CHAPTER 5
Sexually Transmitted Diseases

Sexual intercourse is the main route of transmission of a wide range of infections, and a significant route for many others. Sexually transmitted infections caused by bacterial, fungal and protozoal agents have been curable with antimicrobial agents for over 40 years. In spite of this, such sexually transmitted diseases (STDs) have continued to be a public health problem in developed and developing countries alike. However, most developed countries now have very low rates of infection, with the exception of chlamydia. In contrast, many developing countries continue to experience high rates of STD. The reasons for failure to control STD are complex and vary from one setting to another, nevertheless, there are a number of factors which either singly or in combination have led, at both local and national level, to an inadequate response to the problem of STDs:

- Low priority has been given by planners and policy-makers in allocating resources, for reasons which include an association of STD with perceived discreditable behaviour; failure to associate the diseases with their complications and sequelae; and failure to appreciate the magnitude of the problem.
- STD control efforts have concentrated on treatment of symptomatic patients (most usually men) and failed to identify asymptomatic infected individuals (often women) until complications are manifested.
- Service delivery has often been through specialized STD treatment facilities which provide inadequate coverage and are stigmatizing, particularly for women.
- Although resistance has developed widely to the low-cost antibiotics that were initially effective, they have continued to be used for reasons of economy; in addition, inadequate treatment practices including self-medication are widespread.
- Little or no emphasis has been put on public health and other non-medical efforts to prevent infection occurring.
- There has been a shortage of authoritative guidance on a rational, practical and well-defined package of activities as a basis for control programmes.

As noted in the 1993 World Development Report *Investing in Health*, STDs, not including HIV infection, are among the major causes of healthy life lost among adults in the developing world, particularly among women and those in the age group 15 to 45 years. In addition, they continue to rank among the top five diseases for which adults in the developing world seek health care services. STDs are not only a cause of acute morbidity in adults; they also frequently lead to longer-term complications such as chronic salpingitis, urethral stricture, congenital syphilis, fetal wastage, low birth weight and prematurity, or neonatal conjunctivitis, and ultimately to sequelae such as ectopic pregnancy, infertility, cervical cancer or premature death.

The appearance of a new sexually transmitted disease, infection with human immunodeficiency virus (HIV) and the rapidly developing pandemic of its mortal complication, acquired immunodeficiency syndrome (AIDS), has led to an urgent reappraisal of STD control. An increasing number of countries are now requesting technical assistance from GPA in setting up and strengthening STD programmes. In 1993 such assistance was provided to Benin, Bhutan, Brazil, India, Madagascar, Nigeria, Pakistan, the Philippines, Uganda, United Republic of Tanzania, Zambia and Zimbabwe. Several missions were jointly organized with UNICEF or the World Bank.

It is now accepted that the control and prevention of STDs is a major strategy for preventing HIV infection and hence AIDS. GPA therefore carried out a range of activities during 1992-1993 aimed at developing and supporting STD programmes based on a broad range of public health principles.

**STD programme development and support**

One of the first steps in ensuring the adequate planning of an STD programme is the assessment both of local STD epidemiology and of current service delivery. A simple assessment and evaluation technique or instrument for quantifying such variables would not only be useful in assessing the magnitude and dynamics of the STD problem, but would also
help in evaluating the impact of AIDS and STD programmes. In addition, the results of such STD assessments would reveal the need for local STD programmes, and could be used to advocate their setting up - or strengthening. Work is therefore in progress to develop, in collaboration with the World Bank, a simple planning instrument which would permit the collection and integration of information on the levels of STD in the population, the utilization of STD services, and the quality of STD care available.

STD surveillance should be an integral part of an STD control programme and not an isolated activity. Traditionally, notification of all cases of classical "venereal diseases" has been recommended for STD surveillance purposes, and is even mandatory in many countries. Except in a few developed countries this system does not work efficiently, even in the public sector. In addition, its relevance to STD control is not defined, or clear, in many countries. GPA is therefore seeking the best role for surveillance in STD programmes, and has started to develop feasible methods such as sentinel surveillance for specific clinical syndromes in order to accurately assess and track STD trends. A draft version of guidelines on STD surveillance has now been produced.

Although one module in the GPA Programme Management Course (see Chapter 6) deals specifically with the provision of STD care, there is a need for more comprehensive training on STD control for STD programme managers. WHO therefore cosponsored a series of two-week training courses on the management of STD programmes, in Dakar, Senegal (1992 - conducted in French), London, United Kingdom (1993 - conducted in English), and Santo Domingo, Dominican Republic (1993 - conducted in Spanish). These courses were developed by the Institute of Tropical Medicine, Antwerp, Belgium, and the London School of Hygiene and Tropical Medicine in collaboration with the Institut Leon Mba, Paris, France and the Latin American and Caribbean Union against STD (ULACETS). Support was also provided by the European Commission on European Unity, USAID's AIDS Control and Prevention Project (AIDSCAP), and the Governments of France, Belgium and the United Kingdom.

In addition, a two-day meeting for STD programme managers in the South-East Asia and Western Pacific regions was organized in October 1993 in Chiang Mai, Thailand, in collaboration with AIDSCAP, at which public health approaches to STD control were discussed.

STD control programmes have been largely dominated by clinically oriented approaches - relying mainly on the recognition of symptomatic, mostly male patients spontaneously seeking care - with few primary prevention activities being undertaken. In many countries, however, only a small proportion of STD patients currently make use of public facilities. A package of policies and interventions was therefore developed by GPA's Sexually Transmitted Diseases unit to promote a concept of STD control based on a much broader public health rationale, in contrast to current widespread efforts to improve STD services by focusing exclusively on the provision of effective treatment. Although treatment is a crucial component of any STD control programme, it may not have a major impact on STDs at the population level. The limitation of such an approach is illustrated in Figure 5.1, which presents a much more comprehensive concept of the provision of STD care, and illustrates clearly the stages between STD infection and its successful treatment - at each stage there exists the possibility that people will not proceed to the desired outcome, i.e. successful treatment of an STD. The conceptual model shown in Figure 5.1 is being refined, and the "leakages" at each step identified and quantified. It is anticipated that a simple decision model will be derived which will assist countries in setting priorities for improving STD service delivery by identifying the most cost-effective interventions.

During the biennium, the package of policies and interventions developed by GPA included the following priority areas:

- primary prevention through safer sexual behaviour, including condom use
- promotion of health care seeking behaviour in respect of STDs
- development of appropriate and simplified STD case management protocols
- promotion of effective STD treatment
- integration of STD case management into primary health care services, including maternal and child health and family planning services, to prevent the adverse effects of STD on women's reproductive health, and on children
- prevention and control of congenital syphilis
- intensified interventions for vulnerable populations at high risk for STD.

The first two of these areas have been addressed collaboratively within GPA and are described more
fully in Chapter 3. Activities specific to GPA's STD unit begin at the point of first encounter between an individual seeking health care and the health care system. This point of contact represents a real opportunity for health services to respond to people's needs for STD-related health care and an integral part of such care is cost-effective and comprehensive case management.

**Development of appropriate and simplified STD case management protocols**

The etiological diagnosis of STD usually requires laboratory tests, which are expensive and sophisticated, even for common STDs such as chlamydial and gonococcal infections in women. However, in most settings in both the developed and developing world, such laboratory tests are not available during the assessment of the patient, and those tests that are available are not of help in making immediate decisions about treatment. Reasons for this include the lack of simple rapid tests for the diagnosis of most STDs, the high cost of existing STD laboratory tests, and the absence of the necessary laboratory infrastructure.

An alternative diagnostic approach is the use of simple flow-charts (sometimes called "algorithms") which are based on the presence of consistently identifiable groups of easily recognized signs and symptoms – otherwise known as "syndromes". Once a syndrome has been identified, the causative infection(s) are treated without laboratory tests, thereby making effective STD case management feasible during a single visit. Combined with a better drug supply, the approach makes STD services more widely available through primary health care services. For these reasons, the development of simple flow-charts based on syndromic STD case management has remained a WHO priority. In continuation of its work in this area – and to fulfil an undertaking described in the 1991 GPA Progress Report – GPA has now developed and validated flow-charts for the most common STD syndromes. An example of such a flow-chart – in this case for treating urethral discharge in men – is shown in Figure 5.2. Such flow-charts are now undergoing evaluation in Benin, Brazil, Côte d'Ivoire, Kenya, Thailand and the United Republic of Tanzania with technical and financial support from GPA. Studies are also being supported in India and Kenya which aim at developing and validating flow-charts for the case management of pelvic inflammatory disease and postpartum upper genital tract infection in women, two very common complications for which no simple diagnostic approaches have been evaluated as yet.

Whereas validation studies of case management flow-charts have to date focused on symptomatic women presenting with vaginal discharge and/or lower abdominal pain at general outpatient departments, GPA, in collaboration with a range of research groups, has now initiated studies on flow-charts for use in asymptomatic women seen at antenatal or family planning clinics in Thailand, the United Republic of Tanzania and Viet Nam. In Mwanza, United Republic of Tanzania, for example, investigators working at the
African Medical and Research Foundation (AMREF) are currently evaluating different diagnostic approaches for the identification of antenatal patients infected with *Neisseria gonorrhoeae* or *Chlamydia trachomatis*.

To identify and treat infection with either *N. gonorrhoeae* or *C. trachomatis*, GPA has developed a syndromic approach based on a small number of risk factors which act as markers for these infections. This is an important development because an STD programme based only on the detection of symptomatic persons will fail to direct treatment towards those with asymptomatic infections and their resulting complications – according to AMREF’s findings in the study in the United Republic of Tanzania, approximately 50% of all infections with *N. gonorrhoeae* or *C. trachomatis* were asymptomatic in rural areas. In addition, research in Zaire has revealed that asking a limited number of questions on risk markers for exposure to STD increases the sensitivity of the syndromic diagnosis of gonococcal and chlamydial infection in women, in whom clinical manifestations – although present – are quite non-specific. A flow-chart developed by GPA for vaginal discharge using such risk markers is shown in Figure 5.3.

The incorporation of such syndromic case management, whether supplemented by risk factor analysis or not, can greatly strengthen health service delivery in settings where laboratory facilities are limited and where few trained staff are available. For instance, in the Mwanza area in the United Republic of Tanzania during 1992, the cure rates for urethral discharge, vaginal discharge and genital ulcers in 25 rural health units using this approach were 96%, 94% and 95% respectively, while in Abidjan, Côte d’Ivoire, the corresponding values were 92%, 87% and 100% respectively.

Preliminary results from many of these ongoing studies of the syndromic case management of STDs were discussed with investigators of such studies at an informal meeting in August 1993, prior to the Tenth Conference of the International Society for STD Research.

The Johns Hopkins School of Hygiene and Public Health, in close collaboration with GPA and USAID, has developed a wall chart consisting of flow-charts for STD case management. The English version has now been distributed globally. Translation into French and Spanish is planned. Training modules on STD case management for primary health care providers are also being developed for field testing.

The cost-effectiveness of various approaches to case management is a highly important factor in developing
any feasible intervention in this area. Accordingly, a desk study was performed on the relative cost-effectiveness of (laboratory-based) etiological diagnosis, clinical diagnosis ("educated guess"), and syndromic diagnosis of various STDs in men and women. It was found that the syndromic diagnosis recommended by WHO was more cost-effective than either of the other two approaches.

In addition to the development of flow-charts, GPA also initiated activities aimed at evaluating simple, affordable and rapid diagnostic tests for STD, particularly for the detection of gonococcal and chlamydial infections in women, since they are often asymptotically infected. Contacts are now being strengthened with industry to stimulate the development of such tests by the private sector. To complement this initiative, a bench-level manual of STD laboratory diagnosis for referral centres has been produced by GPA and will be published by WHO.

**Effective STD treatment**

The use of rational standardized protocols is strongly recommended in order to ensure the provision of adequate treatment at all levels of the health care system. Such standardized treatment also facilitates the training and supervision of health providers, delays the development of antimicrobial resistance among sexually transmitted bacterial agents, and is an important factor in rational drug procurement.

Since 1983 WHO has been publishing STD treatment guidelines to assist countries in the development of standardized STD treatment protocols adapted to local epidemiological and antimicrobial resistance patterns. At a meeting in February 1993, the WHO STD treatment recommendations were updated, emphasizing more the syndromic approach, and new chapters—e.g. *Children and sexually transmitted diseases* and *Management of sexual partners and partner notification*—were added. A comprehensive and practical guide on the management of STDs for all levels of health workers has been derived from these recommendations and will shortly be published in the WHO AIDS Series.

The successful use of treatment protocols cannot be achieved unless affordable and effective drugs for the treatment of STD are available. GPA is therefore working with WHO's Essential Drug Programme—and with individual countries—to include antimicrobials that are effective in treating STDs on the list of essential drugs, bearing in mind the growing resistance of *N. gonorrhoeae* to the older antibiotics. More specifically, STD programmes need information on the antimicrobial resistance patterns of *N. gonorrhoeae* and of *Haemophilus ducreyi* (the cause of chancroid) in their country in order to adjust treatment recommendations and drug procurement. In many developing countries,
the laboratory capacity to determine these patterns is not available. GPA therefore supports three reference laboratories (in Australia, Canada and Denmark) which provide technical assistance to countries, organize training in gonococcal susceptibility testing, and conduct research on the development of simplified antibiotic sensitivity tests. In September 1992, a meeting was held with interested bilateral and multilateral agencies to discuss developments in this area.

