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General Population

Summary

One aim of this EC Concerted Action Programme has been to compare and contrast AIDS/HIV prevention strategies aimed at the general population, and the methods used to assess them, in order to arrive at a better understanding of how public education in this area might optimally be effected and evaluated. To this end, data have been collected on interventions and their evaluation for selected European countries by means of site visits, postal questionnaires and expert meetings of those involved. These data have been analysed where possible in relation to other relevant variables including the social and political context in which AIDS public education has taken place, the existing tradition of health education, the financial and manpower resources available and the nature of the HIV epidemic in each country. Initial analysis shows that there have been remarkable parallels between AIDS public education campaigns in different European countries in terms, for example, of their sequence and progression, and their content. At the same time, essential differences are apparent with respect to the ease with which it has been possible to implement strategies, the tone and style of initiatives, and their reception by and effect on the general population. Attempts to attribute these differences to specific cultural, political or operational factors are difficult, but the cross national comparison holds valuable lessons for both campaigns and their evaluation.

Initial attempts at AIDS public education aimed at preventing further spread of the virus amongst the general population were energetic, extensive and expensive. Because of the precipitate nature of the epidemic and the shortage of time in which to develop and evaluate campaigns, however, such campaigns were often steered more by art than science, and their success determined perhaps more by luck than judgement. AIDS is now rightly seen as a chronic public health problem rather than an acute national crisis, in need of sustained prevention efforts. It has often enough been stated that, without the immediate hope of a vaccine or cure, public education will need to be sustained and protracted. Future public education programmes may lack the urgency and therefore the creative energy of the early efforts, but they will hopefully benefit from adjustments made possible by a critical review of past initiatives. Assessment of the efficacy of ongoing activities is therefore essential if possibilities are to be created for improvements in the future.

To this end, the EC Concerted Action "Assessing AIDS Prevention Strategies" was set up as described above (Ref. preceding paper). The aim of the general population working group has been to critically appraise AIDS public education campaigns in different European countries together with the methods used to evaluate them. The purpose of this is to explore the extent to which causal inferences can be drawn between campaign initiatives, the context in which they are conducted and their outcome in order to identify important variables influencing the success or failure of preventive strategies. Throughout this exercise the term "general population" has been defined as a heterogeneous mass of people undifferentiated in terms of groups or behaviours, and so the focus has been chiefly on broad spectrum approaches to public education, principally the mass media.

Basic epidemiological data on the prevalence of AIDS and HIV infection has been monitored to gain an impression of the level of seriousness in each country, and information on past and present prevention campaigns collected including, where possible, details of resourcing, target groups, methods adopted, agencies employed, and the style and content of the intervention, together with a summary of the political and cultural context in which AIDS public education has taken place. In addition, evaluative methods have been examined and compared, and their findings analysed, with the intention of drawing parallels between country-specific initiatives and their outcomes.

These objectives have been achieved by a variety of means. Visits have been made to selected European countries including Belgium, Denmark, France, Germany, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the UK. The absence of any Eastern European countries from this list reflects the (as yet) low level of activity in relation to public education for the general population in these countries. In each country efforts have been made to consult a broad range of people including government officials, health educators, public health professionals, academics, and those working in voluntary organisations such as gay and lesbian and family planning agencies. For each country visited, materials from campaigns together with evaluation and other reports have been collected where available.

This paper does not attempt a systematic analysis of campaigns and their results. A report prepared for the EC sets out the findings from this Concerted Action in more detail. Here the aim is rather to give a description account of some of the main features of the campaigns and their evaluation, together with selected research results.

Interventions

The influence of the scale of the epidemic

It has been suggested[1] that the immediate social, cultural and political differences per se, were not directly responsible for variations in the AIDS public education programmes and that the scale of the epidemic and the rate at which it was spreading had a greater influence on the type of programmes chosen and their impact. This has not been a conclusion reached in this assessment. If this were so, then we could expect a strong relationship between the scale of the epidemic in any particular country, and the urgency and vigour with which efforts were made to mount initiatives.

A measure of level of effort is not easily constructed. The data of inception of campaigns is inadequate to the task and difficult to establish, since in one country it may have been marked by a relatively low profile leaflet drop; in another by a high visibility mass media campaign. The use of some measure of resourcing levels is also problematic in this context since in some countries, Switzerland and Denmark, for example, generous subsidies and concessions were granted by the mass media agencies, whilst in other the full campaign costs had to be borne by the statutory bodies.

Nevertheless, there appears to be no consistent relationship between the urgency with which campaigns were launched, and the seriousness of the epidemic. Examples can be found of countries in which a high prevalence rate was accompanied by early and energetic prevention efforts. Switzerland, for example, the country with the highest prevalence rate in Europe, began a sustained and carefully co-ordinated campaign as early as 1986. Similarly, there are instances to be found of countries – Finland, for example, and Portugal – with low prevalence rates and late starts. But equally, examples are to be found of countries with high prevalence rates and late starts, (e.g. France) and by contrast, low prevalence rates and early campaign starts, (e.g. Norway). It should be emphasized that the start dates refer to the inception of official public education campaigns directed towards the general population (which is taken as indicative of offical recognition of the problem) rather than ad hoc action by dedicated groups, which in most cases began much earlier.

As Figure 1 shows, public perceptions of the seriousness of the epidemic seem to vary more consistently with the scale of the epidemic. This graph is based on a Europe wide survey conducted by Gallup[2] in an attempt to compare public response to the epidemic across the continent. As we might expect, the distribution shows a strong correlation between AIDS prevalence and public perception of severity, (e.g. Switzerland – high prevalence and perception of severity; Finland – low prevalence and perception of severity, etc.). But of interest here are the characteristics of the outliers; countries high in terms of perceptions of severity and low in terms of prevalence are those with early and energetic campaigns (Norway and the UK, for example) and those high in terms of prevalence and low in terms of public perceptions of severity tend to be those in which AIDS public education occurred later, (as in France), or at a lower level of public visibility.

A central theme of this report will be that AIDS public education and its evaluation is heavily embedded in, and indeed inseparable from, the social, cultural, political, ideological, and economic situation and can only properly be understood in this context. At times, the data on campaigns in different European countries gives the

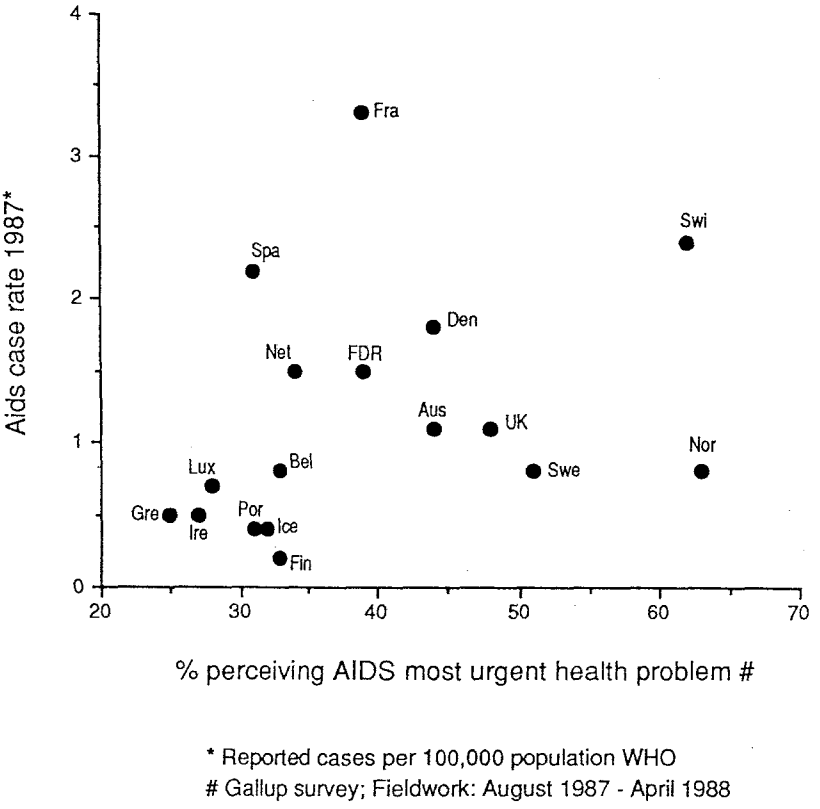


Figure 1. *Relationship between scale of epidemic and perceived seriousness of AIDS.*

impression of a single united continent, but at other times the considerable differences in political structure, cultural background and social development are abundantly clear.

Structure and organisation

In the early years of AIDS public education, mainly before 1985, activities and interventions were conducted on an ad hoc basis in most European countries. Because of the precipitate nature of the epidemic and the pace at which it advanced over most of Europe it was some time before official mechanisms caught up. As a result, in the early years the field was open for organisations with expertise and interest in the field to mount preventive initiatives. In these early days AIDS was seen as being confined to well defined and socially stigmatised groups and Government intervention for the general population was show in forthcoming.

How easily these early efforts could later be coordinated, advanced and built on depended largely on what structures were already in place. As a result of an absence of a well defined tradition in health education in some countries, for example, Belgium and France, there was a weaker foundation of knowledge on which to draw when AIDS emerged, nor any obvious agency which could readily take on the task. In some cases the structures were there, but were seen as less than ideal for some reason. In these countries, there were existing health promotion bodies, but instead of delegating responsibility to them, the Government chose to take on the task themselves – as was the case in Sweden where the National Board of Health, traditionally responsible for health promotion, found itself suddenly divested of this responsibility in the case of AIDS. Similarly, in the UK, the Government's Department of Health took responsibility for the task of mounting the first AIDS campaign in the spring of 1986, the quasi-governmental agency – the Health Education Council.

In these countries, AIDS tended to be seen more as a national emergency – an acute crisis – than a long term health problem. Those whose talents and skills were marshalled in the fight against the disease had proficiency and competence in the area of management, policy making and administration, but not necessarily in health. This had important implications for the manner in which the campaigns were conducted. In these countries, the Government retained far more direct control over the interventions. However, because of a lack of expertise in the area, government ministers and civil servants were more likely to defer to the ideals, principles and strategies of the (generally commercial) agencies chosen to execute the campaigns.

As the result, a different set of criteria were applied in judging the success or failure of the campaigns. Generally speaking, commercial agencies earn their accolades as a result of producing advertisements which score highly in terms of impact, awareness and recall, and may have less regard for securing long term objectives. Such campaigns present difficulties in terms of follow up and sustainability.

In addition, this model was often beset by management problems. Scientific committees had to be convened to give advice of a medical and technical nature, and secretariats set up to service them, as in Belgium, for example. Power was not necessarily lodged with those with the professional profi-

ciency to execute the campaigns. As a result, there were often too many decision making levels and it became difficult to adequately represent the diversity of viewpoints and to reach agreement. These arrangements tend to be characterized by conflict rather than consensus. Accommodating all the competing claims on campaign content resulted in a kind of practical paralysis, described by one observer as the "politics of inertia"[3] and delays and compromises resulted. Controversy in the media only served to exacerbate the existing public confusion.

By contrast, in those countries in which responsibility for the campaigns was entrusted to the official professional body responsible for public health, a generally more felicitous outcome resulted. In Norway, for example, the professional coordinated body at central level was the Directorate of Health, officially accountable to the Ministry, but with a considerable degree of autonomy, authority and self-regulation. The structure and organization of the Norwegian campaigns has been characterized by such a high degree of consensus that rare occurrences of media controversy have been welcomed for the opportunity they have presented in terms of discussion. Similarly, in Switzerland, a country with no Health Ministry but instead a Ministry for Internal or Home Affairs, the Federal Office for Public Health (OFSP) – the professional body responsible for public health, was charged with full responsibility for the campaign, with an obligation to inform rather than to consult. As a result of the strong convictions on the part of these bodies as to how the campaigns should be designed and conducted, interventions in both countries have been robust and relatively free from controversy.

In the Netherlands too, the solid infrastructure of statutory and non-statutory organisations with specialist knowledge and a long experience in addressing specific groups meant that the machinery for AIDS public education was already largely set up. The Dutch campaign was guided from the start by the idea that efforts to inform are more effective when they are developed and carried out in close cooperation with representative bodies and individuals from the target groups. Here the role of government agencies was simply to coordinate existing activities and to that end the National AIDS Commission was established in 1983. For the most part then, the structures were already in place in the Netherlands, Norway and Switzerland and needed only additional resourcing and coordination to carry out the tasks.

The advantages of these broad based coalitions, managed and coordinated from the centre, but without direct hands-on Government involvement are several. The AIDS problem has remained high on the political agenda, but has been effectively depoliticized since the Ministry involved does not have to be associated with the more controversial aspects of health promotional activity. Control is vested in small groups with adequate representation of all interest parties so that the need for wider consultation with its attendant delay and obstructions is limited. Campaigns can be properly synchronised so that they are not competing for public attention at the same time. Harnessing existing skills and experience to the problem obviates the need to set up new organizations, with all the attendant difficulties and disruption which this entails.

A further factor relating to organisation and structure relates to the balance between regional and local level. European countries vary in the extent to which political power and control is decentralised. In Switzerland, for example, devolution to the level of the Canton meant that many interventions were governed at local level. In Germany all initiatives had to receive approval at the level of the powerful Landes, without which support and continuity could not have been facilitated. In other countries, France, Sweden and the UK, for example, control has been vested more at central level.

