a high prevalence of HIV. In 24 countries south of Sahara, at least two out
of three women between 15 and 24 years of age lacked “sufficient knowledge” on how HIV is transmitted. In such countries, more than others, the transmission of HIV from mother to child continues to be common. In the industrialised parts of the world, such transmission has more or less been eliminated through treatment of pregnant women. A strong effort to prevent transmission to the next generation in the womb, at birth or through breastfeeding, is necessary.

Present and future challenges
There is increasing evidence to the extent that the combination of intravenous drug use and prostitution (sex work, both when performed by women and by men) propels the HIV epidemic. Preventive measures tend to fail to reach people with both of these risk factors. There are, however, experiences of successful long term preventive programs to reduce the incidence of HIV in sex workers and their customers (for instance in Thailand and India), as well as among intravenous drug users (for instance in Spain and Brazil). Yet these groups, as is also the case with men who have sex with men, have little or no access to both prevention and treatment in many parts of the world – particularly in Latin America, the Caribbean, the Middle East and North Africa.

Source: UNAIDS

Sweden
Up until November 2005, 7,030 cases of HIV infection have been reported to the Swedish Institute for Infectious Disease Control. Note that this is a cumulative figure! Approximately 2,000 of these cases have been diagnosed with AIDS, and approximately 2,000 have died. Slightly more than 3,600 persons are living with an HIV infection in Sweden, which is more than ever before. The causes of this are a very large (approximately 85%) decrease in the incidence of AIDS since modern combination treatment of HIV was introduced in the mid 1990s, and an increased incidence of HIV infection after the year 2000.

Source: Swedish Institute for Infectious Disease Control
Social consequences

It goes without saying that the HIV epidemic has severe effects both on individuals and societies. In countries where the prevalence of HIV infection is high, a great part of the working population dies leaving orphaned children behind, some of who are also HIV infected.

In countries where the primary spread of HIV at the beginning of the epidemic was primarily between men who have sex with men, the prevalence of HIV infection during the first year of the epidemic was already so high in certain major cities that not even very extensive changes in sexual behaviour would have prevented a high mortality rate. Subsequently the transmission of HIV among men who have sex with men has declined greatly between the mid 80s and mid 90s. During the latter half of the 90s an increase in the incidence of sexually transmitted disease has been noted in many places, including Sweden. In some countries the transmission of HIV due to sex between men has also increased.

Many countries that have up until now had a relatively limited prevalence of HIV are now facing large national HIV epidemics. Some are on the threshold of an epidemic spread of HIV, whereas others have already taken an ample leap over the threshold – for instance parts of South East Asia. India has a large epidemic. In recent years, the risk of a major spread of HIV in countries such as China and Russia has been brought to the fore.

HIV can spread rapidly among intravenous drug users. The proportion of a population that is using drugs intravenously is always a small minority. Therefore intravenous drug users will hardly dominate any HIV epidemic in the long run – not even in countries where they initially constituted the majority of those infected. If there is a large number of infected intravenous drug users in a region, this usually results in an increase in the heterosexual spread of HIV. Highlighting the risk of widespread heterosexual HIV transmission is in no way to disregard or make light of the consequences of HIV within the particular risk groups that still experience the great burden of HIV in many parts of the world, such as ours.
Psychological consequences
The HIV epidemic also has psychological consequences. The knowledge that one may catch or transmit a potentially lethal disease through sexual intercourse naturally affects the way people experience sex. Caring about our own and future generations’ expression of sexuality, necessitates efforts to reduce the transmission of HIV as far as is possible.

Any sexual activity which may lead to the conception and birth of a child comes with a responsibility that extends far beyond momentary sexual pleasure. This is true also of sex between men or between women, even though the responsibility for the partner and for others may seem less apparent since the relationship cannot result in the conception of a child. All the same, we do have a responsibility that goes beyond ourselves and the moment. By noting this, that is not to say that we human beings, regardless of sexual orientation, will always see this responsibility, let alone be prepared to assume it.

If people, in view of the HIV risks, are to take the trouble to abide by the principles of “safer sex” described in the pamphlet Keep it Safe – protecting oneself and others, there must be norms and values in society which encourage sexual activities characterized by responsibility for one’s own and other people’s health and sexuality.

No matter how one views the matter, there is no denying that “safer sex” calls for restrictions and sacrifice. It is difficult to assert that sexual intercourse using a condom is more pleasurable that intercourse without a condom. It may be equally pleasant, but for some people this is not the case. Nevertheless, it is still worthwhile restricting oneself to condom use, because HIV infection is an even worse alternative.