Integration of STD case management into primary health care services

WHO continues to recommend that STD clinical services are delivered through the primary health care system. Such an approach promotes the early recognition and treatment of STDs because even where categorical STD services exist many people will still present in primary health care settings first. In particular for women, who are frequently asymptomatic, maternal and child health and family planning services are in a unique position to contribute to reducing STD levels – and by extension to reducing the incidence of HIV infection – by providing accessible, acceptable and effective medical care and health education. A multicentre study is under way initially in Thailand and Viet Nam (see also Chapter 3) to assess the feasibility of incorporating STD services and education on HIV prevention into maternal and child health and family planning services. In the study clinic-based staff will be trained in the necessary skills for health education and syndromic STD diagnosis and treatment, and community-based outreach workers will learn how to provide HIV/STD information, and how to encourage women to seek health care for possible STDs. After a 2-3 week training period and a 6-month implementation period, an evaluation will be made of impact, feasibility and cost. The evaluation of impact will be based on person-to-person interviews with health care workers and their clients supplemented by direct observation of health care workers during STD case management. An assessment of feasibility will be made based on the programme’s ability to increase health-seeking behaviour among women; on the prevention and treatment of STDs; on the ability to provide information and STD education on a regular basis; on the quality of service and case management as reflected by client satisfaction and appropriate treatment and referral; and on the ability of services to maintain an acceptable level of other maternal and child health and family planning activities. If such integration proves to be feasible and effective, the activities will be extended to other parts of the country.

Prevention and control of congenital syphilis

The prevention and control of syphilis during pregnancy, by routine screening and the rapid treatment of seroreactive women, is a highly cost-effective public health intervention. The costs of adverse pregnancy outcomes due to syphilis are significant, including the costs of providing care to newborns and children with congenital syphilis. These costs far outweigh the cost of screening for syphilis during pregnancy. Routine screening of pregnant women for syphilis also provides an opportunity to introduce primary prevention activities on STD/HIV into maternal and child health services.

In October 1993, GPA organized a technical meeting to develop guidelines for the development of programmes to treat and prevent maternal syphilis, and for the training of health workers to implement such programmes – in addition to the meeting report, a set of guidelines were produced. Several countries in Asia, Africa and Latin America will now be offered assistance in establishing programmes for congenital syphilis control using these guidelines and related training materials. In this activity, GPA is collaborating closely with UNICEF.

Different serological tests available to confirm syphilis are routinely performed in all countries; as a result there is a need for good-quality control to reduce the occurrence of false-positive or false-negative results. GPA, in collaboration with the Centers for Disease Control and Prevention in Atlanta, USA, offers external quality assurance for syphilis serological tests. About 45 countries participate in this activity.

Intensified interventions for vulnerable populations at high risk for STD

In Abidjan, Côte d’Ivoire, support is given to interventions directed at female prostitutes and their clients, aiming at increasing condom use and evaluating the feasibility, costs and impact of periodic case finding and treatment of STD on the incidence and prevalence of STD and HIV infection (see also Chapter 3). The hypothesis being tested is that the provision of clinical services specifically for sex workers significantly improves prevention activities and that case finding and treatment of STD using simple non-laboratory-based flow-charts is feasible and effective.

In Harare, Zimbabwe, the preparatory phase of an intensive intervention with patrons of beer gardens
and female prostitutes ended in October 1993, and data are being analysed. Preliminary results of this pilot study indicate high rates of both STD and HIV infection in the communities where the intervention study is planned, as well as considerable delay before seeking care among men with STD. In addition, significantly declining trends of reported STD have been documented in Harare since 1990, paralleling improved STD care provision and increased condom use. Because of its importance as an indicator of HIV preventive activities, the impact of this observation will be validated in collaboration with the Harare City Health Commission.

These and other initiatives will continue to be required if the problem of STDs—including HIV infection—is to be adequately addressed. In February 1993, GPA organized an informal working group meeting to discuss its whole range of STD activities. The objectives of the working group were:

• to review the activities of GPA in the area of STDs
• to review, revise and where appropriate, further develop GPA's STD-related materials and protocols
• to review proposals for further STD activities, and make recommendations on specific STD studies supported by GPA.

In addition to presenting discussions on the current GPA priorities outlined here, the report of the meeting recommends that:

• more emphasis should be placed on vaginal microbicides, and, in general, on female-controlled methods for the prevention of STDs
• GPA should give high priority to the evaluation of STD diagnostic tests, especially rapid and simple tests.

GPA will continue to refine and review its STD activities in these and other ways in order to maintain a coherent and comprehensive response to the emerging importance of traditional STDs in the effort to combat HIV/AIDS.

References and notes

1 The term sexually transmitted diseases is used throughout this chapter to describe sexually transmitted infections—not including HIV infection—as well as the diseases, complications and sequelae which result from them. Although HIV infection is certainly an STD, it is important to emphasize that here it is the relationship between HIV infection and other more traditional STDs which is the important issue.


CHAPTER 6
Strengthening National AIDS Programmes

During 1992-1993 GPA continued to fulfil its role of strengthening national responses to the HIV/AIDS pandemic by consistently advocating effective approaches to HIV/AIDS prevention and care – as well as the management of other STDs – described in previous chapters. At the same time, a major focus of GPA’s collaboration with countries has been to enhance the capacity of national AIDS programmes (NAPs) to plan and manage these responses. Accordingly, in the past biennium, GPA has sought to strengthen national management capability to coordinate an increasing number of actors and HIV/AIDS-related activities. Considerable resources have been allocated to working with NAPs in the areas of programme management, programme planning and reviewing, and monitoring and impact evaluation.

GPA reaffirmed its gradual shift in emphasis from mainly financial and operational support to NAPs to technical cooperation. The increasing emphasis on technical cooperation has been dictated in part by the rapidly changing nature of NAPs. Not only have they ceased to rely primarily on WHO/GPA support and are now, in many cases, mobilizing both national resources and technical and financial support from many international agencies and donors, but they have also developed from being primarily health-sector driven towards being truly multisectoral in nature. Greater emphasis has been placed on meeting country needs for better programme management.

The number of posts for country-based international GPA staff was reduced from 117 to 85. Financial necessity was a major consideration in this shift. In the process of this staff reduction, an analysis was carried out with the aim of defining the country-specific needs for long-term international staff and to ensure that the distribution of staff was adapted to the changing global pattern of the pandemic. A preliminary analysis carried out by the Regional Office for Africa confirmed the need for more GPA staff in the countries of that region oriented to planning and management rather than epidemiologists, IEC specialists or administrators. In the course of 1993, the Programme virtually completed the process of regionalization of its operations – Uganda is now the only country being dealt with directly from WHO headquarters. A related development during the biennium was the strengthening of the regional offices with GPA multidisciplinary teams providing technical support and guidance to countries, reinforcing the support provided by the offices of WHO representatives in countries, and promoting the decentralization of NAP activities, with emphasis on action at the community level.

Over the coming years the emphasis on technical cooperation will be reinforced, underlining WHO’s traditional role and relationship with Member States. The core of GPA’s technical cooperation during the biennium 1992-1993 was devoted to the following activity areas, described in full below:

- Strengthening the management of national AIDS programmes
- Planning and reviewing national AIDS programmes
- Monitoring national AIDS programmes
- Evaluating the impact of national AIDS programme activities.

At the same time, GPA continued to provide considerable technical guidance to individual NAPs in areas such as:

- condom programming
- logistics management
- blood safety
- training and materials development
- surveillance and forecasting.

Strengthening the management of national AIDS programmes

In this area GPA’s main response has been the development of a comprehensive National AIDS Programme Management Course (See Box 6.1). The
two-week course presents a systematic process for developing, prioritizing and managing a comprehensive AIDS programme. It is designed for those with responsibilities for – or influence over – the design, implementation, supervision and/or evaluation of a national AIDS programme, such as:

- staff of ministries of health, education or planning
- members of national AIDS commissions
- NAP managers or staff
- staff of agencies within the United Nations system
- representatives of NGOs working at national level.

The course was field-tested in Harare, Zimbabwe, in April 1993, with 42 participants from Cambodia, Ghana, India, Jamaica, Pakistan, Philippines, Romania, Sudan, Thailand, Zambia and Zimbabwe. They felt that the course provided a sound managerial basis for the planning of NAPs and suggested a few changes that have since been incorporated into the course design.

The training of facilitators for the course took place in the latter half of 1993 and will continue in 1994, as French, Russian and Spanish translations become available. The course is set to become a regular feature of regional and country training activities, with requests for intercountry and country courses in 1994 having been received from all WHO Regions by the end of 1993. The course will be organized by over 60 countries in the near future.

Course modules have been distributed to other agencies within the United Nations system and to bilateral agencies, and it is hoped that they will promote and support the course in the countries with which they cooperate. Furthermore, UNDP staff participated in the facilitator training during 1993 – an example of interagency collaboration complemented earlier in the year by GPA staff’s participation in UNICEF, World Bank and UNDP courses and seminars on HIV and AIDS.

Although the programme management course took longer than anticipated to develop, the lengthy programme-wide discussions it required provided an opportunity to clarify overall GPA policies on the many complex issues surrounding HIV/AIDS that are, in turn, reflected in the course.

Similarly, extensive discussions took place in 1993, including field visits and interviews, to define the needs at district level for management training programmes. These discussions, together with literature reviews, have provided a better understanding of the most suitable allocation of responsibilities and duties at the district level. Such an understanding will facilitate development of appropriate training programmes and materials during the forthcoming biennium for use at district level.

The wisdom and pertinence of such management training courses were fully verified during a five-day consultative meeting in September-October 1993 in Nyeri, Kenya, which brought together NAP managers, Ministry of Planning officials as well as GPA staff from Kenya, Nigeria, Uganda, the United Republic of Tanzania and Zambia. The meeting highlighted the many difficulties and changing needs of national AIDS programme planning and management, notably the rapid

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**Box 6.1 National AIDS Programme Management Course**

The NAP Programme Management Course consists of 12 modules. Course participants read the information in the modules and complete exercises individually or in a small group. Each group is assisted by a facilitator who introduces each module, answers questions, and leads group discussions.

The course includes case studies, group discussions, and role-play. Participants are helped to apply the information and skills acquired to their own countries. In addition to detailed information on specific subjects, the modules include an outline of the recommended objectives, strategies, interventions and major activity areas of national AIDS programmes; a set of definitions of management terms; a flowchart of steps in the evolution of a national programme; and a detailed description of each step on the chart.

**The 12 modules**

1. Introduction
2. HIV/AIDS problem, control activities and target populations for prevention
3. Interventions and policies
4. Programme prevention priorities and targets
5. Promoting safer sexual behaviours
6. Condom procurement and distribution
7. Provision of STD care
8. Prevention of HIV transmission through blood
9. Prevention of HIV transmission through injecting drug use
10. HIV/AIDS care and social support
11. The national plan
12. Monitoring and evaluation
turnover of staff and the challenges presented by the multisectoral nature of the work, but above all the lack of appropriate training.

**Planning and reviewing national AIDS programmes**

During the 1992-1993 biennium, both the planning and external review processes promoted and supported by GPA underwent considerable modifications in response to the changing circumstances under which NAPs were operating.

As the HIV/AIDS pandemic has evolved, so too has the understanding of its determinants and its direct and indirect consequences. Accordingly national responses to HIV/AIDS have gradually adjusted to the perceived dynamics of the pandemic, particularly in the formulation of new medium-term plans (MTPs) – the so-called second-generation MTPs.

With NAPs becoming increasingly multisectoral, GPA has responded by developing and refining a national planning process that takes into account the multiple participants in the national effort. Unlike the first-generation MTPs, which were developed primarily by and for the health sector, the second-generation MTPs developed in the course of the biennium have been elaborated through a consensus-building process that involved all prospective participating sectors, as described in Box 6.2.

During 1992-1993 over 60 countries initiated or finalized their second-generation MTPs with GPA support. In so doing, they made use of GPA's Facilitator's guide for planning a second-generation NAP (1992, WHO/GPA/CNP/EVA), developed specifically to assist in the process. Briefing based on this guide started in 1991. For this purpose a workshop was held in Geneva for headquarters staff, regional office staff and a core group of consultants, and two separate workshops were held in Manila, Philippines, and Wellington, New Zealand, for managers from the WHO Western Pacific Region. Caribbean NAP managers also benefited from similar briefing in Barbados, while managers from other regions were briefed during their respective programme managers' meetings.