Problems at the interface of local and regional levels have derived from a number of factors: the greater sensitivity at the central level to more radical and innovative approaches to public education compared with the local level, where generally more adventurous approaches can be employed, resulting in possible conflicts between the two. In many countries – Spain for example – it has been possible to execute more radical campaigns at local level where visibility is lower and efforts are not associated with the Government. From time to time, an attempt to resolve the conflict between preventive efforts at the local level where there was a concern and ambition to talk frankly and openly about sex, and the national political level characterized by a more cautious approach has resulted in a mismatch of confusing imagery. Secondly, there has arisen the difficulty of coordinating and ensuring harmony between the two levels, and of ensuring continuity between central and a local level. In those countries which are highly decentralised health education has for the most part been organised at the regional level. The shift in many countries has more recently, however, been away from the centre towards community level activities, because of the high cost of mass media work, its highly political nature and the lack of evidence of effectiveness in changing behaviour.

The formulation of aims and objectives

In terms of assessment, the formulation of campaigns objectives is of utmost importance because they determine not only the campaign components, but also the performance indicators and outcome variables. Common to the aims and objectives of all countries has been the *primary* prevention of HIV, – the provision of information on ways in which HIV is and is not transmitted, and on the means by which one can protect oneself. Countries have tended to differ more in the emphasis placed on *secondary and tertiary* prevention – the removal of unfounded fears and anxieties which would lead to social disruption and create an unfavourable climate in which prevention and care are effected, and to eliminate negative attitudes towards those already infected or at high risk.

The strength and directness with which this second objective has been formulated has varied from country to country. In many countries, it has been recognised that in the case of a communicable disease, it is unwise on pragmatic grounds and indefensible on ethical ones, to limit objectives to those concerned with primary prevention. In countries such as Denmark, the Netherlands, France, Norway, Germany, this aim has been stated explicitly in terms of solidarity and compassion. In Switzerland, for example, the objectives were set out by the National Committee on AIDS[4]:

The first task of AIDS prevention is to prevent new infections. This means providing information, creating adequate risk consciousness, promoting personal responsibility and disseminating convincing simple and promising protective measures... Aids prevention also requires understanding for and solidarity with the target groups, for otherwise they would go underground and would not be prepared either to provide the urgently needed information or to accept advice.

In other countries, an emphasis on secondary and tertiary prevention was either absent altogether or else was very weakly stated. The official remit of the UK Health Education Authority, the national body responsible for health education, was confined to primary prevention despite the fact that AIDS was a communicable disease. Here, the stated aims of the campaign, were to prevent the transmission of HIV and to minimize social disruption, by which was meant avoiding the kinds of socially disruptive events resulting from a fear of transmission of casual social contact – a threat to blood supplies as a result of anxiety that the virus could be transmitted through blood donation, for example – which whilst indirectly benefitting those with the virus, by enabling them to lead a more normal life, was nevertheless not the prime purpose of this particular aim.

Another significant difference between countries is seen in the scope of the objectives. In some countries, there was explicit recognition of the limitations of broad spectrum approaches to public education in terms of their contribution to the modification of high risk behaviour. The need for programmes which combined public information with a variety of other activities, and which combined and coordinated local and regional levels of activity has been taken account of the planning documents of the Swiss, German, Norwegian and Dutch campaigns, for example. Possibly the most prudent strategy was to restrict objectives to those which were achievable and realizable. In Norway, it was recognised that moral imperatives issued through the mass media were likely to meet with very little success in changing behaviour. In the Dutch campaigns too, the approach has been pragmatic rather than moralistic, in the belief that the most effective approach will be one which stimulates people to adapt their lifestyle, rather than requiring them to drastically *change* it. Campaigns guided by such objectives have taken reality as a starting point, persuading people to consider using a condom if they are not in an exclusive relationship, to clean or avoid sharing needles if they inject drugs.

The content of campaign messages

Throughout all campaigns and across all European countries there has emerged a well defined communality of messages in terms of primary prevention. The content of messages disseminated to the general population centred on the ways in which HIV was and was not transmitted and on the means by which infection could be avoided. To more varying degrees, depending on whether it was stated in the aims and objectives, campaigns have also included an anti-discriminatory message.

Primary prevention messages

Thus the principle campaign messages have related to ways in which HIV could and could not be transmitted. The degree to which the second of these messages (i.e. the means by which HIV was not transmitted), needed to be disseminated depended to a marked extent on the degree to which the population had been exposed to confusing and contradictory messages through the free media. In some countries, in the UK, for example, in Germany and in Belgium, there was widespread misinformation on the routes of transmission[5].

In relation to prevention of sexual transmission of HIV, possible messages include:

a)

b)

PLATE 1. *Examples of direct approaches to condom use.*

a) An attempt in the French campaign to provide positive associations to condom use: "Condoms protect against everything. Everything, except love".
Comite Français d'éducation pour la santé/agence Française de Lutte contre le SIDA.

b) in Switzerland the image of a condom was a strong and integral part of the "STOP AIDS" campaign.
Federal Office for Preventive Health (OFSP) Bern, Switzerland.

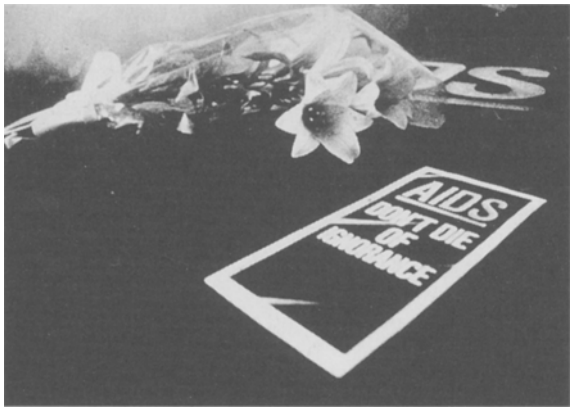
Stay with one exclusive partner, where possible.
If you have more than one partner, avoid penetrative sex/risky practices
If you have sexual intercourse, use a condom.

In fact, the message to avoid penetrative sex, (the encouragement and exploration of safer sex practices apart from condom use) has not been extensively addressed or developed elaborated in any of the countries (with the exception of the Netherlands), despite the fact that it had been a mainstay in the literature for the homosexual community. Preventive messages have been formulated in terms of sexual exclusiveness and the adoption of safer sex practices.

The selective emphasis placed on each of these messages has, however, varied greatly between countries. In scientific and medical terms it is well established that it is not primarily the number of sexual partners that creates risk of infection, but rather the exchange of body fluids by direct routes. Monogamy per se does not decrease the risk if one partner is HIV positive. However, the message to restrict numbers of partners supports the ideal of monogamy and family life better than does the more pragmatic message to adopt safer sex practices. The moral message, therefore, has the political advantage of appearing to *underpin* traditional values, whilst the pragmatic message might be seen to *undermine* them. Campaign messages have therefore been tempered to a large extent by what was possible in political terms rather than desirable in public health terms.

In some countries, France and Switzerland, for example, condoms have been unreservedly promoted and opposition dealt with firmly. (Plate 1: French and swiss condom ads). In others, like the Netherlands, the more circumspect view has been taken that people need to be able to make a personal choice from a range of messages, with no one being promoted more energetically than another. In others, in Belgium, the UK and Sweden, for example, the choice was constantly made against a background of fear as to what might be the political reaction if too heavy a reliance were placed on the condom message, thereby seeming to be condoming promiscuity (Plate 2). But in very few countries has it been possible to use the condom

a)



Dept. of Health

PLATE 2. *Images of death were a common feature of early campaigns which used fear to motivate behaviour change.*

a) As a metaphor of both reproduction and death, lilies draw attention to the association between sex and a fatal disease – an example from an early (1986/1987) TV campaign in the UK.

b) A further example using a similar metaphor from the Belgian STAG campaign

b)

Stag, Belgium

message free from the criticism that this condoned immoral behaviour. Most countries experienced some resistance to a sole reliance on the condom message as a means of protection. The difference between them lies in the strength with which the objections were expressed and the degree to which they influenced the programme.

In this respect, much has depended on how close to Government was the agency responsible for the campaigns. Whether the dominant message has been to use a condom or whether it stressed restrictions in the numbers of parameters, depended very much on the perspective of the agency involved. The high visibility of Government information campaigns led to political fears of objections which prevented a purely pragmatic choice of message. This expressed itself as a clear objection, for example, to an exclusive emphasis on condom use. Where control the public education programme was, in the first instance, taken directly by the Government, as in Sweden, the UK, and Belgium, for example, there was greater emphasis on the moral than the pragmatic message. The degree of willingness to espouse the condom message has seemed also to be directly related to the scale of the problem in rela-

tion to HIV and AIDS prevalence in particular countries. In other words, the moral message could be subordinated to the more pragmatic concern where the need was felt to be urgent. Thus we see the positive promotion of condom use in countries where heavy opposition might have been anticipated, but where, because of the high rate of infection, such qualms have had to be quashed and resistance challenged, in France, for example. It has been stated above that the scale of the epidemic in any one country had little perceivable effect on the scale of public education, it does nevertheless seem to have influenced the willingness to espouse radical measures in relation to public education.

The existing social context and the prominence of the moral agenda also influenced the choice of message. A heavy reliance on condoms in the French campaign, for example, to some extent reflects the traditional obstacles which had to be overcome in promoting condom use as a means of prevention. The same is true to a lesser extent in Ireland, where until recently condoms were not publicly available.

Anti-discriminatory messages

Messages designed to avoid discrimination and prevent stigmatisation of those infected with HIV and with AIDS have similarly been accorded different priority in different countries. In isolated instances, as in Germany for example, a prime component of the information campaign was specifically to counter a tendency to ostracize and discriminate against people with HIV and those in high risk groups which was in evidence. In Denmark and the Netherlands, for example, countries with a reputation for tolerance, the solidarity message was introduced relatively early in the campaign, whilst in the UK and in Belgium, there has been little emphasis on this message.

Anti-discriminatory messages have been tackled in a number of different ways; in Denmark, for example, the approach has been a humorous one, depicting situations in a toilet and in a swimming pool to illustrate the absurdity of implementing elaborate avoidance procedures. In other countries – Norway, Sweden and France, for example, the strategy has been to put a human face to those infected and at high risk, using the testimonial approach to elicit sympathy and a more direct personal involvement and identification with those affected. (Plate 3: Norwegian anti-discrimination ads.)

Tone and style of campaign initiatives

In general, the tone and style of campaigns in different European countries tended to be consonant with the content of the messages, but this has not universally been the case and public education advertisements have sometimes been presented in a manner which ran counter to the explicit message. Approaches can be characterised across a number of dimensions – according to whether they were for example, positive or negative in their approach to sexuality, in the differential use of emotions, (humour, fear, etc.), in the extent to which they were life or death-oriented, etc.

Some of these characteristics are incompatible, for example, it is difficult to envisage a campaign which could be both positive in its approach to sexuality at the same time as fear inducing. Again, campaigns in different countries varied in the extent to which it was politically possible for them to adopt a positive approach to sexuality. In countries such as Denmark, the Netherlands, and France, there were relatively few problems in this respect, and a explicit attempts could be made to eroticize sex. In France a deliberate effort has been made to link condom use with love-making; avoiding the association between AIDS and condom use so as to reinforce the positive tone of the message and eliminate any possibility that sex might be linked with the pathology of a fatal disease.

Campaigns which were less positive about sex have tended to be more typical of countries in which the Government has taken initial responsibility for HIV/AIDS public education. Government information campaigns necessarily have a high public profile, and fear of objections to sexual frankness has sometimes prevented a positive tone from being adopted. The conflict between the views of different sections of society prevented clear messages of positive sexuality emerging.

Countries in which the social climate militated against the explicit use of frank sexual imagery and an erotic approach did not necessarily, however, produce advertisements which were anti-sex. In strongly Catholic countries like Spain, for example, with traditionally more reserved attitudes towards explicitness, the use of humour effectively diffused some of the expected opposition. Cartoons used to depict characters fulfilled the dual role of avoiding the need to portrary sex involving real people, and injecting lightness into the advertisements (Plate 4).

The evidence relating to the use of fear to motivate behaviour change is equivocal. However, there seems to be general agreement that it can be of little value unless it is accompanied by advice on effective action to reduce or avoid risk. Although it seems clear that prevention campaigns based only on fear are likely to prove ineffective, it is often argued that messages producing moderate levels of fear will facilitate behavioural change to the extent that they are complemented

Illustrations and headlines from the posters and advertisements made for the Norwegian Aids Associations campaign 1988 with the main theme: Human care is not contagious.
Picture no. 1 says: *I am HIV infected, give me a hug.* No. 2: *Is this the way we want to solve the AIDS problem?* No. 3: *The loneliness is what kills me.* No. 4: *This child had AIDS. But it died from lack of physical contact.*

PLATE 3. *An important goal of AIDS HIV public education campaigns has been to prevent discrimination and encourage solidarity with people with HIV and AIDS. One way of achieving this has been to put a human face to those affected.*

by a positive, reassuring description of the consequences of change[6].