What can be done to prevent the spread of the HIV epidemic?
Developments in various countries and in different groups of people demonstrate that three basic requirements must be fulfilled to make effective HIV prevention possible.

1. Explicit and intelligible education and information about HIV and its modes of transmission, as well as a
realistic assessment of HIV risks in the area in question and for different groups of people.

2 Access to health care, including HIV testing and treatment of HIV infection, its complications and other sexually transmitted diseases. Access to condoms for prevention of sexually transmitted infections. Access to clean injection tools for intravenous drug users, or at least no obstacles to obtaining them.

3 A supportive environment that contributes with healthy norms and values to preventive information, and that takes care of those who are HIV positive without discriminating against them.

This cannot be achieved without the cooperation of individuals, groups, organizations and institutions – both public and private. In many respects, the HIV situation in Sweden is favourable. Objective and comprehensible information on HIV has been available for over 25 years, and information on sex and partnership for decades. We are allowed to call things by their real names, so that things can be understood. In some European countries and many countries outside of Europe it would not be possible to publish a pamphlet such as this one. People in Sweden are able to talk about sex, even though many of us could be better at it. We can turn to medical care, if we think that we have contracted a venereal disease. We have a relatively tolerant social environment, even though it, too, could be better.

A society that effectively protects itself against HIV can only be achieved if we are on our guard against simplifications, scapegoating and discrimination. Effective HIV prevention presupposes that everyone’s basic human rights are respected, including those who are HIV positive or those for whom the risk of contracting HIV is assumed to be greater than for others.

In some places, being HIV positive entails restrictions of the right to travel, seek employment, or simply the right not to be discriminated against. Rights and obligations are linked to each other. People who are denied their rights, cannot be expected to observe their obligations. For this reason HIV prevention is always associated with human rights, even in a country like ours. HIV positive persons have the right not to be discriminated against.

21

Get smart
Through understanding of and respect for the different needs of different people, we can create a climate that counteracts fear and isolation, which will make it easier for people to live with whatever problems they may have. In the pamphlets *Keep it Safe – protecting oneself and others* and *Get Sure – why, how, and afterwards*, we discuss these matters from slightly different angles.

**Series of pamphlets**

Our hope is that this series of pamphlets will contribute to a better understanding of and education about HIV. Each pamphlet deals with a different aspect of HIV.

- In the first one *Get Smart* – the one that you are reading now – deals with the general aspects of the HIV epidemic.
- The second one *Keep it safe* is about what we can do as individuals to protect ourselves and others from HIV infection.
- The third one *Get Sure* deals with the importance of HIV testing for individuals and society.
- *To treat* is another stand alone pamphlet. It is about the treatment of HIV infection.

LARS MOBERG

APRIL 2007
Swedish Physicians against AIDS Foundation Research Fund
(Stiftelsen Läkare mot AIDS Forskningsfond)
PLUSGIRO 90 06 95-8 BANKGIRO 900-6958
The research fund sponsors HIV research.
Learn more about HIV

Below is a list of telephone numbers to several organizations in Sweden that provide information about HIV and support for people who are HIV infected or undergoing testing. The list is not complete. Through the organizations listed below, you can receive help in finding other organizations and public authorities that can help you.

The AIDS Helpline at Noah’s Ark—Red Cross Foundation (Aidsjouruen på Noaks Ark—Röda Korset) in Stockholm 020 78 44 40

A call to a 020-number is free of charge. The AIDS Helpline at Noah’s Ark will answer questions in Swedish and English about HIV and other sexually transmitted infections and can refer you to other organizations and authorities. They can also tell you where you can have an HIV test. You can also order other informative material through the AIDS Helpline at Noah’s Ark.

INFORMATION, TRAINING, SUPPORT AND AID
Noah’s Ark—Red Cross Foundation www.noaksark.redcross.se
Eriksbergsgatan 46, S-114 30 Stockholm. +46-(0)-700 46 09, fax +46-(0)-700 46 10 E-MAIL info@noaksark.redcross.se
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fax +46-(0)-8-714 04 25 E-MAIL info@hiv-sverige.se

Information about other organizations for HIV positive people can be obtained through Hiv-Sverige or the AIDS Helpline at Noah’s Ark—Red Cross.
Need additional copies of this pamphlet? Get in touch with the AIDS Helpline at Noah’s Ark-Red Cross