The refinement and development of the planning process to respond to the changing nature and role of NAPs owes much to the experience and lessons gained from another crucial element of the whole programming cycle, namely external reviews. The first external review of a NAP took place in Uganda in 1988. By December 1993, GPA had collaborated with 55 coun-

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**Box 6.2  Second-generation MTP planning**

The first step taken by GPA when invited to provide technical cooperation for planning a second-generation MTP is an initial visit to the country. During the visit, GPA staff and/or consultants assess the national situation, discuss the options for taking the planning process further, and lay the ground for a national consensus-building workshop. This preparatory phase may take up to several months, if it requires gathering and interpreting information on epidemiological, behavioural, cultural and socioeconomic patterns and determinants.

Participants at the consensus-building workshop assess the current and projected status and impact of the country's epidemic, and seek consensus on the main elements of the national plan. Key policies and strategies are outlined, and responsibility for specific parts of the plan is assigned to specific sectors or donor agencies.

After the workshop, this consensus is developed further into a strategic 3-5-year plan that sets out objectives, strategies, priority interventions, policies, and responsibilities. Work plans may then be developed by individual ministries and organizations, or in the form of an all-inclusive multisectoral national document.

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**Case study: the National Operational Plan of Uganda**

Between January and June 1993, through a series of working group sessions involving more than 20 different organizations, information was gathered on HIV/AIDS/STD incidence, sexual behaviours, and cultural, traditional and other determinants of these behaviours in Uganda. These preparations culminated in a national consensus conference and planning workshops involving 175 representatives of more than 50 different organizations – government, nongovernmental, private and donor.

The resulting plan – the Uganda National Operational Plan for HIV/AIDS/STD Prevention, Care and Support, 1994-1998 – comprehensively outlines the activities that need to be carried out at the national, district, and local levels by public and private health and non-health sectors. Endorsed by the Uganda AIDS Commission in October 1993, in November/December the plan was used as a basis for formulating a World Bank project. The project has mobilized US$73 million in loans and grants from the Bank itself, KfW, ODA and SIDA for AIDS prevention and care activities.

\[ \text{KfW} = \text{Kreditanstalt für Wiederaufbau (Germany), ODA = Overseas Development Administration (United Kingdom), and SIDA = Swedish International Development Authority.} \]
tries in conducting 82 such reviews, of which 39 were undertaken during 1992-1993.

The main findings of NAP reviews, particularly in terms of programme achievements and constraints, have helped and are helping to shape the new MTPs. At the same time the review process itself has been examined and modified to ensure the involvement of the growing number of participants in national activities. A study of the process of National AIDS Programme reviews was carried out in April-May 1993 through review reports and numerous interviews with NAP managers, review team members and WHO/GPA desk officers at headquarters and in regional offices. Of 82 reviews carried out in 55 countries, reviews of 13 country programmes were selected for in-depth study. The study showed that the review process had been useful on two levels:

- Politically, by directing public and political attention to AIDS and the NAP, and thereby promoting broader participation by additional sectors, both public and private.
- Operationally, by bringing focus to the NAP, clarifying management issues, and speeding up programme implementation and reprogramming.

The study also generated recommendations to improve the review process, including the following:

- To improve preparation of reviews, with briefings and documentation
- To limit the size of review teams and to improve the selection of reviewers
- To undertake single reviews involving all major participating parties, rather than multiple programme reviews
- To make guidelines for the process more operational and to include checklists for each programme area
- To develop a systematic way of checking whether recommendations are followed up.

These recommendations are being incorporated into GPA’s facilitator’s guide for reviewing a NAP.

Monitoring national AIDS programmes

A common feature of NAPs has been the increasing number of collaborating agencies and partners – from the public, private and nongovernmental sectors, as well as from the international community – involved in AIDS work. As a result, keeping track of all AIDS-related activities within a country has now become more complex and difficult. At the same time, however, given the diversity of collaborators, monitoring is more essential than ever if effective coordination of national AIDS prevention and care efforts is to be achieved, and duplication of efforts, programming gaps, and the wasting of scarce resources are to be avoided. Monitoring capability is, therefore, crucial for national management teams and for donor agencies alike.

During 1992-1993 GPA devoted much effort to tracking the implementation of NAPs, and also to strengthening the capacity of countries to accurately monitor their national-level AIDS activities. This involved the development of better tools for monitoring the changing needs of countries, the performance of the corresponding NAP and the response of WHO and other agencies. In the process, GPA has continued to encourage NAPs to submit regular reports by providing uniform guidelines and formats for such reporting.

Information from NAP reports as well as from other sources such as external reviews, consultancy reports and, increasingly, reports from international agencies, has been incorporated into a database called the GPA country profile. This database also includes information extracted from other existing databases, such as demographic and epidemiological data, from both within and outside GPA. Information on financial implementation and external resources complements data on the many other components of NAPs, including STD activities, condom procurement, blood transfusion services, socioeconomic data and sentinel surveillance results. The development of the sections relating to external support was undertaken in close collaboration with the GMC Task Force on HIV/AIDS Coordination.

The GPA country profile thus provides updated snapshots of each country’s HIV/AIDS situation and responses. It is gradually being tailored to the needs of its users, which now include not only GPA units and WHO regional offices, but also other United Nations and international agencies. In its evolving format, with essential information condensed into a neat package, the country profile is becoming a useful tool for facilitating information sharing and hence coordination of HIV/AIDS activities.

A financial monitoring system was developed in 1993 that is intended for use in monitoring the progress and implementation of national activities and for tracking the use of funds from GPA and other sources by NAPs. This system will be fully operational in the 1994-1995 biennium. Together with a related coding system, ARC(activity reference code), it enables project budgets to be divided into established programme areas, and also allows the monitoring of resource allocation to components of special interest, such as NGO work, women, youth, STDs and training activities.

Another tool intended primarily for country use is a computer programme – EpiPlan – that helps NAP managers at central and district levels to monitor their activities. Combining word processing, spreadsheet and other selected data functions, the programme can
Table 6.1
List of prevention indicators (PIs)

<table>
<thead>
<tr>
<th>PI-1: Knowledge of preventive practices</th>
<th>No. of people citing at least two acceptable ways of protection from HIV infection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total no. of people aged 15–49 surveyed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI-2: Condom availability (central level)</th>
<th>Total no. of condoms available for distribution during the preceding 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population aged 15–49</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI-3: Condom availability (peripheral level)</th>
<th>No. of people who can acquire a condom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population aged 15–49</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI-4: Reported non-regular sexual partners</th>
<th>No. of people aged 15–49 who report having had at least one sex partner other than their regular sex partner(s) in the last 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total no. of people aged 15–49 who report having been sexually active in the last 12 months</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI-5: Reported condom use in most recent intercourse with non-regular partner</th>
<th>No. of people aged 15–49 reporting the use of a condom during the most recent act of sexual intercourse with a non-regular sex partner</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total no. of people aged 15–49 reporting sexual intercourse with a non-regular sex partner in the last 12 months</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI-6: STD case management</th>
<th>No. of individuals presenting with STD in health facilities assessed and treated in an appropriate way (according to national standards)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of individuals presenting with STD in health facilities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI-7: STD case management</th>
<th>No. of individuals presenting with STD or for STD care in health facilities who received basic advice on condoms and on partner notification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of individuals presenting with STD or for STD care in health facilities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI-8: STD prevalence, women*</th>
<th>No. of pregnant women aged 15–24 with positive serology for syphilis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total no. of pregnant women aged 15–24 attending antenatal clinics whose blood has been screened</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI-9: STD incidence, men</th>
<th>No. of reported episodes of urethritis in men aged 15–49 in the last 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>------------------------------</td>
<td>No. of men aged 15–49 surveyed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI-10: HIV prevalence, women*</th>
<th>No. of pregnant women aged 15–24 seropositive for HIV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total no. of pregnant women aged 15–24 attending antenatal clinics whose blood has been screened</td>
</tr>
</tbody>
</table>

*Still under development

sort, select and analyse activities according to a unique combination of characteristics such as intervention type, priority, executing agency and funding source. This new management tool will be field-tested and made available to NAPs during 1994.

Evaluating the impact of national AIDS programme activities

Over the past decade, the pressure for speedy and visible action against AIDS has often led to the neglect of adequate and systematic evaluation of the impact of NAPs on the HIV/AIDS pandemic. Evaluation must be seen as an integral component of the NAP, upon which any decisions about programme reorientation or the development and funding of future interventions depend. Plans for evaluation need to be made early so that programme managers can monitor activities to ensure that they are on track and assess whether objectives are likely to be met. Early, regular and planned feedback allows managers to make prompt and effective adjustments and avoids frustration, duplication of effort and waste of resources.

During the biennium, most effort was devoted to finalizing methods and protocols for the quantitative evaluation of AIDS prevention activities, particularly those aimed at reducing the transmission of HIV through sexual intercourse. In addition, GPA began to develop approaches for evaluating alleviation of the pandemic’s impact on individuals, families, communities and societies.

These quantitative assessments will complement
the hitherto qualitative information on NAPs obtained through external reviews. Consideration must be given to the ease of assessment and to the feasibility, accuracy and validity of the measurements taken. Based on these criteria, GPA has developed 10 prevention indicators (Pis) in order to allow the regular and systematic appraisal of the progress and outcomes of HIV prevention programmes (Table 6.1). These indicators range, as shown, from knowledge and behaviour assessments to evaluation of STD service provision, reported STD incidence in men, and syphilis and HIV prevalence in women attending antenatal clinics.

Protocols for the use of four methods for measuring the 10 Pis have been developed:

- a population survey covering reported knowledge of preventive practices (Pi-1), condom availability at peripheral level (Pi-3), reported non-regular sexual partners (Pi-4), reported condom use during last act of intercourse with a non-regular partner (Pi-5) and reported STD incidence among men (Pi-9)
- a records review of major distributors leading to an assessment of condom availability at central level (Pi-2)
- a health facility survey to assess the appropriateness of STD case management (Pi-6 and Pi-7) through observation of patient-clinician encounters and interviews with health care providers
- a serosurvey among antenatal clinic attenders aged 15-24 years to permit the measurement of HIV and syphilis seroprevalence in that population (Pi-8 and Pi-10). GPA recommends that the assessment of impact using Pi-8 and Pi-10 should be limited to selected settings. Therefore, these last two prevention indicators are proposed for experimental use only in selected countries.

During 1992-1993, the protocols were field-tested in a range of countries in Africa, Central and South America, and Asia (Tables 6.2 and 6.3). The field tests were extremely useful for refining and adjusting the

| Table 6.2 |
| Field tests of population surveys – 1992–1993 |

<table>
<thead>
<tr>
<th>City/Country</th>
<th>Geographical areas</th>
<th>Sample size (No. of people interviewed)</th>
<th>Total field work duration (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Republic of Tanzania</td>
<td>1 area of capital city</td>
<td>378</td>
<td>2</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>1 area of capital city</td>
<td>438</td>
<td>2</td>
</tr>
<tr>
<td>Burundi</td>
<td>1 city and 1 rural area</td>
<td>2300</td>
<td>3</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>4 largest cities</td>
<td>6400</td>
<td>4</td>
</tr>
</tbody>
</table>

* Measuring of Pi-3 is always carried out along with the population survey.

| Table 6.3 |
| Field tests of health facility surveys and antenatal clinic surveys – 1992–1993 |

<table>
<thead>
<tr>
<th>City/Country</th>
<th>Geographical areas</th>
<th>Health facilities</th>
<th>Sample size (No. of observations)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honduras</td>
<td>2 largest cities</td>
<td>16</td>
<td>79</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>2 urban areas and 1 rural area</td>
<td>39</td>
<td>64</td>
</tr>
<tr>
<td>India</td>
<td>5 urban areas</td>
<td>89</td>
<td>108</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>4 largest cities</td>
<td>20</td>
<td>350</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Antenatal clinic survey (Pi-8 and Pi-10)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>City/Country</th>
<th>Geographical areas</th>
<th>No. of antenatal clinics</th>
<th>Sample size (No. of people tested)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>1 city</td>
<td>30</td>
<td>1500</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>4 largest cities</td>
<td>25</td>
<td>3000</td>
</tr>
</tbody>
</table>

* Number of times a health care provider - patient encounter(s) was observed.
indicators themselves. In turn, the results – though at the time incomplete – helped mobilize the NAPs concerned to take remedial action where weaknesses were disclosed.

**Repeated survey of the general population**

Population surveys have a central and uniquely valuable role to play in the measurement of two of the main determinants of the rate of HIV transmission: number of sexual partners and use of condoms during intercourse. Unless behaviour changes in one or both of these regards, it is probable that HIV transmission will continue to be high. Measurement of these determinants is the main objective of this population survey.

Repeat, questionnaire-based interviews of a population can measure change in two of the prevention indicators listed in Table 6.1, namely reported number of sexual partners (PI-4) and reported condom use during intercourse (PI-5). In addition, the survey is designed to identify the level of knowledge of HIV/AIDS prevention practices among the population (PI-1), collect information on condom availability at peripheral level (PI-3), and elicit the reported incidence of symptoms of urethritis in adult men (PI-9). The questionnaire is designed to be used as a verbatim instrument. In other words, the interviewer is trained to read out each question exactly as it is written and to adhere to the specified order of questions. Such standardization is essential to achieve reasonable response reliability. This approach demands careful translation of the questionnaire into local languages, thorough pretesting, and the training of interviewers. The substantive content of the questionnaire is appropriate for the vast majority of countries.