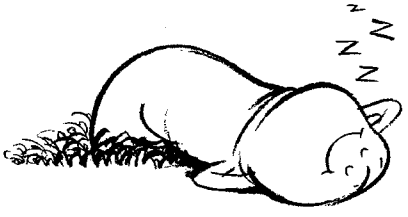
Many countries in Europe stated quite explicitly before the start of the campaigns, their antipathy to the use of fear. In some cases, as in the Netherlands, it was seen as incompatible with the promotion of positive messages about sex[7]. In other countries, in Switzerland, Portugal and Norway, it was stated explicitly as part of campaign philosophy, that fear would form no part of the strategy. This was particularly characteristic of those countries in which responsibility for the interventions lay with professional public health agencies who had strong and firm convictions based on sound health educational principles, and were confident enough to dictate the conditions to the commercial agencies contracted to execute advertisements, etc. In countries in which fear was used as part of campaign strategy, the UK and Belgium, responsibility for the campaigns at least at their inception, lay not with health educational agencies, but with the Government. Where initial action for public education was taken by the Government, professional autonomy and confidence were less in evidence and more power and control was delegated to the mass media agencies.

Again much of the difficulty hinged on whether there was consensus or conflict in the creative team. In Switzerland and in Norway, for example, the teams of experts from the relevant disciplines and areas of experience could agree on what

a)

Think before you take the plunge!

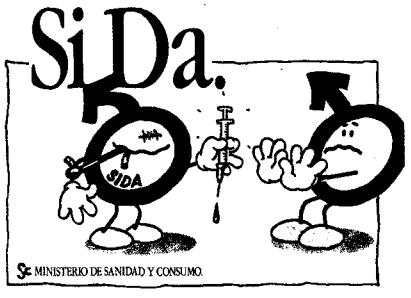
Are you properly dressed for the occasion?

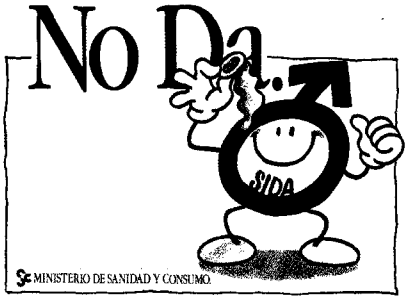


When you're abroad – take it easy!

Think before you act!

b)





Spain's "Si Da, No Da" campaign.

PLATE 4. *The use of humour has been used successfully in AIDS campaigns directed at the general population as a means of avoiding offence in presenting explicit images.*

the interventions should achieve. There may have been differences of opinion between the different Ministry and public health professionals but the latter always had the ultimate right of sanction. In the UK, by contrast, health educators on the team convened to manage the public education initiaves, found it difficult to accept the philosophy of those from a public relations or advertising background, and vice versa. The result was often a compromise resulting in advertisements containing confusing and mixed messages.

Achieving a consistent and sustained response

One of the challenges facing those responsible for public education interventions has been that of maintaining levels of public awareness, interest and concern about the AIDS problem. This was not only a problem for countries in which high impact, fear-inducing messages had been used, though it was heightened in the case of such countries by the difficulty of maintaining concern at that level. Some countries tackled this problem by introducing into the campaign a synergistic element, by creating a symbol or motif which was instantly recognised as characterizing the campaign. The two tone whistle of the Danish ads, the ubiquitous shape of the condom in the Swiss ads, the round cartoon figures in Spain's "No Da, Si Da" campaign, for example (Plate 5).

After long exposure to advertisements, a high level of public information could be taken for granted, and the problem was rather one of reminding people of the presence of the threat of AIDS. For this purpose, shortened, condensed messages were needed which presupposed a familiarity with the previous longer versions. This technique was used in the minimalist advertisements of Sweden, Switzerland and Spain, in which

PLATE 5. *Attempts to synergise campaign materials.*

Moon over Geneva: the ubiquitous condom of the Swiss advertisement links and unites all campaign components.

PLATE 6. *Depicting people with whom the target audience would identify created challenges for campaign design.*

the kernel of the message was firstly embedded and elaborated within a longer text, and later stood on its own as a simple slogan, e.g. "Si Da, No Da" (Spain), "STOP SIDA" (Switzerland).

Target groups

An understanding of the moral and social climate in which AIDS public education takes place is important to an understanding of the direction taken in terms of groups to be targeted. At least as important as the epidemiological situation relating to the prevalence of HIV and AIDS, in determining this, was the political situation in each country. A distinction can be drawn between those countries in which the general population was seen as a *communicational strategy* and those in which it was seen as a *risk group* – a discrete, homogeneous group, which could be at risk (Plate 6).

In some countries, there was from the beginning, a recognition of the fact that mass media campaigns are not the most effective way of reaching high risk groups, and that the most productive focus for the work was likely to be in those settings and amongst those groups in which the virus was most likely to be transmitted. In countries in which prostitution, homosexuality, etc. are not heavily stigmatised it has been possible to run effective campaigns aimed at these groups without fear of discrimination and victim blaming resulting. In Norway, for example, where discrimination on the grounds of sexual orientation is actually legislated against, no problems have been encountered in openly targeting drug users, homosexuals and prostitutes, the stated rationale has been that reducing the size of the populations whose behaviour puts them at risk will directly protect the rest of the population[8]. In such instances, the general population can be treated as a broad, undif-

ferentiated heterogeneous group which contains people at differing degrees of risk and so is an appropriate target for the broad spectrum mass media approach, with smaller risk groups being addressed more at community level.

By contrast, in countries in which homosexuality and other minority behaviours are heavily stigmatised, the decision to mount general population campaigns was guided, in part at least, by a different set of political considerations. Of course it was guided by the epidemiological evidence in each case; by a conviction that those practising risk *behaviours* do not necessarily identify as *risk groups;* by the fact that their sexual partners might be unwittingly at risk, etc. But in countries like Sweden and the UK, it was also guided by the need to destigmatise the disease, to normalize it and to minimize the extent to which it was seen as affecting only certain small, deviant groups. In the UK constant reference has had to be made in the official campaigns to the fact that the general population is also at risk. This has partly been necessary to counter the strident refutations of the existence of heterosexual spread in the tabloid press and a constant obsession with seeing AIDS as associated with deviant practices.

As a group, it had to be assumed that the general population had some integrity and autonomy and did not overlap with other groups. It was constantly the case in countries such as Sweden, Belgium and the UK, that an equation was made between heterosexual and general population. Injecting drug users were seen as outside this group, as were homosexual men. This view was reinforced by the fact that homosexuals and injecting drug users did not feature in the interventions addressed at the general population, they were not visible. This had two important consequences; it encouraged the criticism by those who saw AIDS as retribution that campaigns were being aimed at the wrong target. And it allowed a sterile debate to develop as to whether the general population was really at risk – with constant reference to the AIDS statistics in support of the view that there really was no risk to heterosexuals (Plate 7).

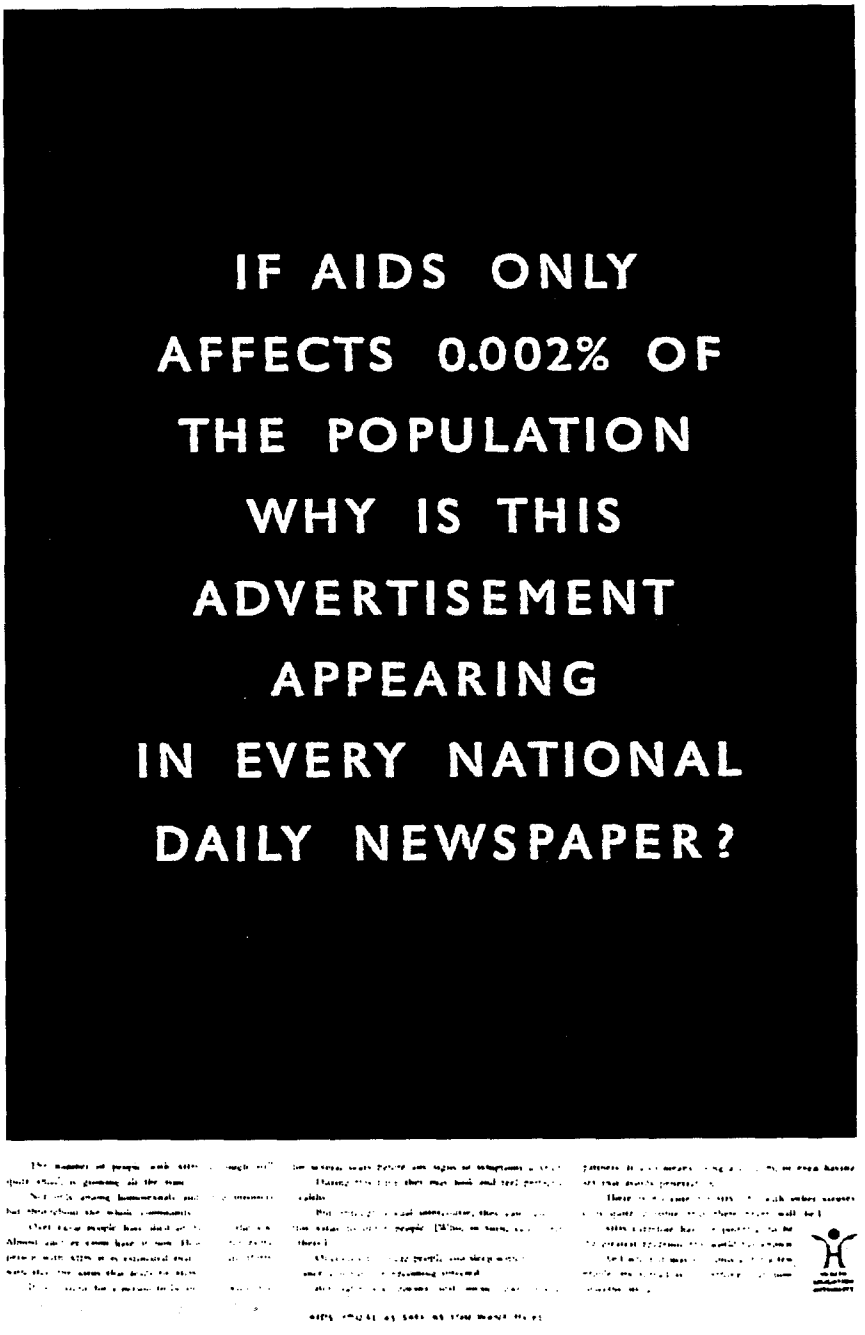


PLATE 7. *UK attempt to persuade the public of the potential for risk of HIV transmission in the general population.*

In other countries, in the Netherlands, for example, the decision to mount a general population campaign was taken relatively late, in 1987. Here the introduction of a general population campaign in

1987 was also political, but differently motivated. The main thrust of the campaign from 1983 to 1987 was towards people with behaviours most likely to place them at risk of infection. The introduction of the general population campaign cannot be taken as an indication that the strategy so far adopted had failed in any way. At the time it was felt the epidemiological evidence supported the introduction of a general population intervention, but it was also at least partly the result of cross national pressure as the Dutch population saw on their televisions the efforts being made in other parts of Europe to inform and educate the general population, in the UK, for example, and put pressure on politicians to do more along these lines in the Netherlands [9].

When selecting target groups, those responsible for AIDS public education had two sections of the population to consider – those who, because of particular behaviours, were at elevated risk of becoming infected and those who, because of particular communicational needs, or because they were to be found in particular settings, needed separately targeting. Included in the first group were prostitutes, men with homosexual contacts, and injecting drug users; in the second were young people, immigrants, prisoners, health professionals, etc.

Some groups uneasily straddled these categories and special efforts were required to ensure that there was no suggestion that they were presented a risk to others. A case in point was prostitutes. Countries differ in the extent to which they have focused on the purchaser and the vendor. Some campaign initiatives treated prostitutes as a risk to others (e.g. Sweden), when the evidence was that they were at risk themselves. In other countries, efforts were made to ensure that this impression was not created. The Norwegian health authorities treated prostitutes as a vulnerable group and avoided strengthening the stereotype of the prostitute as a reservoir of infection for the rest of the population. In Norway, for example, a victim blaming poster designed by the agency, depicting a prostitute as a life threatening person was withdrawn by the Directorate of Health at the distribution stage, a clear example of a campaign in which the health professionals had considerable autonomy.

Travellers, including holiday makers and businessmen were also problematic in this sense. Interventions had to be designed which gave no hint of xenophobia, nor of making the assumption that people in other countries were riskier than people at home, i.e., that risk was inherent in the behaviour of the traveller and not in the people of the country being visited. An instance in which this was not achieved is again to be found in Sweden, where an advertisement showing a gay bar in Copenhagen came under fire from the Danes, and a picture of the Eiffel Tower brought injured criticism from the French Embassy (Plate 8).

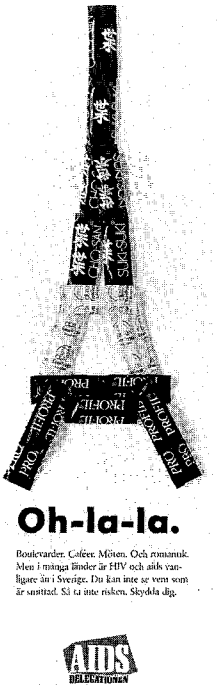


Plate 8. *Swedish Blackjack condoms form an image of the Eiffel Tower – the implicit advice to take care in foreign countries attracted criticism of xenophobia.*

Evaluation of the campaigns

Methodological issues

The pace and precipitate nature of the AIDS epidemic has made it difficult to set in place the necessary evaluative procedures and has resulted in hasty preparation of evaluation work in most countries. All too often, survey work has been haphazard, ad hoc and piecemeal; necessary preliminary research has been neglected or omitted and piloting inadequate. The stages of evaluation often classified as "formative" (prior research designed to help inform the design of the most effective campaign) and "process" evaluation (research designed to measure aspects of dissemination) suffered most in this respect, being strikingly deficient in the evaluation attempts of many countries. The cautionary note [10] that "the AIDS epidemic is much too serious to allow interventions to be based on some communicator's untested and all too often incorrect intuitions about the factors that will influence the performance or non-performance in a given population" went largely unheeded at the start of the epidemic.

Ideally it would have been beneficial to have been able to draw on an existing stock of knowledge about the sexual behaviour of the general population, yet there was a dearth of relevant surveys to use for this purpose. In many countries in Europe, the most recent surveys of sexual behaviour were carried out in the 1960s and 1970s, and questionnaire design and sample

selection reflected particular social and health problems of the time. In the future, projects like the EC Concerted Action on sexual behaviour and on assessing AIDS preventive strategies should be remedial in this respect.

What has passed as outcome evaluation to date is more properly described as monitoring. In many cases what have been measured have been the *effects* of campaigns (whether they achieved any results at all) rather than their *effectiveness* (whether an intervention achieved its objectives) or *efficacy* (whether it achieved its objectives more effectively than an alternative course of action or none at all) – the question which is seen by many as being at the heart of the evaluation process.

Effectiveness evaluation requires that targets are set so that success in achieving them can be systematically measured[11]. Again, haste and a feeling of working in the dark has prevented their formulation in the context of HIV/AIDS prevention. The absence of baseline data from which to measure change has made it difficult to envisage what might be appropriate and relevant targets (e.g. "By the end of the current campaign, to reduce by 25% from base line, the proportion believing that receiving blood transfusions puts one at risk of HIV infection" or "to reduce to fewer than 10% the number of people who are unaware of the protective effects of condom use".) Lack of clarity over the scope of the objectives has also led to confusion over the measurement procedures in some instances. Evaluation of the effectiveness and efficacy of campaigns requires the use of variables or indicators which provide measures by which the outcomes of interventions and programmes can be assessed, the selection of which is fundamentally dependent on the objectives of a campaign[12]. The primary outcome variable – incidence of HIV infection – is not a sensitive indicator for the general population, partly because of the nature of the virus and its long incubation period and partly because of the vagaries of the collecting process.

In many instances, the specific goals or objectives of a national programme constitute the indicators themselves, e.g., condom use, discrimination against people with HIV. In the case of AIDS and HIV, the proximate outcome variable most relevant to reducing HIV transmission in most situations will be adoption and maintenance of behaviours that protect uninfected individuals from contracting HIV and protect infected individuals from transmitting it. In many countries, change in the social environment to facilitate the prevention and treatment of HIV and AIDS was also an explicit aim of the campaigns. Even countries in which the emphasis is on primary prevention depend on changes in the social climate in relation to e.g. TV advertising, condom availability, etc. for their success and this needs to be taken account of in the evaluation process.

The methods used, however, have not been wholly appropriate or adequate to the task of measuring these objectives. The stock-in-trade of evaluation of public education in relation to the general population, particularly interventions deploying the mass media, has been the knowledge, attitude and behaviour (KAB) survey. Typically, the KAB survey investigates exposure to, recall and comprehension of messages and self reported behaviour change. A major drawback, however, of the KAB survey is that the investigative unit is the individual so that it fails to monitor charges wrought in the social environment. For this reason KAB surveys are not appropriate instruments for the evaluation of changes in the social context. In particular they neglect to understand the influence of social, cultural political and ideological factors which may either impede or expedite AIDS public education.

The cultural climate has placed restrictions on what can and cannot be done in terms of AIDS education, but it has in turn been influenced by the AIDS epidemic. AIDS has had implications for health and sex education in general. For example, as a result of AIDS publicity, the ruling on TV advertising of condoms was changed in several countries, including France, the UK and Ireland. In Belgium, in the Netherlands and in the UK, AIDS has had an enabling effect on the provision of sex education. The absence of explicit measures of change in the social context has resulted in unforeseen and unintended outcomes (whether favourable or unfavourable), going unrecognised and unrecorded.

Where the programme objective of changing the social environment was explicit, evaluation efforts were more like to take the effect on social context into account. The Swiss, for example, acknowledged the importance of the "multiplier effect" – the political function of the campaign to persuade teachers, parents, opinion leaders, etc. to play their part in raising awareness, and so have attempted to evaluate this by measured how many actions have resulted from each campaign. In general, however, this has been a neglected area of evaluation.

Attributing Outcome to Intervention

A further problem relating to efficacy is that of attributing outcome to intervention – the necessity for which is often held to be a central canon of evaluation of public health interventions. "The attributability of indicators is a characteristic which must be kept in mind at all times during evaluation, so that it can be assured that the out-

come which the indicator is measuring is actually the result of the intervention or programme being evaluated" [12].

It should be noted that there is not universal agreement on the feasibility of this. The view is also widely held that a particular outcome can rarely be ascribed to a specific intervention since a really effective campaign will have an effect far beyond its original remit, creating media discussion, providing the impetus for local efforts, etc. This is particularly relevant in the case of AIDS where an explicit objective of many campaigns was, as stated above, to effect a favourable climate in which interventions could be received. The objective of changing the social environment made it particularly difficult to disentangle the effects of specific interventions designed to improve knowledge and change attitudes and behaviour in individuals, from those aimed more broadly at facilitating a favourable climate in which AIDS public education could take place.

Nevertheless the policy maker, charged with the task of cost-effective utilisation of public resources, understandably wants to know which of the interventions have greatest impact and effectiveness. The researcher's role is to devise methods of achieving this objective. Methods relying on respondents' retrospective reports of gains in knowledge, changes in attitudes or modifications of behaviour as a result of the campaign in question have often been the only available ones, because of the absence of base line data, yet suffer seriously from the biases introduced by the desirability response, by recall difficulties, and a lack of specificity in terms of meaning. Pre- and post-test surveys and tracking surveys (involving repeating the same set of questions at intervals of similarly selected samples) offers some improvement but provides no assurance that what is being measured is the effect of a particular intervention and not a generalised response to the AIDS epidemic.

The more rigorous quasi experimental methods, using phased implementation, randomised field experiments, the application of media weight bias, or simple random assigment of individuals to one group or another in order to compare one group exposed to the intervention with a control group with no such exposure were contra-indicated in the case of AIDS preventive strategies. There were definite practical, political, ethical and, in some cases, economic obstacles to the implementation of these strategies.

The "dose-controlled approach" requires time to implement and so was contra-indicated by the precipitate nature of the epidemic and the urgency and haste with which politicians needed to be seen to be responding to it. The urgent need for the data made it morally indefensible to deny people interventions in the interests of scientific accuracy. Further, quasi-experimental designs are difficult to apply to mass media campaigns because ideally and by definition virtually everyone is exposed to them.

Most importantly, the success of the experimental approach depends on being able to ensure that observed differences in outcomes between treatment and control group do not arise from any other factors than the intervention under investigation. In the case of the AIDS epidemic, however, the usual problem of interference was heightened. Public knowledge was accumulating, through media coverage, commercial advertising, etc., at such a pace that even a short time lag could result in a change in measures with or without intervention. Not only has it been difficult to separate out the effects of national campaigns from the effects of national news coverage, but overspill between countries has made it difficult to separate out the effects of one national campaign from another. In Ireland, for example, 75% of households receive British TV and so the Irish public had been heavily exposed to British campaigns before the start of their own in 1987 [13].

Clearly there have been very real difficulties in prospectively controlling for intervening variables in the evaluation of AIDS preventive acitivities. Nevertheless, although experimental design was not feasible, imaginative analysis and interpretation of results has compensated in some cases. Attempts have been made in several countries to attribute outcome to intervention retrospectively. One method of effecting this has been to partially disaggregate the data at the analysis stage using outcome variables to discriminate between those exposed to campaigns and those not. The evaluation of the Dutch "excuses" campaign designed to encourage condom use, for example [14], compared responses of those who claimed to have recalled the campaign with those of others who did not. A statistically significant higher level of endorsement of the messages of the campaign amonst respondents who claimed to have seen the campaign, provides support for attributing the effects to the campaign. Alternatively, it has been possible to select and measure retention of items of information attributable only to the campaign, for example, in the UK [15].

An essential caveat here is the lack of certainty that some other explanatory variable, i.e. perception of personal risk, may not be responsible for both sensitising people to the public education materials and thereby facilitating recall and absorption, at the same time as predisposing them to a change in behaviour. Determinants of variations in exposure need to be introduced as explicitly as possible into the analysis and inter-

pretation of results to eliminate the possibility of spurious associations.

Comparability across countries

Cross national comparisons might, at first sight, seem to present tempting opportunities for the assessment of different intervention strategies. If the constraints of time and budget have prevented the kind of controlled implementation which would permit a thorough going comparison of the relative effectiveness of different interventions within countries, then the European context might seem to present a kind of laboratory in which efficacy evaluation can take place. Enough has been made above of the differences between countries to make clear the impossibility of holding constant all other variables save the intervention itself. The multiplicity of different social, cultural, political and health factors operating in the different countries rules out any kinds of controlled analysis.

In addition, just as the campaigns themselves are context specific, so too are the methods we use to appraise them. The practical frustrations of dealing with secondary data quickly become apparent in the context of European comparisons. Direct comparisons are difficult, not only because of different fieldwork dates, but also because of methodological differences between surveys and measurement effects within each. Social and cultural factors play a major part in the selection of methods. Postal surveys amongst the socially obedient Swedes and Norwegians, for example, dependably produce response rates of 60% or more, whilst in Britain and Germany response rates of 30% are nearer the norm. Similarly, telephone surveys can be conducted in Switzerland and France safe in the knowledge that more than 95% of the population have a telephone, but the same assumption cannot be made for many other European countries. It may be possible to use sexual vernacular in the Netherlands or Denmark, where sexual terms do not double as terms of abuse, but the same words may offend in other countries and could risk reducing the response rate.

There have also been budgetary constraints on the capacity to conduct evaluative research. Mass media campaigns are expensive, and extensive evaluation was seen by some as an unnecessary luxury, or alternately as a means of cost cutting. Countries which were less energetic in terms of campaigns were also, not surprisingly, also less energetic in terms of evaluation, so that it tends to be difficult to evaluate public education in less active countries. In some countries, Belgium for example, and Finland, little money has been made available for evaluation[16]. In Great Britain and in Switzerland substantial sums of money have been spent on large scale continuous KAB surveys. In others, France, for example, Spain and Norway, surveys have been more sporadic and smaller scale. As a result, comparisons often have to be made between surveys with very different sample sizes.

A further difficulty lies in the fact that there has been not standardisation of wording in the KAB surveys conducted in the context of HIV/AIDS prevention in the European countries. A WHO protocol for such a standard instrument, although valuable for developing countries and for Eastern Europe, was completed too late for most of the Western European countries. Differences in question wording are substantial.

In addition, in some countries, in Germany, for example, in Spain and in the Netherlands, surveys have been carried out by more than one agency. The difficulty then is one of deciding which survey to choose for the purposes of comparison. Table 1 shows the extent of differences in findings from surveys conducted by three different agencies at roughly the same time in the UK.

The ideal solution might seem to be to implement a standard universal cross national protocol for use in every country, so that methodological differences can be controlled and measurement effect minimised. There are, however,

	MORI Fieldwork: 4 Jan 1987	GALLUP Fieldwork: 24 Jan – 3 Feb 1987	BMRB Fieldwork: 26 Jan – 7 Feb 1987
	n = 1004	n = 1115	n = 708
Coughs and sneezes	5%	12%	3%
Insect bites	40%	24%	30%
Kissing	40%	19%	10%
Sexual intercourse	94%	99%	86%
Sharing needles	98%	98%	75%

MORI: Quota sample; aged 16–54; face to face interview in home.
GALLUP: Quota sample; aged 16+; face to face interview in home.
BMRB: Quota sample; aged 13–59; face to face interview in home.

Table 1. *Knowledge of ways in which HIV is transmitted: UK; January 1987.*

major difficulties involved in developing in common research methodology, some of which are illustrated by efforts by Gallup International to achieve this in 1987. Despite the best efforts by the parent company to gather standardised data for each country, local survey agencies were ultimately responsible for carrying out the surveys for Gallup, and there were limits to the extent of control which Gallup could exercise in the field. As we have seen, there can be substantial differences attributable to the variation in research agency in any one country and these differences are of course further exaggerated between countries. Even when a standard protocol is applied, there is no certainty that its translation will be precise enough to ensure that measurement effects resulting from differences in the attribution of meaning have been controlled. The difficulties of ensuring standardisation and replicability, eliminating bias in the research instrument and in ensuring that populations share a common meaning in order to obtain valid or comparable results in one country are magnified when comparison is extended to different countries.