Population surveys use a clustered probability sample design. Sample participants are selected in two stages; first according to the area and second to the household in which they live. Every adult aged 15-49 years in each selected sample household is interviewed. Sample sizes must be sufficiently large to allow a 20% loss due to empty households and non-response, calculations indicate that the minimum sample size is 3200. The age range 15-49 years has been carefully set – 15 years being the minimum partly for reasons of social acceptability as there are often objections from the family if younger people, particularly girls, are questioned about their sexual behaviour. The upper age limit of 49 years results from studies suggesting that in many settings the numbers at risk of HIV infection falls off rapidly beyond this age.

Further narrowing of the age range is not recommended for a variety of reasons. First, in many countries, risk behaviour occurs at all ages within the range. Second, the median age at initial sexual intercourse among men ranges from 16 to 27 years, depending on the country. Third, even though peak sexual activity occurs in the younger part of this age range, it is important to monitor changes in knowledge and practices among the older adults as well, given the sexual mixing between age groups (especially between older men and younger women) and the fact that individual sexual behaviour is shaped by families, communities and the general socioeconomic environment. Fourth, it is highly desirable to have comparability with other demographic surveys which collect data on condom knowledge and use, and which traditionally cover the same age range.

Knowledge of protection from HIV transmission (PI-1) can be measured through an open-ended question or by a checklist approach. Neither method is satisfactory. The former is vulnerable to recall problems, vagueness of answers, and reluctance to mention potentially embarrassing or sensitive topics. The checklist approach is simpler, but is unable to establish the relative salience of different preventive means in the mind of the respondent. In a field test undertaken in Colombo, Sri Lanka, 58% of respondents reported at least two acceptable methods of protection against HIV infection when prompted by a checklist, compared to 47% with an open-ended question. This pattern of lower scores with open-ended questions has been observed consistently in many settings.

The population survey calls for interviewing household members within a series of randomly selected clusters, and within each cluster, in order to measure PI-3, the investigator has to identify condom outlets of three major types: medical or family-planning clinics; shops and pharmacies; and bars and hotels. Guided by key informants during the population survey as to which outlets are most likely to stock condoms, the investigator visits three outlets of each type to determine whether condoms are currently available and whether there was an uninterrupted supply during the past 12 months. If at least one outlet has condoms available and has had an uninterrupted supply in the past 12 months, the total population of the cluster (calculated on the basis of the population survey sampling frame) is considered to have a supply of condoms regularly "available".

Sexual partnerships take a multitude of forms which must somehow be defined to permit the measurement
of PI-4. While the extreme opposites – legally sanctioned cohabiting marriage and anonymous commercial sex encounters – are relatively easy to define, the range of possible intermediate relationships defies any straightforward typology. These relationships may vary in terms of duration to date, expected future duration, range of possible intermediate relationships defies any satisfactory. However, duration may represent the most social dependency, social visibility and legitimacy.

Different types of relationships involve different degrees of risk of HIV transmission. At one end of the spectrum, stable and mutually faithful relationships yield no risk if neither partner is infected to begin with nor becomes infected via blood; at the other end, commercial sex – unless there is 100% condom use – involves an increasing risk of HIV transmission as the probability of meeting an infected partner increases.

Within the limits of simple standardized surveys, a blunt approach is required. For evaluation purposes, any sexual relationship that has lasted for at least 12 months is classified as "regular". This cut-off point is not entirely satisfactory. However, duration may represent the most important dimension of sexual relationships from the viewpoint of potential HIV transmission.

In a national population survey in Burundi, 20% of men but only 5% of women reported non-regular sexual relationships (PI-4). A large difference in reported behaviour between men and women has been observed in most sexual behaviour surveys to date.

Reported use of a condom during the most recent act of sexual intercourse with a non-regular sex partner (PI-5) raises no particular difficulties of measurement. However, it is important to correlate it with the indicators of condom availability, particularly PI-3. For example, in a field test in Dar es Salaam, United Republic of Tanzania, although the availability of condoms was estimated to be 100% (PI-3), only 27% of respondents reported the use of a condom during their last sexual intercourse with a non-regular sex partner (PI-5). These findings illustrate the fact that although condom availability is an enabling factor, other social and cultural factors are critical to condom use.

Self-reported incidence of STDs (PI-9) raises a number of definition and measurement problems. Because most respondents are unaware of the correct medical terms for different STDs, all questioning must be about symptoms. For women, in whom many infections are asymptomatic for long periods and difficult to diagnose, self-reported data are of little value. For men, symptoms are usually more easily recognized and gonorrhoea (penile discharge) can be distinguished from syphilis (sores, ulcerations). Therefore the questions are restricted to male respondents. There may also be problems in distinguishing one episode from another, in so far as symptoms may wane or disappear but recur if the infection is untreated.

Population surveys should be repeated in the same area only after a period of about three to four years as behavioural changes are unlikely to be detected at shorter intervals. The cost of conducting the population survey ranges between US$ 20 000 and US$ 35 000.

**Estimation of condom availability at central level through records reviews**

Condom availability at the central level (PI-2) can be defined as the average number of condoms that have been (centrally) available for distribution per person (aged 15–49 years) during the previous 12-month period. By interviewing major donors and major commercial distributors, an estimate can be made of the number of condoms supplied in the past year to the NAP and the family planning programme, and for sale through private commercial channels.

Such a condom availability indicator should ideally reflect the ratio of the number of condoms available to the number required to meet the population's condom needs. However, for a host of reasons, there is currently no satisfactory method for determining condom needs for HIV/STD prevention. The proportion of the adult population that is sexually active varies widely within and between countries, as does the proportion in faithful unions. Condoms are also used for family planning purposes – a use for which needs are somewhat easier to assess. Until a more refined measurement can be devised, PI-2 will be based on the "volume" of condoms available at central level.

In Ethiopia, where distribution is organized primarily through regional health bureaux, a field test of PI-2 disclosed that 1.3 condoms were available per adult in 1993. In the United Republic of Tanzania, where a condom social marketing programme has been in...
operation for several years, 3.2 condoms per adult were available for distribution in 1992.

The cost of assessing PI-2 is minimal as it requires only one person to visit central distribution facilities, and GPA recommends collecting information annually.

Assessment of STD case management through health facility surveys

PI-6 and PI-7 have been developed as indicators for measuring the quality of case management provided to patients who present with an STD. In these indicators the quality of care provided is measured in terms of the adequacy of the history taking, assessment and treatment of patients reporting to health facilities with specific STDs (PI-6), and in terms of condom promotion and basic advice on partner notification given to the patient (PI-7).

For PI-6 the denominator relates to specific STDs: genital ulcer disease in men and women and urethral discharge in men. PI-7 relates more generally to "individuals presenting with STD, or seeking STD care" as it is felt important that people who think they might have an STD should receive prevention advice.

Such surveys are carried out in a sample of health care facilities, and use the following methods of data collection:

• enumeration of all health care facilities in the selected areas to obtain a list of those providing care to people presenting with STD complaints
• observation of the practice of clinicians in these health care facilities with individual patients to yield an evaluation of the quality of case management
• interviews with health care providers to permit the identification of constraints in supplies and areas for improvement in health care provision.

For PI-6, "appropriate" STD assessment and treatment refers to the clinician’s adherence to certain standards of history taking, examination and treatment according to recommended national and/or WHO guidelines. PI-6 requires only that a treatment be considered acceptable, but for the national programme it may also be useful to record whether or not the treatment is in line with national recommendations if available. In such instances, there will be three categories: acceptable and in accordance with national guidelines, an acceptable alternative, and unacceptable (i.e. likely to be ineffective).

The two criteria used for the scoring of PI-7 are whether the clinician gave the patient "basic" advice on condom use for STD prevention and advised the patient that sex partner(s) be informed and referred for treatment. The provision of condoms and of instructions on how to use them are both recorded but are not part of the scoring. If such instructions were included at this stage in the scoring for PI-7, most clinicians would score very poorly, with an attendant risk of frustration, discouragement and lack of motivation for change. As the evaluation process evolves, however, it may be appropriate to add condom use instruction as a complementary criterion to be scored for PI-7.

It is recognized that patients with symptomatic STD consult a wide range of health care providers, including public, private, informal and traditional sources of care. For reasons of method as well as logistics, however, the protocol is limited to measurements of care in health facilities (public and private) and does not address the quality of care available from other health care providers such as traditional healers and pharmacists.

A further limitation of the protocol is that it tends to elicit little information on STD care provided to women: sample sizes for women with genital ulcers are generally small, and most other syndromes are asymptomatic in women. More research into utilization patterns, problems of access and client perceptions of STD services for women is needed before meaningful indicators can be developed.

The cost of the survey is between US$ 4 000 and US$ 10 000, depending on the country. GPA recommends that such surveys be undertaken at a subnational level (for example, in a few major cities or a province) and repeated every two years or even more often, if low scores are obtained from the baseline survey and activities to improve STD case management are initiated rapidly.

Evaluating NAP impact through serosurveys

The method used for indicators PI-8 and P-10 – indicators which are still under development – is a cross-sectional survey of point HIV and syphilis prevalence in 20-40 urban or semi-urban antenatal clinics. For each clinic listed, a tabulation is made of the number of sera obtained for syphilis screening over a 3-month period. Consecutive sera obtained from clinic attenders aged 15-24 for syphilis screening are tested for HIV by the unlinked anonymous method; total sample size is 3 000 sera. The field work is expected to last 6-8 weeks. The survey, costing between US$ 20 000 and US$ 30 000, should be repeated every three to five years.

For a predominantly sexually transmitted and chronic infection such as HIV, or for a chronically elevated
marker of previous syphilis infection such as Treponema pallidum haemagglutination assay (TPHA) seropositivity, changes in prevalence in the immediately post-pubertal age group—the age group just beginning sexual activity—closely reflect changes in incidence in that group.

It is not unreasonable to hypothesize that HIV or TPHA seroprevalence in 15-year-olds would closely parallel HIV/TPHA incidence in 15-year-olds. However, the age of sexual debut varies considerably between countries. Moreover, a community-based survey of only 15-year-olds would be difficult for ethical reasons and because of the enormous sample size needed. This is the rationale for selecting antenatal clinic attenders aged 15-24 years for the measurement of HIV/TPHA seroprevalence.

On the other hand, the underlying hypothesis may not be sufficiently robust to allow extrapolation to 15-24-year-olds (a 10-year age band), as is proposed in PI-8 and PI-10. One difficulty may be illustrated by modelling the expected changes in HIV prevalence in a hypothetical high-prevalence population (typical of eastern and central Africa). In the 15-24-year age group, assuming that successful interventions lead to a progressive 25% decrease in HIV incidence over a 5-year period, HIV prevalence will decrease by only 12% in the same period. In many circumstances, seroprevalence may actually continue rising for some years even if incidence has decreased. It may then be difficult for the national programme to argue that it is having an impact, except by comparing the observed rise in prevalence with the hypothetical larger rise that would have occurred if there had been no effective interventions.

Conversely, the situation could occur where an apparent decrease in prevalence is mistakenly interpreted as an outcome of the programme’s efforts. In the initial years of the epidemic the vast majority of HIV-infected persons are asymptomatic. Later, an increasing proportion develop AIDS and gradually die. Therefore, with a 10-year age band, even if HIV incidence remains high, a fall in HIV prevalence may occur as the older individuals in the 15-24-year age group die of AIDS.

\[\text{Even if HIV incidence remains high, a fall in HIV prevalence may occur as the older individuals in the 15-24-year age group die of AIDS.}\]

Field tests of prevention indicators

GPA provided technical assistance and financial support for the field testing of the methods described above. The most comprehensive field-testing of the indicators was conducted in Ethiopia. The PIs were measured in four urban areas of the country: Addis Ababa, Awasa, Baher Dar and Dire Dawa. As shown in Tables 6.2 and 6.3 respectively, the population survey had a total sample size of around 6400, while the health facility survey included 350 observations of patient-physician encounters made in 20 clinics. An analysis of the evaluation results, conducted by staff from the national Department of AIDS Control and GPA, prompted the national programme to focus its attention on certain geographical areas, population groups and activities. For example, condom availability, while high in the capital city, was less than optimal in some regional towns. Young people aged 15-24 (around 40% of the adult population) were identified as the group knowing the least about preventing HIV infection, reporting the largest number of non-regular sexual contacts, and using condoms least often with these partners.

In September 1993, an interagency meeting in Washington, DC, organized by GPA in collaboration with AIDSCAP brought together representatives of international organizations and governments to review the results of the field tests and make recommendations on their use. The meeting recommended that all countries with NAPs should incorporate these indicators into their evaluation strategies. Accordingly, the agencies present at the meeting committed themselves to promoting and actively supporting the implementation of the evaluation protocols and use of the prevention indicators.