Validity and reliability

The main methodological problem of KABP surveys are those of reliability and validity. Most surveys use quota samples which, like all surveys using this selection method, present problems of reliability, since those most likely to be willing to disclose details of their personal opinions and behaviour cannot be taken to be representative of the population as a whole. Nor can they be relied upon to produce responses which always correspond totally with the objective reality of their actions. Surveys of this kind are useful for assessing the impact of campaigns and the knowledge gleaned from them, but they are less reliable in the case of assessing attitudes and behaviour changes, being particularly prone susceptible to the influence of the social desirability response.

These difficulties were exacerbated in relation to the assessment of HIV/AIDS preventive strategies. One consequence of the sudden onset of the AIDS epidemic was that many evaluations had to be prepared simultaneously with the interventions, leaving little time to develop and pilot research projects. In the panic of the moment, research seemed to abandon the established empirical rules and failed to draw on the body of knowledge previously accumulated. Simple methodological principles, those relating to order effect in question formulation, for example, seemed to be overlooked. Part of a Norwegian survey had to be repeated because of failure to take account of the biasing effect of question order[17]. In the UK, an expensive piece of research had to be abandoned because insufficient time had been invested in its preparation[18], and in Sweden inadequate piloting failed to reveal difficulties of understanding certain questions[19]. Subsequent generations of programmes will hopefully benefit from past mistakes.

One solution to the problem of bias in the collecting process has been to attempt to triangulate results, or to check against other data sources which might provide more objective measures of behavioural change. In this respect, a number of sources have proved useful, condom sales figures have provided a rough and ready guide to trends in condom use, and have been profitably used in France, Switzerland, the UK, Netherlands and the GDR. Although it cannot be assumed that condom sales figures are necessarily a more reliable source of data, they do provide a check on self reported data. Similarly, HIV test data have not only been used as a measure of outcome in terms of what people do as a result of public education, but have also been used as a useful proxy measure of impact and acceptability – measuring unintended outcomes of campaign initiatives (e.g. panic and alarm in the UK).

The changing volume of calls to AIDS Helplines has provided a rough and ready indicator of the level of public interest and involvement in the AIDS issue and has been used to good effect for example in the UK[20]. The use which can be made of routinely collected STD figures as surrogate measures of sexual behaviour and in validating self reports of sexual behaviour has been a topic in its own right in this Concerted Action, and is dealt with separately (see Renton's article in this issue). Media analysis provides a valuable indicator of changes in the social context and has tended to be of interest to academics, and interesting projects have been carried out by the Glasgow Media group in the UK, in Switzerland[21] and in Finland[22] though inadequate networking and communication has sometimes prevented the results from being of as much practical use as they might have been.

Selection of agency

The choice of agency to carry out the evaluations has been pivotal in determining the quality of the data produced, the manner in which it was used and its impact on future campaigns. Several models emerge from a survey of different European countries. In the first, those responsible for the campaigns, generally Governmental agencies, have directly commissioned survey work of commercial social research agencies who are required to report directly back to them. This pattern is to be found in the UK, Spain, Denmark and Germany. A second pattern to emerge is one in

which, relevant research has been carried out generally by an academic agency, independently of campaign originators and resources, which has formed the basis of evaluation, e.g., Brorsson's work in Sweden, that of von Hove in Belgium[23]. A third pattern combines elements of both of these. Those responsible for funding campaigns and programmes also fund an independent evaluation survey; data is collected by a commercial company but the survey is designed and the data analysed and interpreted by academic teams of behavioural scientists as in e.g., France, Norway, the Netherlands and Ireland[24, 25, 17, 26, 27, 13, 28].

The urgency with which data was needed in the context of HIV prevention made commercial social survey agencies the obvious candidates for carrying out the surveys. Their experience and proficiency in handling the sheer weight of data to be collected gave them advantages over academic agencies. The common assumption is that scientific rigour is thereby sacrificed to the demands of time. In some cases, more haste did mean less speed. Inadequate piloting resulted in expensive mistakes which took time to be rectified. There is however no evidence that the questionnaires produced by market research agencies alone, were either inferior or superior to those produced by other agencies.

The choice of agency and the relationship between that agency and those responsible for campaign execution had more significance of dissemination of the data. A direct contractual arrangement between commercial research agencies and campaign funders removes any obligation to make public the results. General, social research companies are required to produce "top line" data, or frequencies at the aggregate level, analysed only by classificatory variables. As a result the potential of these vast data sets has remained unexploited in many cases, (as in the case of the UK BMRB data, and that produced by Intomart in the Netherlands) and they have either failed to enter the public domain or taken an inordinately long period of time in which to do so. The involvement of academic research teams in data processing, as in France and the Netherlands (the University of Utrecht for the Safer Sex Foundation) has generally resulted in more sophisticated analysis and more useful explanatory insights. In addition, the usual channels of dissemination, through publication in journals or presentation at conferences, have ensured that findings have emerged with greater certainty and speed.

There is clearly a political dimension of evaluation since the results may show projects as not as effective as the originators believed they would be. Inevitably, where those commissioning the evaluation and controlling the dissemination have also been reponsible for the campaigns, it has been difficult to ensure impartiality.

Evaluation

Data

In terms of explanatory models for determinants of behaviour, the dominant theoretical framework remains the Health Belief Model. At its simplest, the Health Belief Model[29, 30] states that the likelihood of taking recommended preventive health action depends on the perceived susceptibility to disease, the seriousness of the threat imposed by it and the knowledge of the means by which to reduce risk, minus the perceived barriers to action. In operational terms then, the Health Belief Model prompts the development of messages which include explicit information indicating that the severity of the potential illness is great, that the individual receiving the message is susceptible to the illness, that a change in behaviour can reduce the likelihood of illness, and that the relative benefits of behaviour change outweigh the costs. Weakness of the Health Belief Model are well documented in particular, the failure of people to behave rationally in line with knowledge and information. Subsequent refinements have been more useful in helping to illuminate the relationship between knowledge, attitudes and behaviour – the Theory of Reasoned Action, for example, which takes account of the effect of social approval in the expected utility of action, and of the role of intentions in behaviour[30]. However, the theoretical constructs associated with the Health Belief Model have implicitly if not explicitly guided, and form the basis of, KABP surveys and in the context of AIDS evaluation research, this formulation provides the following set of measurement objectives, which are here used as an organising framework and form the headings under which the data will be ordered:

- perceived seriousness of the disease
- perception of personal risk
- knowledge of routes of transmission of HIV
- knowledge of risk reduction strategies
- perceived barriers to health action
- evidence for behaviour change.

Perceived seriousness of the disease

Most AIDS campaigns show high awareness, higher than for most campaigns. In a sense, AIDS raised its own awareness and for this reason, high levels of public awareness are perhaps more a consequence of prior sensitization to the issue than the intervention itself. Besides which, currently astronomically

	FRA Jun 1987 %	GER Feb 1987 %	IRE Feb 1987 %	NOR Jan 1986 %	SPA Jul-Sep 1987 %	SWE Mar-Apr 1986 %	SWI Apr-May 1986 %	UK Feb 1986 %
Sexual intercourse: man and woman	93.5	96.0	97.0	85.0	78.0	–	88.0	62.0
Sexual intercourse: two men	}	}	}	95.0	90.0	–	}	95.0
Sharing needles for drug use	75.4	83.0	96.0	93.0	90.0	–	–	63.0
Kissing	10.5	41.0	–	33.0	46.0	30.0	26.0	21.0
Being bitten	10.0	21.0	–	21.0	–	29.0	–	33.0
Shaking hands	0.5	1.0	–	3.0	6.0	–	} 32.0	2.0
Sharing drinking and eating utensils	9.0	15.0	15.0	13.0	25.0	–		11.0
Public toilets	9.5	19.0	26.0	–	27.0	30.0	21.0++	7.0
Giving blood	37.3	–	73.0	32.0	–	–	–	44.0 *
Receiving blood	–	87.0	91.0	95.0	89.0	–	54.0	92.0

} Question mentioned only sexual intercourse and did not make distinction between sex with a man and sex with a women.
* Question first asked in November 1986.
~ Spontaneous mention.
++ Question included mention of saunas and swimming pools.

FRA = France: AGORAMETRIE Research Institute [24].
GER = Germany: IfD commissioned by Zeitschrift "Ja"; commissioned by Central Office of Health Education.
IRE = Ireland: Irish Marketing Surveys for Health Education Bureau.
NOR = Norway: Markedsog Mediainstituttet for Health Directorate[17].
SPA = Spain: Centro de Investigaciones Sociologicas [33].
SWE = Sweden: Institute for Social Medicine, Uppsala University [19].
SWI = Switzerland [34].
UK = United Kingdom: British Market Research Bureau for Central Office of Information [35].

Table 2. *Knowledge of transmission routes in selected european countries.*

high levels of reported awareness are beginning to stretch credibility given that there appears to be no clear correlation with behaviour.

In order to gauge how seriously the AIDS problem was considered by the public, evaluation surveys most commonly listed AIDS alongside other major heath or societal issues warranting concern and compared the results, as for example in Sweden and the UK. Relative to other social and health issues, concern for the AIDS problem was clearly high in those countries for which there is relevant data, ranking alongside serious social problems such as drugs, unemployment and crime, and alongside such major causes of mortality as cancer and cardiovascular disease. In fact, in relative terms, concern may have been disproportionately high, no doubt reflecting perceptions of the potential, rather than the actual, scale of the problem. Public perceptions of seriousness seemed to peak in early 1987.

Perception of personal risk

Survey data shows tremendous variation between countries in the extent to which members of the public considered themselves to be at personal risk. In the spring of 1987, whilst only one in 30 appeared to have been concerned about risk to themselves in Sweden, as many as three quarters were personally concerned in the Netherlands. To some extent the degree of personal concern might be expected to reflect the actual numbers affected in each country, but this by no means accounts for a difference of this magnitude. To some extent, too, it is a function of question wording.

It might also have been expected that the difference between countries might reflect the extent to which AIDS was seen as a problem likely to affect the whole popula-

tion, but the evidence on this is equivocal. In the Netherlands, where a belief in personal susceptibility was high, 86% of respondents is anwer to the question "Who can get this disease?" responded "everyone" [31]. Similarly in Spain, where EDIMSA's [32] research in February 1988 showed one in five to have been personally worried, a survey carried out by the Centro de Investigaciones in Sociologia [33] in September 1987 asked "Until now homosexuals and drug addicts have been the most affected groups with AIDS, do you think that in the near future this illness will affect the rest of the population?" to which 58% of respondents gave affirmative responses. Yet this figure is only marginally higher than the 52% who agreed with the statement in the Swedish survey in May 1987. The numbers of people with HIV in the general public could equal those among homosexuals and drug users, and at that time only three per cent of the Swedish population reportedly believed the risk to themselves to be high or quite high [19].

Clearly there have been very real differences in the extent to which the public in different countries have been able to personally engage in a perception of risk. It can be argued that the scale of the epidemic did not warrant higher numbers of people being personally concerned, but prevention would only be effectively achieved in countries in which low numbers of people believed themselves to be at risk if these were the same people who were *actually* at risk, which seems improbable.

Knowledge of routes of transmission of HIV

Despite the general recognition that knowledge alone will not lead to behaviour change, knowledge of transmission routes seem to be a necessary, if not a sufficient, precondition to action, at least where it results from conscious choice rather than coercion. Surveys in most countries contained questions testing knowledge of ways in which the virus was most commonly transmitted, i.e. through sexual contact and the exchange of contaminated needles and syringes in drug use. In addition, questions probed the extent of misinformation, including beliefs in theoretical risks like saliva and kissing, as well as more irrational beliefs relating to casual contact. Respondents in most cases were presented with a series of true and false statements relating to the transmission of HIV.

	Netherlands Oct 1988 What does the the term safer sex to you? %	Switzerland Oct 1988 Methods of preventing AIDS infection %	UK Jul/Oct 1988 What does the term safer sex mean to you? %
Reducing no. partners	33	48	61
Using condoms	82	92	75
Careful choice of partner	n.m.	25	31

Table 3. *Knowledge of risk reduction techniques* [27, 37, 38].

Table 3 represents an attempt to bring some of the findings on knowledge of routes of transmission together. No assumptions should or can be about differences between levels of knowledge between countries on the basis of the data presented. The dates in Table 2 are chosen to mark the earliest time for which there was appropriate survey data available, rather than for purposes of comparison. Direct comparisons are inappropriate, not only because of different fieldwork dates, but also because of methodological differences surveys and measurement effects within each.

In order to compile this table, several surveys of varying size and quality have been drawn upon and differences in question wording are substantial. For example, one of the mistaken beliefs derived from the saliva links was that HIV was transmissible via bites. The Norwegian questionnaire specified bites by cats or dogs, the French by mosquitos, the British and German by insects, whilst in Sweden the questionnaire referred only to insects and not to being bitten by them. In Ireland, a question relating to sharing eating and drinking utensils was covered in terms of knives, cups and plates, in the UK, Spain and France the reference was to glasses. In some questionnaires it was specified that the glass belonged to a "patient" (France) or "someone with AIDS" (Norway) whilst in many other questionnaires it was simply stated as "using someone else's cup" [17]. Kissing too was loosely and variously delimited. In Norway and Germany it was described as kissing, in France "by a kiss" denoting a less lingering action, whilst in Sweden the comparable question asked only if the virus was found in saliva.

Thus, whilst it is tempting to attempt to draw inferences at least for the differences of greater magnitude, it is unlikely to be informative. From the limited data available, there does not seem to be a perceptibly large difference in beliefs relating to the myths of transmission, for example, between countries like Norway, in which the

epidemic has, by all accounts, been treated sensibly by the press, and the UK where press coverage has been more sensational. The low figures for the early AGORAMETRIE survey in France [24] should be treated with caution for they are not replicated in the later IPOS/AFLS surveys.

As Table 2 shows, in general, survey data revealed a high level of knowledge of the major transmission routes across most countries. Indeed knowledge of transmission routes of HIV may well be higher than for almost any other disease. It is doubtful whether, if asked, most people would know whether viruses causing common infectious diseases like pertussis, rubella or even influenza are airborne, waterborne or passed on through exchange of bodily fluids. Clearly, knowledge is more important in the case of HIV/AIDS because of the behavioural implications.

A high degree of familiarity with transmission routes, however, predated the start of official general population public education campaigns in many countries. The public had gained much of their information from other sources, in particular, press and television reports. Table 2 shows the results of the earliest available surveys in selected countries, some of which, as in the case of Ireland (1987), Sweden (March 1987), UK (February 1986), France (1987) were conducted either before public education began or else at its earliest inception, by which time the main transmission routes were familiar to more than three quarters of respondents in most countries. The high level of knowledge of transmission routes limited the further improvements which could be achieved by means of mass media campaigns. Nevertheless, it has been suggested that official campaigns may well have fulfilled a valuable function in authoritatively conforming knowledge of the modes of transmission, thereby reinforcing people's confidence in their information [36].

Levels of information were generally found to be highly correlated with age and somewhat less with level of income and education. The younger the respondent the greater the likelihood that correct answers relating to transmission would be given [24, 19, 17, 32, 38]. Level of knowledge was also found by some to be higher amongst those in upper income groups, the more highly educated, and those living in urban as opposed to rural areas [17, 19, 37], although this was not invariably the case. Moatti et al. [24] found that where scientific evidence is ambiguous or equivocal, e.g., "at the dentist", the more highly educated respondents were more likely to believe these to be modes of transmission.

Misinformation in relation to routes of transmission

There has been considerable confusion in most European countries over whether HIV can be transmitted via casual social contact, and also over the distinction between contagion and infection. As can be seen from Table 2, a sizeable minority of people in many countries believe that the virus can be passed on through kissing, shaking hands, sharing drinking glasses, using public toilets, swimming pools, etc, and, more seriously, in terms of the social and public health consequences, in relation to the donation and receipt of blood.

Data from tracking surveys show how persistent these myths have been, albeit in a minority of the population. A belief in casual transmission has been eroded to some extent, most significantly in the period of intensive public education between 1986 and 1987, when many countries mounted campaigns specifically addressing this issue, (the "Si Da, No Da", campaign in Spain, for example, and the "No catch" campaigns in Britain and Switzerland). Nevertheless, among a minority, mistaken beliefs about ways in which HIV can be passed on remain entrenched and intransigent.

Knowledge of ways in which the virus is not transmitted is important, firstly, in terms of minimissing social disruption caused by HIV and AIDS, and secondly preventing stigmatisation and discrimination of those affected. Confusion over giving and receiving blood, for example, seriously threatened supplies in many countries, while the mistaken beliefs that AIDS could be passed on through casual contact and shared drinking utensils resulted in ostracisation not only of those with the virus, but also those perceived to be in "high risk groups".

Blood transfusion is possibly the most striking example of social disruption. Confusion over receiving blood has persisted in the face of constant campaigns centred around eliminating this false belief. The very high rates of belief in transfusion as a mode of transmission in Norway, Ireland and the UK in Table 2 (1986) may be attributable to the fact that screening of blood supplies was then a relatively recent intervention. Yet the proportion of Irish respondents who believed blood transfusion to present risk remained unchanged at 91% in September 1989, and in the French "Ile de France" sample it actually increased between December 1987 and March 1990, from 88% to 94%. Evidence that this may be more an emotional than a rational response is instanced in the Irish data from 1989; despite the fact that almost two thirds of respondents knew that steps had been taken in Ireland to make blood transfusions safe from infection, only one in 20 believed the statement "the HIV/AIDS virus can be passed on by receiving a blood transfusion" to be false. Clearly, the power of information

to change beliefs in the face of such emotional responses is limited.
Of greater concern to health care service providers, was the confusion in the public mind over the risk attendant on *receiving* blood on the one hand, and *donating* it on the other. The proportion believing HIV to be transmitted during blood donation, whilst lower than the proportion believing it to be transmitted through blood transfusion, is sizeable, at around a third to one half of respondents.
Analysis of the French data by Moatti et al.[24] probes the relationship between mistaken beliefs about transmission, and negative attitudes towards sufferers, and thereby to assess the potential role of public education in this respect. False beliefs on HIV transmission by casual contact were correlated with a willingness to espouse the implementation of containment measures which carry a danger of stigmatisation for those affected. However, both negative attitudes towards sufferers and support for coercive measures were also highly correlated with similar opinions on other controversial issues, suggesting that "for a fraction of public, attitudes towards AIDS are rather determined by a priori ideological and ethical values than by risk perception of the disease per se". Whilst stressing the knowledge alone will not eradicate discriminatory attitudes, the authors highlight the importance of avoiding ambiguity in the communication of scientific results to the lay public.

Knowledge of risk reduction strategies

As discussed above, the two messages which predominated in public education campaigns were to use a condom and to restrict the numbers of sexual partners, preferably to one mutually exclusive relationship. Subordinate messages, including being careful about the choice of partners, practising safer sex techniques and abstinence, featured less commonly. Very few countries, Spain being a notable exception, attempted to introduce the message to avoid needle sharing into campaigns addressed to the general public. Selective emphasis on each of the main messages varied with factors described above as did the extent to which attempts were made to broaden the range of message further. Against this background, what is interesting to note is the degree to which the choice of messages officially transmitted might appear to have influenced public perception of risk reduction strategies, whether the Swiss public, for example were more or less likely than the British or Swedish to cite condom usage as the primary risk reduction strategy.
Knowledge of the protective effects of condoms seems to have been extremely high. In the UK, 95% of the population agreed with the statement "using a condom reduces the risk of getting HIV"[39]. In the Swiss sample in 1988, 92% of the population aged 17 to 30 spontaneously mentioned condoms as a mean of protection[37]. It may be that the controversy generated in certain countries by the message to use condoms brought it to the public notice as effectively as did deliberate attempts to promote them, for it was not the efficacy of condoms as prophylactics which was cast in doubt as the moral seemliness of promoting them. In Ireland, a country perhaps most exceptional in Europe in the extent of the hold on public morals of the Catholic church, the proportions mentioning monogamy and condom use were more equally balanced. However over the period of the most intensive campaigning efforts, the number of people spontaneously mentioning condom use as an effective preventive measure increased from less than a half to more than two thirds, while the proportions mentioning monogamy and avoidance of casual sex decreased slightly.
Table 3 compares data from three countries with different selective emphases in terms of the "moral" message to practice monogamy or restrict numbers of partners, and the "pragmatic" messages to use a condom, at roughly the same point in time. Results show the selective emphases on different messages in different countries are to some extent reflected in the responses for each country. (These were spontaneous rather than prompted responses.) In all three countries, using a condom is the risk reduction strategy which most commonly comes to mind, but the proportion of respondents mentioning it is highest in Switzerland, where the condom message was dominant, slightly lower in the Netherlands where a more diversified message was broadcast, and lowest in the UK, where considerable political ambivalence attended the condom message. Nevertheless, nearly half the Swiss respondents and a third of Dutch respondents also mentioned restricting the number of partners, and a quarter mentioned choosing a partner more carefully. Content of risk reduction message in the campaigns seems not to be directly reflected in public perception of the effectiveness of each.

Barriers to action

Many surveys restricted the scope of their questioning to a knowledge of risk reduction strategies without probing perceptions of the costs and benefits of these. On the assumption that knowledge of efficacy of safer sex practices will not predict for their use unless it is accompanied by favourable attitudes, the more throrough going surveys included questions on the perceived barriers which might militate against the implementation of safer sex strategies. FORSA's re-

search in Germany, for example, attempted to probe barriers by investigating which areas of behaviour presented the greatest difficulties [40]. Abstinence was difficult for everyone, but surprisingly perhaps, condom use was considered difficult by higher proportions than was reducing numbers of partners, a reflection perhaps of the general population sample many of whom would already be in exclusive relationships.

Of interest were the responses in countries in which campaigns had deliberately addressed the barriers to the adoption of risk reducation strategies, the "condom excuses" campaigns in the Netherlands, for example, in France, and in Britain. The evidence is that there was a slight shift in public opinion in favour of condom use over the period of these campaigns. In the Netherlands, for example, it was thought that negative attitudes towards, or perceived disadvantages of, condoms would inhibit their use. Respondents were asked to summarise the advantages and disadvantages of condoms. Those who saw the advantages of condom use outweighing the disadvantages outnumbered those of the reverse opinion by two to one, increasing to almost three to one over the period of the campaign.

In France, where a major goal was the erosion of negative beliefs about condoms, (for example, that they were outmoded and associated with illicit sex, made the user appear foolish, were difficult to use and interrupted sexual pleasure), attitudes proved largely favourable, though the cost, the fact that they are not natural and the diminishment of sexual pleasure were mentioned as disadvantages by a sizeable section of the sample [41]. In addition, a very large proportion of the French believed condoms not to be completely effective in preventing AIDS, far more than in the Netherlands and in the UK, reflecting the efforts by campaign detractors to discredit them. Attempts were made to prevent the active promotion of condoms by disguising moral misgivings as doubts over reliability.

Evidence of behaviour change

Data on the behaviour of the general population is sparser and less satisfactory in terms of comparability than that on knowledge and attitudes. Surveys are designed to evaluate one country's campaigns and so the measurement objectives reflect country specific objectives. No attempts are made, for example, to measure success in achieving reductions in the numbers of sexual partners in countries in which this has not been a campaign goal, and so the comparability of results is limited.

The principal difficulty has, however, been the absence of reliable data on sexual behaviour. Accurate information on sexual practices is essential if changes are to be monitored and if public education campaigns are to succeed in formulating relevant and appropriate risk reduction messages. Yet reservations about the appropriateness of asking sensitive and delicate questions of the general population persisted even at the height of the AIDS epidemic. The problem has been common to all countries to a certain extent, and heightened by the fact that very few agencies had a foundation of experience on which to draw in studying this area of behaviour. Reticence about asking questions directly on matters relating to the sexual behaviour of a general population sample characterises particularly those surveys conducted on behalf of governments.

In some cases, agencies circumvented the problem of possible offence by indirect questioning, as in Germany's FORSA survey [40]; respondents were asked whether

Switzerland:				
Casual sexual contacts in last 6 months (17 to 30 year olds)	**Jan 1987 n = 1182 %**	**Oct 1987 n = 1211 %**	**Oct 1988 n = 1213 %**	**Oct 1989 n = 1231 %**
	18	14	15	15
UK:				
Two or more partners in last 12 months (18–24 years olds)	**Nov 1986 n = 111 %**	**Dec 1987 n = 260 %**	**Total 1988 n = 1156 %**	**Total 1989 n = 1176 %**
	19	24	23	23
Sweden:				
More than one partner in last month (Singe and unattached) n = 4000	**Mar/ Apr 1986 %**	**Feb/ Mar 1987 %**	**Feb/ Mar 1988 %**	**Feb/ Mar 1989 %**
	22	22	19	21

Table 4. *Reported sexual partnerships.*

they felt others were making changes. A more satisfactory alternative, and one commonly used in the surveys to overcome the problem of absence of base rates by which to assess change, probes behavioural intentions of respondents,[17] or else retrospectively, claimed behaviour changes[42,43,27].

Of most value, in assessing modifications made at the aggregate level, is the tracking survey, in which the same questions are asked of a representative sample either continuously (as in the UK) or at intervals (as in most cases, e.g. in the Netherlands, Germany and Switzerland), comparing the results over time and identifying trends. In some cases, agencies avoided possible offence to a general population sample by filtering out those respondents who reported having had more than one partner in the last year and asking the most sensitive questions only of that sample.

Reported claims of behaviour or statements of intention are often held to be more properly construed as proxy measures of knowledge and attitudes than of behaviour. Data from the Netherlands comparing *claimed* behaviour changes with serially *reported* behaviour over time shows that claims can predict reasonably well for reported behaviour[27], though the possibility that the same biases are affecting each cannot be ruled out. In April 1987, nearly two thirds of the sub group with casual partners claimed they intended to use condoms in the future, at a time when fewer than one third in the same subgroup reported having done so in the previous six months. Two and a half years later 83% of the same subgroup reported having used a condom in the last 6 months.