During 1994, the package of evaluation protocols,
for measuring the prevention indicators, will be prepared and distributed to WHO regional offices and NAPs. The package will gradually be expanded to include indicators and protocols for evaluating activities for the care and support of people with HIV and for the alleviation of the social and economic impact of HIV/AIDS as these are developed. Regional training workshops to train national AIDS programme staff in use of protocols will be held during the 1994-1995 biennium and continued technical assistance will be provided.

The results of the field tests conducted so far have been helpful for programme managers, clinicians and other participants in the countries evaluated, in that they have alerted them to the need for improved efforts in the areas of condom supply, STD case management, and interventions promoting behavioural change. Initiatives based on the experience gained have included:

- decentralizing condom distribution or integrating social marketing into the public sector distribution of condoms
- developing guidelines for syndromic approaches to STDs
- conducting training courses for health care providers on the importance of primary prevention
- initiating studies of patterns of strain resistance to antibiotics
- updating and simplifying the list of STD drugs
- reviewing the quality of information and communication messages for safer sexual behaviour, and providing clear and accurate messages to encourage behavioural change
- focusing specific interventions on particular age groups and geographical areas.

**Condom promotion**

**will be of little use in a setting where there is no reliable supply of high-quality condoms or where people do not know how to use them.**

**Condom programming**

HIV infection will continue to spread far as long as sexually active people have unprotected sex in non-monogamous relationships. The provision of high-quality condoms to all sexually active people who need them has been identified as one of the few effective methods of HIV prevention available. Condom programming has two main aims: firstly, to ensure that appropriate human, technical and financial resources are available and utilized to promote condom use; and, secondly, to provide easy access to good-quality, low-cost condoms. This section focuses on the supply of condoms; for more information about condom promotion and condom programmes at country level, see Chapter 3.

A wide range of activities can help increase condom use: advocacy, social marketing, logistics management, research, policy strengthening, and training, to name but a few (Figure 6.1). To be as effective as possible, these activities must be coordinated. It is clear, for example, that condom promotion will be of little use in a setting where there is no reliable supply of high-quality condoms or where people do not know how to use them.

Against this background, GPA continued during the biennium to work on the full spectrum of condom-related activities in collaboration with national AIDS programmes, international, regional and bilateral agencies, and private and nongovernmental organizations. The Programme developed, refined and disseminated guidelines and training materials; reviewed national AIDS programme plans, workplans and other documents to ensure that they included adequate condom components; provided direct technical assistance to countries in procurement, quality assurance and planning; conducted research to identify gaps and duplication in international condom-related activities; attempted to estimate future condom needs for STD/AIDS prevention; advocated condom programming through contacts with donors, NGOs and national AIDS programmes; and both organized and took part in international meetings on condom issues, including the improvement of specifications.

The GPA activities presented in this section are interrelated, but for clarity are presented under the following headings:

- Interagency collaboration
- Condom procurement and quality control
- Identifying needs
- Guidelines for key aspects of condom programming, social marketing and country assistance.

**Interagency collaboration**

GPA has acquired information on condom quality, cost and other issues that can be helpful to multilateral and bilateral agencies undertaking condom activities. A formal dialogue between governmental and intergovernmental agencies on strengthening the global supply of condoms for STD/AIDS prevention in developing countries, through greater efforts and improved coordination, began in February 1990 at a consultation convened by GPA in Geneva.
At first, the group comprised representatives of WHO, the United Nations Children's Fund (UNICEF), the International Planned Parenthood Federation (IPPF), the United Nations Population Fund (UNFPA), the World Bank, and USAID. By the time of the fifth (and final) meeting on condom procurement and supply—on 31 March 1992—participation had broadened to include the United Nations Development Programme (UNDP), the World Bank, the Commission of the European Community, the Gesellschaft für Technische Zusammenarbeit (GTZ—Germany’s Agency for Technical Cooperation), Switzerland's Direction de la Coopération au Développement et de l’Aide humanitaire (DDA), and the United Kingdom’s Overseas Development Administration (ODA).

In these meetings, participants shared information on such subjects as condom suppliers, laboratories, orders and shipments. But perhaps the biggest achievement of the interagency group has been a more profound understanding of how condom-related interventions should be programmed at global and national levels. This understanding has led to better coordination and planning of field activities.

The final meeting in March 1992 achieved consensus on a number of key issues:

- Effective condom programming at national level needs to be comprehensive in concept, planning and execution. It implies a high degree of coordination and cooperation among international agencies working at the country level.
- Quality assurance monitoring is an essential part of condom logistics management in developing countries with tropical climates and weak distribution infrastructures. Strengthening logistics management is the best long-term approach to satisfying concerns about condom quality.
- The WHO specifications and guidelines for condom procurement*—updated during the biennium—help to assure buyers of low prices and good quality by facilitating competitive tenders characterized by bulk procurement and batch quality testing. WHO uses this approach to procure condoms on behalf of national AIDS programmes. Adherence to these guidelines can assure consistently high-quality, low-cost condoms. UNFPA has recently adopted WHO’s recommendation of batch-by-batch testing.
- Responsibility for condom planning and funding at the national level should be decentralized. How this can be facilitated is described in the WHO Procedure for national-level collaboration in condom procurement.* Working contacts between national AIDS programme managers and local donor agency representatives must be strengthened.
- The private sector must play a greater role in commercial and social marketing to increase demand for condoms and establish cost-effective distribution systems in which income generation contributes to greater self-sufficiency.
- Mobilization of financial resources to strengthen the ability of countries to provide cost-effective condom activities is vital to the success of national

*Unpublished document available from GPA.
AIDS programmes. The issue should be raised at international forums concerned with resource mobilization.

Condom procurement and quality control

Buying condoms from the lowest bidder is not advisable unless quality can be strictly controlled. Under the WHO specifications, interested manufacturers must be assessed in advance and their products tested for compliance batch-by-batch before payment is made. In 1992, to strengthen this process of quality assurance, GPA supported a follow-up to a 1991 inter-laboratory trial of 9 international condom testing centres. In the 1991 trial, participating laboratories had been asked to conduct the required quality tests on samples of essentially identical products. In 1992, follow-up site visits to participating laboratories were made in order to identify the causes of variance between the laboratory’s results and those obtained elsewhere, and to help take steps to correct them. A report entitled Condom testing laboratories – Reconciliation of inter-laboratory test results was disseminated to the laboratories concerned and other interested parties in 1993.

In October 1993, GPA organized in Geneva a WHO Consultation on Condom Quality which aimed to raise awareness of the importance of maximizing condom quality from the time of manufacture to the time of use. The participants included condom quality experts, manufacturers, donor representatives, suppliers, national laboratory managers, logistics specialists, programme officers and consumer representatives.

The consultation recognized that the continuing effectiveness of condoms depends on quality being maintained from factory to user. The report of the consultation contains a series of recommendations that emphasized the importance of national policies and effective logistics procedures for condoms based on the concept of “total quality management”. WHO was encouraged to continue to develop and disseminate its Condom logistics manual and training course, and to prepare guidelines for use by national AIDS programmes in establishing post-marketing surveillance systems to collect and respond to user feedback.

In 1992, GPA bought 29.7 million condoms on behalf of about 50 national AIDS programmes. In 1993 the figure fell slightly, to 27.3 million. At the end of 1993 GPA was preparing to procure 60 million condoms in 1994 after assessing the market with a view to negotiating a new bulk-purchasing agreement. As part of the market assessment for the tender, close to 70 suppliers were contacted. Each company that expressed interest in becoming a regular bulk supplier of condoms to WHO was requested to submit 500 random samples for quality testing by an independent laboratory in Sweden. The 12 companies which did so all passed the test and were pre-selected for the bidding. WHO staff visited potential suppliers to examine production and quality control procedures. The final selection of suppliers to be included in the bulk-purchase agreement will be made in 1994.

Apart from condoms themselves, related products that some countries find useful but hard to obtain may be ordered through WHO, such as penis models (for use in demonstrations on condom use) and inexpensive water-based lubricants.

Identifying needs

In October 1992, GPA disseminated to donors, implementing agencies and national AIDS programmes a Survey of condom-related activities in developing countries. This report, based on a GPA survey, shows which agencies are engaged in each country in condom-related activities. It has already assisted countries and organizations involved in condom programming by identifying how they might coordinate activities, and where their interventions might be particularly needed owing to the absence or minimal level of specific activities.

Recognizing that rapid growth in condom use for STD/AIDS prevention would affect its condom forecasts and possibly its estimates concerning other methods of contraception, UNFPA has been updating its global contraceptive requirement projections through an initiative entitled In-depth studies of contraceptive requirements and logistics management needs in developing countries. As part of this initiative, GPA participated during the biennium in UNFPA-organized field visits to India, the Philippines, Viet Nam and Zimbabwe where studies were undertaken to calculate the total number of condoms likely to be needed for STD/AIDS prevention and for family planning over the next decade. Studies will be undertaken in additional countries during the next biennium.

In December 1993, GPA issued a draft report entitled Projected condom requirements for STD/AIDS prevention during 1993–2005, which provides estimated quantities and costs of condoms required by national AIDS programmes in developing countries over the period in question. The report was designed to share information with other agencies, donors and national AIDS programmes, and to stimulate greater awareness
by all parties of the need to quantify the risk associated with specific sexual behaviours, set realistic targets, and generate resources to cover the costs.

Few data exist on the number of people engaging in sexual behaviour that might put them at risk of HIV infection, their coital frequency or the extent to which they use condoms. GPA therefore used social marketing, sales, donor shipments and estimates by national AIDS programmes to infer a 1993 baseline for condom distribution in 1993 and the assumed number of people using condoms in that year. Taking into account the projected annual increase in the number of users due to condom promotion, it was calculated that the total cumulative number of condoms required between 1993 and 2005 would range between 9110 and 20 161 million (see Table 6.4). With condom prices ranging between 3 and 7 US cents each, this represents a major expenditure for national AIDS programmes. A variation in unit price of just a few cents would also mean a difference of several hundreds of millions of dollars—hence the importance of bulk-purchasing through competitive international tender.

**Guidelines for key aspects of condom programming**

GPA also continued during 1992-1993 to develop, refine and disseminate guidelines for national AIDS programmes in key areas of condom programming other than specifications and procurement:

- Research (Rapid assessment protocol for planning condom services, in preparation)
- Information, education and communication (Guide to condom promotion, in preparation)
- Logistics (Managing condom supply, in preparation)
- Quality testing (Condom testing—a set of three manuals)
- Training (curriculum for WHO's condom logistics course)

- Management, Module 6 of the National AIDS Programme Management course, described earlier in this chapter
- Instructions for users (Guide to adapting instructions on condom use, World Health Organization, 1992, WHO/GPA/GNP/92.1).

These guidelines, and condom programming in general, are discussed at regional meetings of programme managers. They have also been the subject of meetings and workshops in all WHO regional offices. Feedback received has been taken into account in finalizing these materials which will all be available by early 1995.

**Social marketing**

Recognizing the importance of social marketing—a method of marketing subsidized products that has proved successful for condoms as well as, for example, oral rehydration salts—WHO collaborated with GTZ in October 1993 in organizing a condom social marketing (CSM) workshop. African countries yet to have a CSM programme (Congo, Gabon, Madagascar, Niger, Senegal and United Republic of Tanzania) were invited to meet donor organizations in Yaoundé, Cameroon, where CSM is already successfully under way. The workshop led to greater acceptance of the CSM concept by the participants. It is planned to hold CSM workshops in at least three of WHO's six regions—South-East Asia, Western Pacific, and the Americas—in 1994-1995.

Family planning CSM programmes have the potential to extend their work into condom promotion and distribution for STD/AIDS prevention, although there is sometimes resistance on their part to doing so. In some countries, national AIDS programme managers have collaborated for some time with these programmes; in others, awareness of this potential collaboration is increasing.

**Country assistance**

In early 1993 GPA collaborated with the Indian National AIDS Control Organization (NACO) to develop a strategy for adapting India's CSM infrastructure and resources to help NACO achieve its objectives regarding condom distribution for STD/AIDS prevention.

India is one of the countries—Kenya and Zimbabwe are other examples—with which GPA worked closely during the biennium to strengthen procurement practices and improve condom quality. As one of the world's largest condom producers, India revised its national condom quality standards to meet international standards and comply with the WHO specifications during the biennium. GPA missions to Indian condom factories and quality testing laboratories, some in collaboration with UNFPA and the World Bank, were also instrumental in helping the Indian Govern-

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**Table 6.4**

<table>
<thead>
<tr>
<th>WHO Region</th>
<th>Condoms required (low estimate)</th>
<th>Condoms required (high estimate)</th>
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</thead>
<tbody>
<tr>
<td>Africa</td>
<td>5 223 000 000</td>
<td>11 275 000 000</td>
</tr>
<tr>
<td>Americas</td>
<td>546 000 000</td>
<td>1 313 000 000</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>1 674 000 000</td>
<td>3 971 000 000</td>
</tr>
<tr>
<td>Europe</td>
<td>474 000 000</td>
<td>1 140 000 000</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>56 000 000</td>
<td>134 000 000</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>1 137 000 000</td>
<td>2 328 000 000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9 110 000 000</td>
<td>20 161 000 000</td>
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</table>
ment develop a strategy for upgrading its production and quality control capabilities. In December 1993, GPA arranged an emergency shipment of 1.5 million quality-tested condoms to NACO for distribution to STD/AIDS prevention projects experiencing a temporary but severe shortage of good-quality products.