Scale of change

The proportion of the population who claim to have made, or intend to make, changes is small at the aggregate level, 10% in the Spanish sample[43], 4% in the Norwegian[17], and 20% in the Swedish sample[19], for example. Interpretation of such results has led in some cases to a criticism of campaigns for not having achieved their objectives. Yet, as has been pointed out elsewhere[44] although large scale changes in behaviour are often assumed to be necessary, the actual numbers of people who need to effect changes in their behaviour in order to reduce the risk of HIV transmission is relatively small. The proportion of people who report having had more than one partner in the past year in the UK, for example, is around 9%, and in Sweden 13%[39,19].

In fact, when the sexual behaviour of the more active section of the population is considered, the target populations of the young, and those with casual or multiple partners, modifications aimed at risk reduction rise appreciably. In the French sample, a total of 17.1% of people had used condoms in the last 12 months, at least occasionally. This proportion reached 42% (24.2% systematically) amongst those with casual partner, compared with 11.9% (5.6% systematically) only amongst those with only one partner[42].

Switzerland:				
Condom use in last six months:	**Jan 1987**	**Oct 1987**	**Oct 1988**	**Oct 1989**
(Base: those with casual sexual contacts)	**% n = 210**	**% n = 160**	**% n = 186**	**% n = 181**
– sometimes	25	45	58	20
– always	8	17	29	48
UK:				
Used a condom on last occasion of having sex	**Nov 1986**	**Dec 1987**	**Total 1988**	**Total 1989**
(Base: 18–24 years old)	**n = 111 %**	**n = 260 %**	**n = 1156 %**	**n = 1176 %**
	14	23	30	31
Sweden:				
Either self or partner has used condom in last month	**Mar/ Apr 1986**	**Feb/ Mar 1987**	**Feb/ Mar 1988**	**Feb/ Mar 1989**
(Base: single and unattached)	**%**	**%**	**%**	**%**
	22	22	19	21
Netherlands:				
Use of condoms in last 6 months	**Apr 1987**	**Sep 1987**	**Oct 1988**	**Oct 1989**
(Subgroup with casual partners)				
– sometimes	20.8	32.8	31.1	42.7
– always	9.4	27.7	45.9	40.0

Table 5. *Reported condom use.*

The Swiss tracking data similarly show sizeable improvements in condom use over the period from early 1987 to late 1989, amongst those respondents reporting casual sex contacts during the last six months. The proportion of young adults reporting never using condoms decreased from over two thirds of the sample to one third, whilst those reporting always using a condom increased during the same period from eight per cent to 48 per cent [37].

Nature of changes

Few surveys investigated behaviour changes attendant on fears of casual social contact, the major concern understandably being with changes in behaviour which might effect a reduction in the risk of HIV transmission. One survey which did address the question of change induced by misinformation was conducted by CUANTER SA for the Spanish Institute of Health. More than 90% of people questioned said they had made no changes to their everyday life. Of the seven per cent who had claimed to have made adaptations, nearly half reported demanding disposable needles. These results may reflect the high proportion of those with HIV infected via injecting drug use in Spain.

In terms of sexual behaviour, on the whole, people seemed to opt for two main preventive measures, i.e., monogamy and condom use. The practice of safe non-penetrative sexual techniques do not seem to have played an important role, even among those having sex with casual partners. Very few surveys even contain questions about non-penetrative sex which in itself is an indicator of the rarity of such activity and of its low priority as a risk reduction strategy. Even in the Netherlands, one of the few countries to actively promote safer sex practices other than condom use, the numbers reporting adoption of this protective measure were low.

The most noticeable change in sexual behaviour during the time studied was that up to 1988 there was an increase in the percentage of those claiming to have used condoms. Claims for behaviour change in relation to condom use are far more dramatic than those with respect to restrictions in numbers of partners. Looking at the Swedish results for the single and the unattached, the scale of claimed changes in behaviour was almost totally accounted for by the increase in claimed condom use in the last month, whilst the proportion who had more than one partner in the last month (the question on more than one partner in the last year was not introduced into Brorsson's survey until early in 1989) has remained relatively constant in this subgroup at around 1 in 20, despite the fact that in Sweden the condom message was subordinate to the message to reduce numbers of partners.

An attempt has been made in Tables 4 and 5 to compare responses in terms of condom use and numbers of partners in those countries for which tracking data is available. The data on sexual relationships lend themselves less readily to direct comparisons but at least give some indication of the scale of changes over time in different countries.

As these tables show, more or less irrespective of the country, the figures relating to numbers of partners – whether expressed in terms of multiple partners, casual partners or exclusivity – fluctuate within fairly narrow bands. By contrast, figures for condom use show some remarkable achievements over the period of most intensive campaigning, ie 1986–1989. Furthermore, whilst it is clear (as far as we can tell from the data) that higher rates of condom use seem to have been achieved in some countries than in others, this is not the case for reductions in numbers of partners, exclusivity in relationships, reduction in the prevalence of casual sex, etc. Despite the fragility of the data and the frustrations of dealing with data resulting from differently designed and conducted surveys, it is difficult to avoid the conlusion that those campaigns which set out single mindedly to increase condom use, and in which those responsible for public education were most resolute in countering resistance, seem to have made greater progress in achieving their goals than have countries in which there was a greater degree of hesitancy over the condom message. It seems as if those countries in which AIDS public education has maintained a constant presence and a continuous flow seem to be characterised by a smoother and more consistent profile for condom usage than do those in which campaigns have been characterised more by peaks and troughs of campaign activity.

Results of the self-reported indices of changes in sexual behaviour were partly validated by figures on condom sales which have been collected in several countries. Figures 2 to 4 show fluctuations in condom sales during the period of AIDS prevention activities. Cross-validation of the data from surveys relying on self reported behaviour with these more objective measures of behavioural change broadly confirms the results, though the reservations expressed above need to be borne in mind in interpretating them.

Other measures of control

Evaluation surveys also investigated support for other mechanisms of AIDS control and for attitudes towards suffers. In those countries in which the creation of a social climate which would facilitate the prevention and treatment of HIV infection was an explicit objective

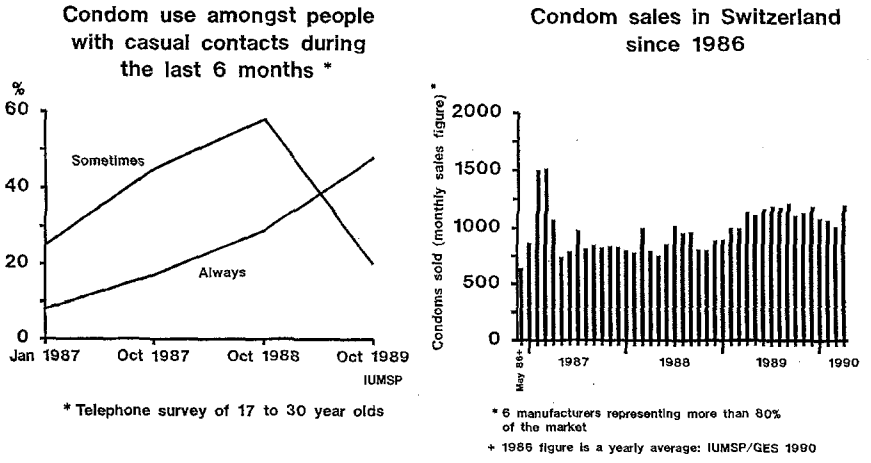


Figure 2. *Knowledge and practice of condom use amongst Swiss youth.*

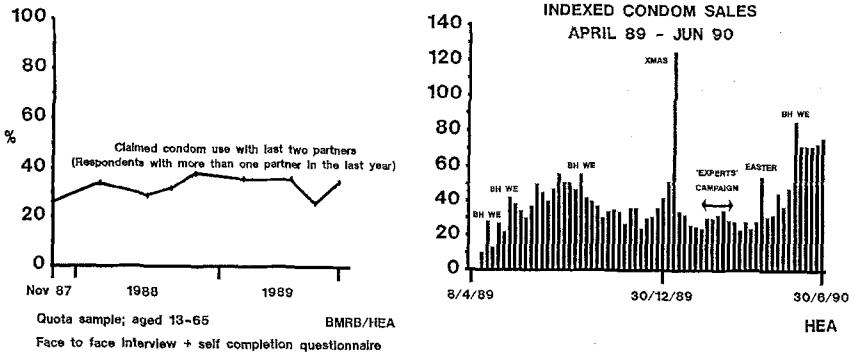


Figure 3. *Practice of condom use in the UK.*

of AIDS public education, measures of tolerance were important indicators of achievement. Even in countries in which less (or no) emphasis was placed on this second aim, it was still an important factor in the success or failure of preventive measures. The interesting question as far as evaluation is concerned is the extent to which deliberate efforts to improve the social context can be effective.

Two questions related to forms of AIDS control which most commonly feature in questionnaire sought views on the isolation of people with HIV or AIDS, and mandatory testing for HIV, respectively. In fact, in no European country have statutory powers to compulsorily detain people with HIV been put into practice, except in Sweden, and even there the numbers involved have been small. Similarly in no country has mandatory testing been carried out, though in some countries the drive to encourage voluntary testing has been more aggressive than in others. In Sweden, for example, advice to the public to seek an HIV test has been an explicit message of public education campaigns. In the Netherlands, in Denmark and in Norway, by contrast, testing has played an insignificant or minor role in prevention policy.

The epidemic of AIDS raises ethical and ideological issues which have to deal with fundamental values in democratic societies: the containment effort implies complex value trade-offs between protection of public health and civil rights including the right to privacy. The survey results show that the majority of the population in most European countries prefer voluntary measures relying on individual responsibility to control AIDS and are against measures of control imposed by the State. What is interesting is the size of the minority in favour of more repressive methods, how it has changed over time and in relation to which factors. In particular, it is important to the evaluative process to attempt to discover whether any changes might be attributed to campaign efforts.

Once again, question wording and the timing of fieldwork makes direct comparisons between countries difficult. Taking the earliest dates for which data was available in those countries in which the issue of isolation of people with AIDS was included in the questionnaire, support for coercive measures seems to vary markedly between countries. In the Spring/Summer of 1987 (depending on the timing of fieldwork), for example, some form of isolation for AIDS patients was favoured by 70% of respondents in Sweden[19], 43% in Spain[33], 36% in Germany[40], 22% in France[24,41], 41% in the UK[38] and 3.7% in the Netherlands[31].

The extent to which these variations reflect real differences in public attitudes in the different countries, and the extent to which they are a product of methodological differences is difficult to assess. The Swedish population, for example, looks at first sight to be the most repressive, but though it may be tempting to deduce that these results reflect national policy it would not be lagitimate to so. The result is almost certainly a function of question wording. The Swedish results do however show widespread support for the Prevention of Communicable Diseases

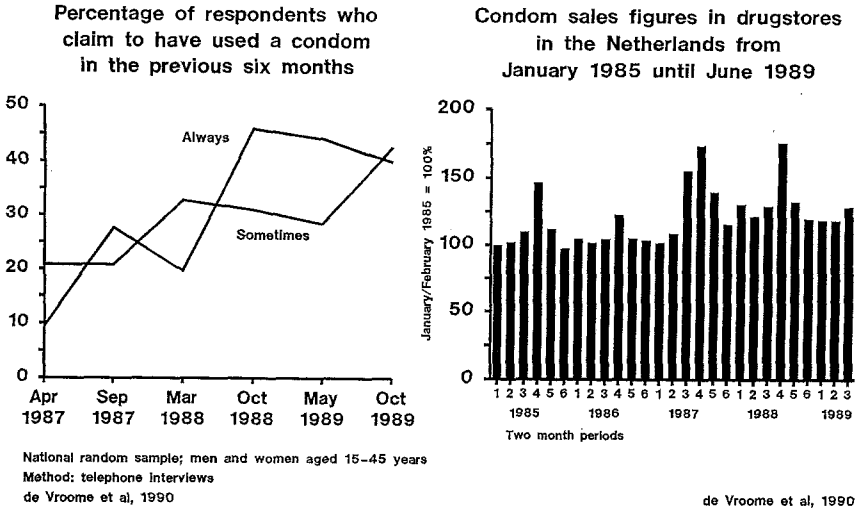


Figure 4. *Condom usage in Netherlands.*

Act, which provided for the compulsory detention of people with HIV/AIDS. Since a society capable of formulating such a law must clearly be able to take for granted a set of values underpinning it, it is perhaps not surprising to find no dissonance between the spirit of the law and the opinion of the general public, but there was clearly less support for its enactment. In Spain too, the high level of agreement with isolation almost certainly reflects the way the phrasing of the question [33].

Support for universal screening measures was, predictably perhaps, considerably higher. A substantial majority in most countries favoured mandatory testing of the population as a whole. In 1987, 73.1% of French respondents favoured mandatory screening for HIV infection [24]; in the UK, 61% were of the opinion that "Everyone should be tested for HIV the AIDS virus" in Dec. 1987 [38] and in Spain 88% said they would support an administration which would "Oblige high risk groups to have an AIDS test" [33]. In Sweden, 58% of respondents were in favour of compulsory testing.