GPA's technical support to the Indian programme emphasizes the indivisibility of the condom quality continuum: good standards and specifications, manufacturing practices, and logistics management, independent quality testing for compliance to specifications, and rigorous attention (through market research) to the needs and desires of users.

Effective collaboration outside WHO would not be possible without good cooperation and information-sharing within the Organization. During 1992-1993, GPA worked with other WHO programmes on issues including procurement, quality testing, condom social marketing, logistics management training, virucide development and other activities, including acceptability and efficacy research on both male and female condoms (see Chapter 4). In this way, GPA’s barrier methods internal working group (originally set up as the condom internal working group in June 1991), continued during the biennium to share information and collaborate on ways to strengthen the condom activities of national AIDS programmes.

Logistics management

Condoms, HIV diagnostic tests, and drugs to treat opportunistic infections currently account, on average, for 12% of total national AIDS programme expenditure in Africa, according to a GPA survey of 14 countries carried out between January 1992 and April 1993. Naturally, this kind of recurrent spending grows as the HIV/AIDS pandemic spreads. At a time when demands are rising faster than the resources available, threatening the sustainability of national programmes, proper logistics systems can help programme managers to ensure that essential products are used as efficiently and cost-effectively as possible.

After the recruitment of a logistics officer in July 1992, GPA implemented a strategy to strengthen the logistics capabilities of countries by supplying:

- Management tools – In late 1992, GPA began to develop a computer software called AIDS Drug Estimator to help project the demand for drugs to treat opportunistic infections and STDs, and estimate the costs involved. Based on morbidity data and standard treatment regimens, this software not only facilitates calculations; it can also show, through “sensitivity analysis”, how the estimates would be affected by changes in the parameters – for example, an alteration to a treatment regimen, a reduction in the rate of infection, the substitution of one drug for another, or a change in drug price. After a field test in Uganda (see Box 6.3) the software was used successfully for a workshop in Thailand in December 1993. Similar workshops are planned for other countries during 1994-1995. GPA also began to review commercially available inventory control software, with the aim of identifying packages that could be used by national AIDS programmes in managing condoms, test kits and drugs. This information will be sent to countries during the 1994-1995 biennium.

- Training – In the United Republic of Tanzania, GPA field-tested a five-day course on condom logistics in December 1992. Designed to meet the need for supply management training within national AIDS programmes, and adaptable to supplies other than condoms, the course was reviewed, refined and finalized in 1993. It is scheduled to be given in all six WHO regions in 1994-1995. The training, led by GPA staff and external experts, comprises sessions on estimating demand, calculating order volumes, controlling stocks, estimating storage capacity, and setting up distribution channels, with practical

### Box 6.3

**Case study: Uganda**

**Helping to reduce drug costs**

More than a decade has passed since Uganda identified its first case of AIDS. By the end of 1993 about 1.5 million Ugandans were estimated to be infected with HIV. In 1994, according to projections by the Uganda AIDS Commission, 340,000 people will need treatment for AIDS-related infections. It is crucial for planning and budgetary purposes, as well as for policy-making, that this increased burden be quantified in financial terms.

According to calculations made with GPA’s AIDS Drug Estimator software, the cost of necessary drugs prescribed according to prevailing patterns was likely to rise from US$ 2.4 million in 1994 to US$ 3.5 million in 1998. Cost analysis by product showed that six products accounted for 60% of total estimated expenditure: ketoconazole, quinine, calamine lotion, intravenous fluid sets, fluconazole, and glucose solutions.

A sensitivity analysis conducted by the software revealed that replacing ketoconazole, the most costly item, with nystatin – a cheaper alternative currently used in the country – would cut the cost to Uganda by an average of US$ 500,000 per year. The analysis also showed that protocols could be prepared to help prevent costly wastage in the use of intravenous fluids and fluconazole.
methods explained for each step. The training method is participatory in nature, drawing on the participants' experience. At the end of the workshop, participants test their skills in managing simulated situations and unforeseeable events, such as a warehouse fire.

- Technical support to help countries identify locally appropriate solutions to logistics problems was provided by GPA during the biennium in Malawi, the Philippines, Thailand, Uganda, and Zambia. GPA endeavoured to provide client-oriented technical support that used existing systems as much as possible and did not entail the transfer of sophisticated technology.

In December 1993, GPA gave technical support to a workshop organized by the Food and Drug Administration in Thailand – where the rise in drug spending is becoming a problem for hospitals – on quantifying the demand for drugs to treat HIV-associated opportunistic infections. More than 20 clinicians, pharmacists, epidemiologists and planners learned how to use the patient morbidity standard treatment method and carry out sensitivity analysis. Calculations made with AIDS Drug Estimator software estimated that drugs to treat opportunistic infections had cost Thailand US$ 1 million for children and US$ 22.4 million for adults in 1993 – and that these figures would be doubled if zidovudine were dispensed to all people with AIDS. The national AIDS programme will now be able to take fully informed decisions on treatment policy and resource allocation.

The experience gained from the first year and a half of the agreement for bulk procurement of test kits was very positive. More savings were made than expected (see Box 6.4). These positive results led to a renewal of the agreements with the three manufacturers involved. In addition, as the demand for ELISA test kits had actually increased, it was decided to include in the 1993 agreement a fourth supplier, Murex Ltd (formerly Wellcome), whose test kits have been repeatedly requested. The four ELISA test suppliers agreed to reduce the price from US$ 0.70 to US$ 0.67 per kit (and even to US$ 0.65, in the case of Sanofi Diagnostics Pasteur) after the purchase of the first 500,000 tests.

Blood safety

Transmission of HIV by transfusion of infected blood or blood products is far more efficient than any other route. Fortunately, almost all transfusion-associated infections are preventable. To this end, GPA seeks to develop and promote cost-effective and sustainable blood safety strategies, and to assist countries in developing and implementing them.

In developed countries, WHO estimates that the risk of acquiring HIV infection from donated blood or blood products at the end of 1993 was at most around 1 in 100,000 for each unit transfused. In developing countries, however, blood safety is more elusive. GPA estimates that the transfusion of HIV-infected blood and blood products has accounted for 5-10% of all HIV infections in developing countries – and in some cases for a far higher proportion. The main problems to be overcome are inadequate organization of blood transfusion services, a lack of trained staff, and insufficient funds. But where effective steps are taken, the benefits can be great. In Zimbabwe for example, the Ministry of Health calculated that more than 86,000 adults and children would have been infected during 1985–1990 if the rational use of blood, blood screening, and a policy promoting safe blood donors had not been introduced early in the epidemic.

GPA’s recommendations for the prevention of HIV transmission through blood and blood products are:

- the recruitment and retention of voluntary, regular, and non-remunerated blood donors
- the testing of all blood for HIV by the most appropriate and cost-effective means
- the appropriate use of blood (to minimize unnecessary transfusions).

In all three areas, GPA continued to develop, publish and advocate use of appropriate guidelines during the biennium. It also supplied direct technical assistance to countries in planning or reviewing blood safety programmes; ensured that short-term and

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<th>Box 6.4</th>
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Bulk purchase of HIV test kits

National AIDS programmes have been able to make significant cost savings through WHO's bulk-purchasing agreements of test kits. In negotiating with suppliers WHO/GPA has been able to bring the cost of HIV tests down considerably. It has been estimated that during the first year (April 1992–March 1993) of this agreement the following savings were made:

- **Elisa tests** US$ 615,000
- **Confirmatory tests** US$ 353,070
- **Rapid tests** US$ 596,925
- **Simple tests** US$ 72,800

In total this represents savings of US$ 1,637,795 or 43.5% on the market price.

It has been estimated that from March 1993 to April 1994 over US$ 2,000,000 has been saved through this bulk-purchasing agreement.
medium-term national AIDS programmes contained the necessary components; and provided expert guidance on blood safety at international meetings.

Collaboration on blood safety issues continued with international, regional and national organizations, and with other parts of WHO. In 1992, for example, GPA was requested by the Swiss Red Cross to conduct an external review of a nine-year blood transfusion programme in Mozambique funded by the Swiss government. The findings of this review are now being used as a basis to reprogramme, and seek funding for, the blood transfusion programme in that country. A similar review will be carried out in Zambia in 1994, and other such assessments are expected to follow.

In November 1993, following media reports that blood products had been produced without proper HIV testing or adequate donor selection in European Member States, GPA played an important role in organizing a consultation in the WHO European Regional Office in Copenhagen, Denmark, involving the Council of Europe, the Commission of the European Union, the International Federation of Red Cross and Red Crescent Societies, and leading experts in blood transfusion medicine. This was an example of WHO’s important major collaborative role with international and regional authorities. The Council of Europe issues recommendations and guidelines on blood safety for 34 European countries; the European Commission issues directives to all 12 states of the European Union. The meeting identified existing mechanisms that WHO Member States could implement to monitor, control and prevent transfusion-associated transmission through the health authorities of each country.

Documents and learning materials

Blood transfusion staff involved in educating, motivating and recruiting blood donors, and in collecting, processing, storing and distributing blood and blood products, must do all they can to ensure the safety of the blood supply. In many countries, there is a need to improve and update their skills, particularly where technical staff have no easy way to learn essential new techniques. This is especially true at provincial and district levels, where supervision may be limited.

To address these issues, GPA blood and training experts collaborated with the South Bank University Learning Centre in London to produce Safe Blood and Blood Products’ a set of distance-learning materials designed for use by individual technicians studying independently at the workplace. The materials were written by several experts in blood transfusion medicine, and reviewed in 1992 at a meeting in Thailand attended by experts from five of the six WHO regions.

The three technical modules cover safe blood donation; screening for HIV and other infectious agents; and blood transfusion technology (see Box 6.5). Each section requires the technicians to read and practise new or revised activities – on their own, at their own pace, and using the reagents and materials available to them.

Distance learning, which has not been used before in blood transfusion training, puts new skills within reach of large numbers of staff without the expense of establishing or strengthening a training infrastructure. But although the material is self-contained, independent learning requires support. Each country’s health authority will be expected to identify one or more “mentors” who can advise learners and give encouragement and feedback. A module for use by such mentors is supplied. The materials can thus be linked easily to existing systems of supervision and in-service training.

The modules are available in English. Chinese, French, Russian, and Spanish editions will be

| Box 6.5
<table>
<thead>
<tr>
<th>Distance learning materials for blood transfusion training</th>
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<tbody>
<tr>
<td><strong>Module I</strong>: Safe blood donation</td>
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<tr>
<td>- Identification of safe blood donors</td>
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<tr>
<td>- Education, motivation and recruitment</td>
</tr>
<tr>
<td>- Selection of donors</td>
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<tr>
<td>- Organizing donor sessions</td>
</tr>
<tr>
<td>- Care of the blood donor</td>
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<tr>
<td>- Blood donor retention</td>
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<tr>
<td><strong>Module II</strong>: Screening for HIV and other infectious agents</td>
</tr>
<tr>
<td>- Introduction to transfusion microbiology</td>
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<tr>
<td>- The human immunodeficiency virus</td>
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<tr>
<td>- HIV screening assays and factors affecting their use</td>
</tr>
<tr>
<td>- HIV antibody screening of donated blood</td>
</tr>
<tr>
<td>- Quality assurance</td>
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<tr>
<td>- Screening for other transmissible infectious agents</td>
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<tr>
<td><strong>Module III</strong>: Blood transfusion technology</td>
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<tr>
<td>- Immunology</td>
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<tr>
<td>- ABO blood grouping</td>
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<tr>
<td>- Rh blood grouping</td>
</tr>
<tr>
<td>- Compatibility testing</td>
</tr>
<tr>
<td>- Techniques in blood group serology</td>
</tr>
<tr>
<td>- Storage and transport of blood and blood products</td>
</tr>
<tr>
<td>- Stock control</td>
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produced when an appropriate funding source has been identified.

GPA continues to promote the education, motivation, recruitment and retention of low-risk blood donors who give their blood voluntarily as the cornerstone of a safe blood supply.

WHO commissioned the American Institutes of Research to produce a document entitled Communicating with blood donors (in preparation) in close collaboration with GPA. This interactive learning material, to be published in 1994, will help blood donor organizers and recruiters to educate, motivate, recruit and retain safe blood donors. It will be used in regional and in-country training courses as an adjunct to material developed for the mentors advising the distance learners of Safe blood and blood products.

During the biennium, GPA also began to collect background information for the development of materials for educating the prescribers of blood about the appropriate use of blood and blood products. These materials will contain information on basic blood volume physiology, indications for transfusion, and the use of simple blood substitutes such as crystalloids and colloids.

Training and materials development

As in previous years, considerable GPA staff and consultant time was spent during the biennium on training, both formal and informal, during country visits. GPA set up a training and materials development unit in 1991 with two main aims: to help fulfil a wide range of perceived training needs in the field of HIV/AIDS; and to provide a focus for transforming technical recommendations from GPA into a form usable by national AIDS programmes. The staffing of the unit was increased in 1992.

Although much of the unit’s training activity during the biennium was in producing materials to improve the planning and management of national AIDS programmes, it also carried out extensive work on training for specialists in areas such as sexually transmitted diseases, HIV/AIDS counselling, and nursing and midwifery and provided training support to countries.

In the area of general materials development, the unit reviewed guidelines produced by GPA, adapted them for the respective target audiences, and field-tested them in collaboration with GPA author units, regional offices, countries, and other agencies within the United Nations system. The following are examples of direct training support provided to countries during the biennium.

Examples of training support for countries

• Starting in 1992, and through visits in 1993, GPA helped India’s National AIDS Control Organization (NACO) to develop and carry out a training programme in AIDS prevention and control for physicians and nurses at state level. The programme was funded by the World Bank.

• Together with the Canadian International Development Agency and the University of Manitoba, Canada, GPA staff advised the University of Nairobi, Kenya, on the development of STD training curricula for health workers in East Africa. This activity involved the development of methods to assess training needs.

• GPA collaborated with WHO’s Regional Office for South-East Asia on reviewing counsellor training needs in Nepal, and subsequently in producing a curriculum and training materials for AIDS counsellors.

Training for specialists

As mentioned above, an important function of the training and materials development unit was to collaborate with specialists in other parts of GPA to produce training materials in specific technical areas. The development of distance learning materials for blood transfusion technicians, described earlier in this chapter, was one innovative example of this in 1992-1993.

Others, described more fully elsewhere, include the following:

• STDs – Treatment flow-charts – sometimes known as algorithms – have been developed and are being validated as part of a comprehensive training initiative to improve the clinical management of STDs. These charts will be a key element of a programme developed initially for the continuing education of health service providers (see Chapter 5).

• HIV/AIDS counselling – Considerable effort was expended during the biennium on the production of a training manual to strengthen HIV/AIDS counselling. This comprehensive resource, expected to be published in 1994, will be used to train would-be HIV/AIDS counsellors from different educational and professional backgrounds, and for different counselling situations (see Chapter 3).

• Nursing and midwifery – Teaching modules for nursing and midwifery education in the area of prevention and management of HIV infection were published in December 1993. Adapted from materials developed in WHO’s Regional Office for the Western Pacific, they are designed for basic, post-basic, and continuing education programmes (see Chapter 3).

• Epidemiology and surveillance – Training workshops on sentinel HIV surveillance were held at least once by all WHO regions in 1992-1993. By the end of the biennium, people from more than 100 coun-
tries had taken part in at least one GPA workshop on sentinel surveillance since the Programme began. Practical in form, the workshops culminate in the drafting of protocols and plans of action for implementing sentinel surveillance in each participating country. They have played a major role in strengthening HIV/AIDS surveillance by national AIDS programmes worldwide. Although their main subject is epidemiology, the workshops have also proved to be a useful forum for explaining GPA recommendations – on laboratory HIV testing and the importance of an individual’s right to confidentiality, for example – to national AIDS programme managers (see next section).

GPA also offers direct on-the-job training to principal investigators in a broad range of skills needed to conduct research funded by the Programme. The following areas are covered:
- efficacy trials of WHO treatment algorithms for HIV-related infections, including tuberculosis
- efficacy trials of prophylactic drugs to delay or prevent the onset of HIV-related infections, including tuberculosis
- efficacy trials of drugs to treat people with HIV infection
- vaccine trials
- trials to measure the efficacy of vaginal spermicides in preventing HIV transmission
- condom stability in tropical countries
- the establishment of baseline epidemiological data
- STD-related HIV transmission
- HIV-1 perinatal transmission
- HIV-1 transmission related to breast-feeding
- situation assessment of HIV in low-prevalence countries
- time of occurrence of perinatal transmission of HIV-1.

**Surveillance and forecasting**

GPA’s work during the biennium in the area of HIV/AIDS epidemiology and surveillance continued to embrace epidemiological software development, the promotion of standardized methods for estimating national, regional and global HIV/AIDS prevalence and incidence, and technical cooperation with selected countries for sentinel HIV surveillance.

**Sentinel HIV surveillance**

GPA continued to provide technical support aimed at enabling national AIDS programmes to implement sentinel HIV surveillance, i.e. periodic cross-sectional
surveys of seroprevalence in selected “sentinel” populations. To date, more than 120, mostly developing, countries have benefited from such support.

The Programme recommends that the number of sentinel sites that should be operational in countries, depends on factors such as population size, geographical size and accessibility, and the distribution and dynamics of HIV-associated risk behaviours. Figure 6.2 provides a broad view of sentinel surveillance implementation as of the end of 1993.

During 1992-1993, intercountry activities aimed at strengthening sentinel surveillance by national AIDS programmes included the following:

• At a GPA meeting in Dakar, Senegal, held in 1991 with the support of the World AIDS Foundation (WAF), epidemiologists from national AIDS programmes in the African Region discussed common obstacles to sustaining or accelerating the implementation of sentinel surveillance, and made recommendations for overcoming them (see Box 6.6). These recommendations were published in 1992.

• A workshop on HIV/AIDS surveillance was held in Cairo, Egypt, in April 1993. Epidemiologists from national AIDS programmes in North Africa and the Middle East reviewed progress in initiating, and to a lesser extent sustaining, sentinel surveillance in the Eastern Mediterranean Region.

• A European Region workshop on initiating sentinel surveillance in the newly independent states of eastern and central Europe was organized in Kiev, Ukraine, in May 1993. It was facilitated by HIV/AIDS epidemiologists working in Africa, Europe and South-East Asia who were fluent in languages spoken by the participants. National AIDS programme epidemiologists from the region acquired an understanding of the rationale for GPA guidelines on epidemiological surveillance for HIV/AIDS prevention and care.

As a complement to global and intercountry activities, GPA provided technical cooperation in strengthening national sentinel surveillance systems in Brazil, Egypt, India, Pakistan and Viet Nam. Similar cooperation with China, Nigeria and the Sudan is planned for the 1994-1995 biennium.

For India, GPA provided technical support to a UNICEF-supported workshop on sentinel surveillance held by the Government of India and targeted at the north-eastern states. This led to a subsequent all-India workshop on the same subject. The outcome of these two workshops was reinforced by a GPA consultant surveillance specialist provided for six months to the Indian National AIDS Programme. Table 6.5 shows the Indian states and territories for which surveillance plans and protocols were prepared during the biennium.

<table>
<thead>
<tr>
<th>Box 6.6 Consensus recommendations on sentinel HIV surveillance</th>
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<tbody>
<tr>
<td>• Training, supervision, and feedback to health workers should continue to be improved.</td>
</tr>
<tr>
<td>• The provision of financial incentives to health workers for surveillance should be reviewed, as in the longer term they may be detrimental to sustainability.</td>
</tr>
<tr>
<td>• WHO/GPA guidelines on sentinel HIV surveillance should be followed wherever possible, and the system should be simple and practical, leaving most resources available for prevention activities.</td>
</tr>
<tr>
<td>• External funding agencies should be encouraged further to coordinate their surveillance-related activities.</td>
</tr>
<tr>
<td>• Resource allocation for supervision should be improved, and problems identified during such visits should be followed up, thereby helping improve health worker motivation.</td>
</tr>
<tr>
<td>• Western blot HIV testing should not be necessary for surveillance purposes.</td>
</tr>
<tr>
<td>• More emphasis should be placed on interpreting results obtained, and following up with public health action based on the results of surveillance.</td>
</tr>
</tbody>
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<tr>
<th>Table 6.5 States/territories of India for which protocols and plans of action on sentinel HIV surveillance were prepared in 1992-1993</th>
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<tr>
<td>Andaman/Nicobar Is</td>
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<tr>
<td>Andhra Pradesh</td>
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<td>Arunachal Pradesh</td>
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<td>Assam</td>
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<td>Bihar</td>
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Note: States/territories in bold received field support from a GPA surveillance specialist.
HIV infection and AIDS have been epidemic in Brazil since the early 1980s. Initially, the Brazilian National AIDS Programme (PNDST/AIDS) emphasized AIDS case surveillance to help identify the major risk behaviours and practices associated with HIV/AIDS in Brazil. In May 1992, emphasis shifted to a national project for periodic and systematic cross-sectional surveys of HIV seroprevalence in selected sentinel populations, in collaboration with the state and municipal STD/AIDS programmes concerned.

To obtain the most accurate estimates of point HIV prevalence in the sentinel sites, the unlinked anonymous method was used. Residual sera from blood legitimately collected for syphilis screening was HIV-tested after all information potentially identifying the donor had been removed. To avoid including the same person more than once in the same survey (double counting), sample collection periods were limited to 8 weeks at all sites.

The results from 8 sentinel STD clinics are presented in Table 1.1. Ten sentinel STD clinics were originally selected in this initial phase of the project, but two were unable to implement the project as planned. Small sample sizes were obtained in Salvador (Bahia) because of the unexpected closure of a large part of the catchment area for renovation and reconstruction. The high seroprevalence rates found in Rio de Janeiro appear to be the result of the particularly high-risk catchment population, as well as the erroneous inclusion of some individuals specifically presenting for voluntary HIV testing.

The results indicated a wider than expected distribution of sexually transmitted HIV infection in Brazil, and have helped the national programme to obtain additional resources to expand HIV/AIDS prevention activities. In follow-up meetings organized by the PNDST/AIDS, the importance was again emphasized of careful supervision of sentinel sites, to avoid some of the problems encountered in the initial 1992–1993 surveys. Plans were also prepared for expanding sentinel HIV surveillance to selected antenatal clinics in the cities and states already actively participating in the project, repeating surveys in the existing sentinel clinics in 1994, and expanding sentinel surveillance to 11 additional cities. The PNDST/AIDS plans to have 60 sentinel sites operational by the end of the 1994–1995 biennium.

A case study (see Box 6.7) describes the conduct and outcome of collaboration by GPA and PAHO with the Brazilian National AIDS Programme. Sentinel HIV surveillance findings from Brazil are shown in Table 1.1.

GPA’s recommended sentinel HIV surveillance strategies have always emphasized protection of the rights of HIV-infected persons. The implementation of sentinel HIV surveillance worldwide has continued to play an important role in disseminating the public health rationale for safeguarding the rights of persons with HIV/AIDS. Surveillance through AIDS case reporting, and monitoring of HIV seroprevalence data collected as part of research studies, are also recommended as second-level strategies important in maintaining a broad view of the epidemic’s distribution and spread.

**Country-specific estimates**

Mobilizing national efforts against the HIV/AIDS pandemic requires information on the extent of HIV infection within individual countries. Such estimates are useful for developing prevention activities. They are also necessary for planning impact alleviation programmes including care of HIV-infected individuals, support for dependents of those ill from HIV-related conditions, and the reduction of negative social impact related to the premature mortality of HIV-infected adults. At the regional and global level these estimates constitute the foundation of an aggregate picture of the current dimension and dynamics of the pandemic.

GPA epidemiologists are cooperating with national authorities in making country-specific estimates of adult HIV prevalence. Preliminary estimates are based on seroprevalence data abstracted from country reports and from continuing review of seroprevalence databases, as well as on routinely reported AIDS cases, population age/sex structure and urban/rural differences. Where possible, social and behavioural data, STD data and other information are used to improve the estimates.

Initial country-specific estimates have been sent for review to two regional offices, and with their feedback, GPA headquarters staff are in the process of modifying them. The same review procedure will be followed for the other four regions, and the resulting estimates will be sent to the national AIDS programmes for final agreement. With the countries’ approval, the country-specific estimates will be published in early 1995.

**Epidemiological software development**

During the biennium, in collaboration with the United States Centers for Disease Control and Prevention (CDC), GPA designed and developed version 6 of EpiInfo®, a programme to facilitate the management
and analysis of epidemiological data. *EpiInfo* contains modules for defining data entry screens, entering and updating data, and producing basic statistical analysis. It may also be used to create menu-driven systems for ongoing surveillance activities.

To date, more than 40,000 copies of the programme have been distributed in Arabic, Chinese, English, French, Portuguese, Russian and Spanish, the translations having been done by collaborators. *EpiInfo* is used worldwide for HIV/AIDS surveillance, general communicable disease surveillance, outbreak investigation, and in the training of public health professionals.

*EpiMap*,7 also developed in collaboration with CDC, is designed for producing thematic maps. It allows the creation of base map boundary files, basic data entry, the selection of three cartographic methods for displaying data, and the annotation of the map. Version 1 became available in January 1993, and during the biennium GPA distributed several hundred copies to ministries of health, international health agencies and universities.

*EpiModel*,8 developed during the preceding biennium, permits short-term forecasting of AIDS cases based on the natural history of HIV, an estimate of HIV prevalence, the year in which widespread transmission of HIV began in the population, and knowledge of local progression of the epidemic. The programme was distributed during 1992-1993 to individuals and institutions working in health, ministries of health, and others working in HIV/AIDS epidemiology.