In Germany and the Netherlands support for universal testing was found only amongst a minority. FORSA's results showed 65% agreement for the statement "HIV antibody testing should remain voluntary", in 1987, and the Intomart survey in the Netherlands in the same year showed 36% support (i.e. believing it to be good or excellent) for the suggestion that "Everyone should go every year for a test to see if they're infected". Again the questions were variously and often vaguely phrased which made comparison and exact interpretation difficult, but the results clearly show widespread support for compulsory testing in the early years of the epidemic. It is difficulty to determine to what extent expressed beliefs are the result of the corporate mentality in each country, to what extent they reflect public policy and to what extent they are influenced by campaigns. This is partly because it is difficult to determine to what extent national policy leads or follow public opinion. Some insight might be gained from investigating whether repressive attitudes were exclusive to the issue of AIDS or a general reflection of attitudes in each country. In France, attitudinal statements relating to AIDS ("AIDS patients must be kept isolated"; and "Screening for HIV infection must be made mandatory") were included in a broader list of 100 items dealing with the main controversial topics in contemporary French society (for example, "the death penalty", "liberalization of abortion", "nuclear energy", "immigrant workers", etc.) so that it was possible to construct a general profile of tolerance on different issues and to see where AIDS stood among them [24]. Similar data from other countries would permit a more careful comparison of AIDS-related in relation to attitudes to other social and ethical issues.

In most countries, level of support for coercive measures increased with the age of the respondent, was higher among men that women, and among those with lower levels of education. It does not seem to be associated with higher prevalence of the virus. Where results have been analysed by level of knowledge, the results seem to suggest that information may play a part in encouraging more liberal rather than repressive and restrictive attitudes. In Germany 93% of those who were self reportedly knowledgeable about protection believed isolation of people with AIDS not to be right, compared with 82% of those who were uncertain about means of protection. The Danish results show a similar effect. Research conducted to evaluate the AIDS-campaign in 1988, showed that people taking an active interest in the campaign had better knowledge about AIDS and a more liberal attitude to sexual habits and to "HIV-carriers" [40,45].

Of course, the causal connection between exposure and attitude is not a simple unidirectional one. The evidence is that the more people know about AIDS the more likely they are to change their habits and to adopt favourable attitudes. These results do not tell us however, whether there is an antecedent variable on which both level of information and the espousal of liberal attitudes are dependent. It may be that willingness to be ex-

posed to information and to adopt such attitudes are both influenced by some unidentified psychological or social factor.

An attempt in one of the French surveys to correlate information and misinformation about casual transmission with agreement with coercive measures suggests that knowledge alone would not eradicate negative attitudes towards sufferers, and those in so-called risk groups, and that more deliberate and positive attempts to eradicate change public attitudes were required. "A large majority of the French public (73% of respondents) supported mandatory screening for HIV, and a significant part (21.9% of respondents) even favoured isolation of AIDS patients. Results show the relationship between false beliefs on transmission of AIDS by causal contact and willingness to agree with measures that carry a great danger of stigmatization for AIDS patients and HIV carriers. Strong correlation between support of coercive measures for prevention of AIDS and similar opinions on other controversial issues suggest that, for a fraction of the public, attitudes towards AIDS are rather determined by *a priori* ideological and ethical values than by risk perception of the disease per se. Results also show that any ambiguity in scientific information about AIDS may increase social pressure, even amongst the most educated part of the population, for unnecessary measures" [24].

According to these results, religion was a significant factor, as was political affiliation, in predicting whether or not people would advocate harsh measures of control and containment for HIV and AIDS sufferers; practising Catholics were more inclined to favour isolation of AIDS patients than people who declare no religion (25.5% of 14%) and more inclined to favour mandatory screening (78% of 62%).

Trends over time (where available) provide additional opportunities for attempting to assess the effects of public education. Major gains in terms of the liberalisation of attitudes seen in 1986 and 1987 later stabilised in most countries. These may well have been the result of the partial removal of some of the irrational fears about transmission which resulted from misinformation about the virus, and may be attributable to increased information from a variety of sources. However, in some countries in which persistent and sustained efforts were made to achieve solidarity in the population, continued improvements can be seen in public attitudes towards people with HIV and AIDS. In Germany, for example, more than a third of respondents favoured isolation of people with AIDS in 1985, a proportion which had decreased to one in six in 1987 and was substantially reduced still further, to 6% in 1989. The same effect cannot be observed in France, however, where similarly energetic efforts invested in the long running "testimonial" campaign seem to have had less effect. In the Netherlands, the already tiny minority of people in favour of coercive methods was reduced still further during the period of the campaigns.

There is, of course, no certainty that these results may be attributed specifically to the information campaign, rather than to a general increase in knowledge from all sources. It can be noted that the improvements occurred to a greater or lesser degree in all countries irrespective of whether it was an avowed intention of the campaign to improve the social climate in which interventions took place. Nevertheless the achievements made in the case of Germany, in which forcible and energetic efforts were made to execute an effective campaign against discrimination, compared with those for the UK in which deliberate attempts were made to launch a solidarity campaign were delayed until 1990, seem to suggest that liberal attitudes can be at least accelerated by the deliberate use of official campaigns.

Discussion

The European context might, at first sight, seem to provide almost an experimental setting for the purposes of assessing AIDS prevention strategies. Cross-national comparisons of campaigns present potentially ideal opportunities in terms of comparing different approaches to AIDS public education amongst the general population, at different times and in different geographical and epidemiological contexts. Theoretically, if all other factors could be held constant expect the intervention itself, a comparison of effects in different European countries would yield valuable information on efficacy. Contrariwise, if it were possible to find two countries in which the interventions were similar the opportunity would present itself to examine the influence of contextual factors.

In practice, of course, Europe is not a laboratory situation. For the reasons detailed above, it has not been possible to carry out a systematic controlled investigation of the factors which collectively determine the relative success or failure of public education initiatives. The reason for this have been detailed in the main body of this paper and relate to the difficulty of disentangling variables, etc. of attributing outcomes to interventions, of making comparisons using data from differently designed research methodologies, etc. As discussed above, there are far too many variables to hold constant – the social and political context in which campaigns are conducted, the scale of the epidemic, the nature of the agencies involved, etc.,

and there are no countries in which public education has followed so exactly similar a course as to warrant interpreting differences in effect as the result of differences in the cultural and social context.

Nevertheless useful generalisations can be made in relation to the interventions. Some of these are at the level of untested and, for the reasons mentioned above, possibly untestable observation. There seem to have been advantages for AIDS public education, for example, in those countries in which efforts have been made to maintain and sustain an even pace and profile for AIDS and HIV public education and to avoid peaks and troughs of activity; in which external influences, the media the activities of different interest groups has been consistent rather than contradictory with official messages; in which there has been consensus rather than conflict at the level of operational interaction; in which responsibility has been vested in fewer hands so that competing claims on the content have not had to be taken into account; and in which the design and execution of campaigns was chiefly delegated to professional groups with expertise and experience in health promotion who were able to operate at some distance from government.

Other observations merely confirm, in the context of AIDS prevention, existing health educational tenets. The apparently greater compliance with the condom message compared with advice to restrict numbers of partners tends to reinforce Nelkin's assertion that the common examples of direct behavioural responses to information are "all in areas in which alternative choices are available so that changes in behaviour require no significant changes in life style"[46].

Others are specific to AIDS education but may provide insights which transfer to other problems. The unprecedented amount of media interest in AIDS, for example, created particular problems for health education and presents some object lessons in how they might be dealt with. It is interesting and useful to observe that the graver the health problem in terms of the scale of the epidemic, the greater the tolerance for radical and potentially controversial solutions; and that the more stigmatised the disease the more likely it is that campaigns directed towards the general population will be required to take on a political role in normalising the disease, with attendant operational implications.

A cross national appraisal of both interventions and the political and social context in which they are produced cautions against the assumption that interventions which appear to have been successful in one cultural context can be transferred directly and without further modification to another. Campaigns have to be tailored to specific cultures. Yet an understanding of the role and influence of the social, political and cultural context in mounting preventive strategies helps us understand the limitations, take account of their effects and devise strategies for circumventing the constraints they impose. The value of cross national comparisons is that countries can be found in which the approach taken has helped to overcome the cultural and political obstacles, which may contain lessons for other countries, the imaginative use of humour in the Spanish campaign, by defusing the effects of explicit sexual imagery and thereby deflecting Catholic resistance, for example.

An appraisal of evaluative methodologies has also produced some sturdy and robust observations. A comparison has pointed up the importance of carefully formulated objectives to the development of measurement indicators; the need for careful piloting and design to obviate the need for subsequent changes threatening comparability, the advantages of collaboration between academic and social research agencies; the need to develop and implement broader methods of evaluation which will assess change in the social context as well as the individual, and which assess interventions which operate at community level.

Perhaps most important it has highlighted the benefits of attempting to develop, at international level, shared research protocols. A comparison between countries is hampered by the absence of standardised evaluative procedures. Just as the campaigns are culture specific, so too as we have seen, are the methods by which attempts are made to assess them, so that opportunities for direct comparison are difficult. Yet as we can learn from each other in terms of the successes and failures of interventions so we can learn from each other both in relation to our method of evaluation. By sharing our methodology and our results we become familiar with the sources of bias and to what extent we are able to take account of them. The more valid, reliable and comparable and flawless our methods, the less likely apparent differences will be the result of measurement effects and methodological variations and the more likely they can be attributable to real differences in interventions. Having explored how comparable are our findings the question should be "To what extent are our measurements of effectiveness comparable and how can they be made more so?"

It is clear that there are methodological difficulties involved in developing and designing a common research methodology. Indicators, for example, will reflect the objectives of campaigns which are to some extent country specific. However, such are the potential benefits of comparative efforts that every effort needs to be made to

ensure that common protocols are developed and shared within the limits set. The ongoing Concerted Actions organised by the European Community are one way of ensuring this, but ideally efforts should be extended to other countries in which AIDS public education is well developed, the USA and Australia, for example.

Resources have not permitted a systematic controlled analysis of all the factors influencing the efficacy of campaigns obtaining in each country. Some useful observations have been made but if these generalisations were to be substantiated, and to stand as more than hypotheses, then further testing under more controlled conditions would be required. But ultimately perhaps the value of the European perspective lies not in establishing definitively what has and has not been successful in terms of AIDS public education, but in surveying the variety of approaches possible, both in terms of the design and excution of campaign interventions and in the methods used to assess them.

Zusammenfassung

Gesamtbevölkerung

Ein Ziel dieser konzentrierten Aktion war der Vergleich von AIDS/HIV Präventionsstragien, die sich an die Gesamtbevölkerung richten, und der Methoden zu ihrer Evaluation, um zu einem besseren Verständnis darüber zu gelangen, wie öffentliche Erziehung in diesem Gebiet optimiert und evaluiert werden kann. Dazu wurden Daten über Interventionen und ihre Evaluation in ausgewählten europäischen Ländern durch Besuche und Besichtigungen, schriftliche Befragungen und Expertentreffen gesammelt. Diese Daten wurden, wenn immer möglich, in engem Zusammenhang zu anderen relevanten Variablen, eingeschlossen dem sozialen und politischen Umfeld, in welchem die öffentliche Aidserziehung stattfand, der Tradition der Gesundheitserziehung, den finanziellen und personellen Ressourcen und der für jedes Land spezifischen Art der HIV-Epidemie analysiert. Bereits eine erste Analyse zeigt auf, dass beträchtliche Parallelen zwischen den AIDS-Erziehungskampagnen, die sich an die breite Öffentlichkeit richten, in den verschiedenen europäischen Ländern bestehen, z.B. ihre Abfolge, ihr Fortschreiten und ihr Inhalt. Zur gleichen Zeit bestanden öffentliche Differenzen in bezug auf die Leichtigkeit solche Strategien zu implementieren, den Tonfall und Stil der Initiativen und auf ihre Aufnahme und Wirkung bei der Gesamtbevölkerung. Versuche, diese Differenzen auf länderspezifische kulturelle, politische oder operative Faktoren zurückzuführen, erwiesen sich als schwierig, aber dennoch verfügen wir dank diesem Vergleich zwischen verschiedenen Nationen über lehrreiche Erfahrungen für zukünftige Kampagnen und deren Evaluation.

Résumé

Population générale

L'un des buts de l'action concertée européenne «Evaluation des stratégies de prévention du VIH/SIDA» était de comparer les stratégies de prévention adressées à la population générale et les méthodes qui avaient été utilisées pour les évaluer. Il s'agissait de mieux appréhender comment l'éducation du public dans ce domaine pourrait être mise en oeuvre et évaluée de façon optimale. Des données sur les interventions menées et leur évaluation ont été collectées dans divers pays européens par le biais de visites, de questionnaires postaux et de réunions d'experts. Ces données ont été analysées et mises en relation, quand c'était possible, avec d'autres variables pertinentes, parmi lesquelles le contexte social et politique dans lequel l'information au public avait eu lieu, l'existence d'une tradition d'éducation à la santé, les ressources humaines et financières à disposition et la nature de l'épidémie de VIH dans chaque pays. Une première analyse montre qu'il existe de remarquables parallèles entre les campagnes d'information au public des différents pays européens, par exemple dans leur séquence et leur développement, ainsi que dans leur contenu. En même temps, des différences substantielles apparaissent en ce qui concerne la facilité avec laquelle il a été possible de les mettre sur pied, le ton et le style employés, leur réception par la population et leurs effets. Il est difficile d'attribuer ces différences à des facteurs spécifiques culturels, politiques ou opérationnels mais la comparaison internationale permet de tirer des enseignements utiles pour de futures campagnes et l'évaluation.

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