As effective HIV/AIDS surveillance draws upon a variety of data sources, GPA has developed a prototype computer-based information system to facilitate the management and analysis of HIV/AIDS surveillance data, based on the generic software described above. It illustrates important principles of data management and analysis for HIV/AIDS surveillance data and contains examples of data management systems for reported AIDS cases, sentinel HIV surveillance, seroprevalence studies, population data, STD rates and behavioural data.

**References and notes**


African Region

During the 1992-1993 biennium the HIV/AIDS pandemic continued to spread throughout the African Region, with an overall increase of 52% in the number of reported AIDS cases at the end of the biennium over the total for the previous biennium. AIDS cases have been reported in all 44 Member States of the Region. The national authorities have reacted by organizing AIDS awareness campaigns and initiating numerous activities at national, district and community levels to combat the disease. For instance, in Côte d'Ivoire, Ghana, Kenya, Lesotho and Zambia there were more AIDS awareness campaigns and briefings of parliamentarians, government ministers and opinion leaders. There was an increase in activities concerned with informing and educating the general public and particular population groups, provision of care for AIDS patients and their families, orphan care and rehabilitation, counselling and promotion of condom use.

All countries in the Region have established national AIDS programmes, AIDS committees and also sub-committees dealing with specific aspects of the Programme. During the biennium more countries made provision within their national budgets for AIDS prevention and care activities and more governments assumed responsibility for the salaries of national staff members of their AIDS programmes. All countries have appointed a national programme manager, director or coordinator. Many of these personnel are now very experienced in the work, but in a number of countries the turnover rate of programme managers continues to be high. GPA produced materials for a training course for programme managers (see chapter 6), and the first such interregional course was held in Zimbabwe in April 1993.

National AIDS programmes established or increased epidemiological surveillance activities. Sentinel surveillance sites have been equipped for collecting data on a regular basis. Surveillance data are often available on women attending antenatal clinics and on blood donors, but are much less frequently available on patients with STD or tuberculosis, and on commercial sex workers. Several countries have developed their own AIDS case definition for use by health workers in diagnosing and reporting AIDS cases.

Almost all leaders in every sector of African society are now making AIDS prevention and control a top priority. Information, education, condom promotion and improved health services to treat sexually transmitted diseases are receiving increased attention. In this context, during the biennium, community-based groups, including NGOs and religious groups, continued to be encouraged to participate in AIDS prevention in an active partnership with national governments' AIDS control efforts. The support of the private sector has been invaluable: in most countries there has been rapid growth of local nongovernmental and community-based organizations undertaking activities related to one or more aspects of AIDS prevention and control. Individuals, employers and workers are becoming involved in prevention activities, while community organizations and associations are more active in the domains of care provision and counselling. GPA is advocating the mobilization of local businesses to form a network of people in business for AIDS control at the workplace and in the community.

In short, the national response to AIDS is increasingly embracing all sectors of African society. While ministries of health are still providing technical leadership for AIDS programmes, it is now widely understood that such programmes are the concern of all ministries and public and private sectors.

For example, efforts were made during the biennium to persuade ministries of education and other bodies involved in education to modify school curricula so as to include or increase AIDS education. Many schools use extracurricular sessions for this purpose. In several countries, anti-AIDS clubs exist in schools, some have organized theatres and playgroups, while others encourage pupils and students to compose songs and poems with AIDS prevention messages.
While there is a steady increase in the demand for and sales of condoms in all countries of the Region, no country has an effective condom management programme to make condoms more accessible and affordable. In general, condoms are becoming increasingly acceptable to sex workers and their clients, young people and the general public. However, further efforts are required in this area, including the development of social marketing activities.

Significant achievements were made in many countries in the mobilization and training of health care workers who provide community-based home care (including community health workers, traditional healers, traditional birth attendants, families and all volunteer care-givers, especially women’s groups), the development of training materials and guidelines (for instance, in Botswana, Kenya, Malawi, Senegal and Zimbabwe), the procurement and use of gloves for use by midwives in their work (Togo), and the integration of HIV/AIDS activities in the national health system.

Efforts were made to implement AIDS counselling activities within primary health care structures and to promote and coordinate intersectoral activities in this area. Counselling workshops and training programmes were conducted, and counselling services are being set up in many countries, some of which (e.g. Botswana, Uganda and Zimbabwe) have produced guidelines and training materials for counselling activities.

A GPA survey was undertaken to elucidate the role of women’s organizations in the fight against AIDS. The survey identified 154 associations in 21 countries in the Region, involved in such activities as information and education, training, social management and support, counselling and community-based home care, income-generating activities, condom distribution and spiritual support. GPA gave technical and financial support to the Society for Women and AIDS in Africa, in connection with a “training-of-trainers” seminar on counselling, attended by participants from Angola, Benin, Cameroon, Central African Republic, Senegal and Uganda.

A WHO survey carried out in December 1992 showed that only 10 Member States in the Region can guarantee the safety of blood transfused to patients in the health care setting. The blood route is not a major one for HIV transmission, but it could be completely eliminated by establishing well-equipped nationwide HIV screening facilities. Each year, just under 1.4 million transfusions are given in the Region, two-thirds of them to children. The ratio of women to men among adult recipients is 7:3.

Member States have responded to a resolution of the Regional Committee for Africa calling for the integration of national services concerned with STDs and AIDS. In most countries of the Region, STD officers have been recruited to work within national AIDS prevention and control programmes. In recognition of the important role of STDs in the transmission of HIV, several governments have elaborated STD prevention and control plans as integral parts of medium-term plans for AIDS control and have undertaken reviews of both programmes together. GPA collaborated in STD training seminars on case management organized in Congo, Côte d’Ivoire, Togo and United Republic of Tanzania.

By the end of 1993, the first-generation medium-term plans of all but two national AIDS programmes (those of Madagascar and Namibia) had come to an end. Some countries opted to extend their plans to enable them better to prepare and undertake activities for the formulation of a multisectoral second-generation medium-term plan. At the end of the first-generation plans, external reviews had to be undertaken. During the 1992-1993 biennium GPA provided technical assistance to 42 countries through country and subregional teams, specialist consultants, including national programme managers experienced in conducting the review, planning and evaluation of medium-term plans. During the biennium GPA continued to participate in technical visits, programme reviews and national consensus workshops.

In an effort to better monitor and coordinate activities, GPA sent out a questionnaire to African country programmes so as to obtain information on all bilateral contributions received for AIDS activities. The feedback so far indicates that success in mobilizing financial support varies from country to country. Contributions are being received not only from major donor countries but also from international NGOs and private institutions.
Box 7.1
An AIDS awareness campaign in Ethiopia

On a cool Sunday morning on 28 February 1993, a 64-year-old grandfather started a strenuous and gruelling 1200-km walk from the Addis Ababa stadium to Asmara via Massawa with nothing more than his small bag. His mission: to talk to as many people as possible on his way about HIV/AIDS and STDs, with the youth of Ethiopia as his primary target group.

Ato (Mr) Tekie Geze/Mariam first became interested in health issues about 23 years ago, when he started donating blood to the Ethiopian Red Cross. To date he has donated 98 units of blood. The Red Cross honoured him and presented him with a medal.

While working for the Ethiopia Metal Works Corporation (where he worked for 15 years), he was the company's health coordinator. He retired seven years ago. At one time Ato Tekie was chairman of the Diabetic Association although he is not himself a diabetic.

Once he got the idea, it took him just over two months to plan the AIDS Walk. He first approached the Department of AIDS Control of the Ministry of Health for permission to start the walk. He received full support from the Ministry and personal encouragement from the Vice-Minister of Health, Dr Azeb Tamirat. Letters were prepared by the Ministry of Health introducing him to the Regional Health Bureau of each town that he passed through and requesting the local authorities to support and facilitate the work of the AIDS Education Ambassador.

From the start of the walk, the Department of AIDS Control maintained contact by telephone with every town ahead of Ato Tekie, informing them about his imminent arrival and requesting them to give him full support.

On arrival in each town, Ato Tekie would report to the local Ministry of Health office, Ministry of Education office and the police. A programme would be arranged for him to address schoolchildren, health centres, hospitals, military camps, teacher training institutions, police officers' colleges, markets and anywhere where people were assembled.

Ato Tekie believes that he addressed over 38,000 people on this journey. He says that he aroused so much interest that people grouped around him and asked questions about AIDS. Health personnel at each of his stops helped him to answer the difficult questions. He stopped in 17 towns and would stay three to four days in each.

It took him a total of 67 days to complete the journey. He walked during the day and rested at night, sometimes under a bridge if he could not get to a town or village. He walked under the scorching sun without water to drink, or sometimes he would be caught in the rain. But he continued undismayed.

Television crews, reporters and well-wishers would be waiting to receive him as he entered towns. Since the Department of AIDS Control kept track of him, the local authorities would have informed in advance of his expected arrival and so a crowd would be waiting to receive him.

Generally, Ato Tekie managed to create awareness and arouse interest in the disease. People started asking questions and he stimulated debate on the issue, which continued long after he had left. Hearing about the problem from a lay person old enough to be their grandfather made people, particularly young people, listen to him more attentively and believe him.

Ato Tekie's only regret is that he could not provide all those he met with information materials to take home. He wished he had been able to carry large quantities of leaflets and posters. His own assessment was that a significant proportion of the people he met did not believe that AIDS existed and they always demanded to see an AIDS patient. However he did his best to convince them.

On completing his mission, Ato Tekie returned to Addis Ababa by air. He returned to a hero's welcome from the Department of AIDS Control. He was officially welcomed back by the Vice-Minister of Health and the three WHO/GPA staff in Ethiopia, who had earlier pledged one Ethiopian birr per kilometer walked, and who presented him with 1200 birr.

Region of the Americas

A cumulative total of 435,978 AIDS cases and 248,593 deaths were reported in the Region of the Americas as of December 1993. The rates of AIDS cases per million population for each subregion were (in descending order): (1) North America 228.5; (2) the Caribbean 143.3; (3) Brazil 58.2; (4) Central American isthmus 39.0; (5) Mexico 34.9; (6) Latin Caribbean 20.8; (7) Andean Area 18.3; and (8) Southern Cone 16.3.

In the Americas, the male:female ratio of reported cases fell steadily from 11.7 males per female in 1986 to 5.6 males per female in 1992. While male cases increased by only 1.9%, from 54,287 cases in 1991 to 55,301 cases in 1992, female cases increased by 11.4%, from 8804 cases in 1991 to 9807 cases in 1992.

For the Region as a whole, homosexual/bisexual transmission continued to be the primary mode of transmission (57%), followed by injecting drug use (22%) and heterosexual transmission (11%). In the Caribbean, heterosexual contact was the predominant transmission mode (69%), followed by homosexual/bisexual (22%) and perinatal transmission (9%). Among the subregions of Latin America, the largest proportion of cases was associated with homosexual/bisexual transmission in the Andean area (71%), Southern Cone (55%), Brazil (49%) and Mexico (56%), whereas heterosexual transmission accounted for the largest pro-
portion of cases in Central America (64%) and in the Latin Caribbean (73%). In addition, compared to other subregions, a significant proportion of cases was associated with injecting drug use in the Southern Cone (24%) and in Brazil (24%).

Cases associated with homosexual/bisexual contact declined, and an increasing shift to heterosexual transmission occurred in the Region as a whole. It is evident that with the increase in the number of infected women of childbearing age, the numbers of paediatric cases in the Region will continue to increase. In areas where heterosexual transmission is the predominant mode of transmission and where the male:female ratio is low, such as the Central American isthmus and the Caribbean, the proportion of paediatric cases among total reported cases was comparatively high. In the Central American isthmus, Honduras had the highest proportion of paediatric cases (4%), followed by Costa Rica (3%). In the Caribbean, Jamaica had the highest (10%), followed by Bahamas (8%). A similar situation was found in areas such as Brazil and the Southern Cone, where transmission through injecting drug use is increasing, and more and more women are becoming infected as a result of drug use or through sexual intercourse with their husbands or sexual partners who are injecting drug users (IDUs).

Available HIV seroprevalence data are consistent with the patterns observed in reported AIDS cases in Latin America and the Caribbean. For example, in the Southern Cone and Brazil, prevalence rates of HIV infection among IDUs range from 23% (n=306) in Sao Paulo city to 65% (n=105) in Campinas, Sao Paulo. Similarly, 1991 studies also documented high seroprevalence rates in IDUs, ranging from 35% (n=58) in Rio de Janeiro city to 59% (n=160) in Santos city. In Argentina (areas unspecified), several studies carried out from 1989 to 1992 in IDUs (both sexes) showed high infection rates ranging from 29% to 59%. Among sex workers in Argentina, HIV seroprevalence rates ranged from under 2% in some studies before 1990 to 27% in 1991. Infection rates among high-risk populations (prostitutes, STD patients and others) were found to be highest in Haiti (42%), Martinique (39%), Honduras (36%) and Brazil (24%). In low-risk populations (pregnant women, blood donors and others) the highest rates are found in Honduras (3.6%), Bahamas (2.9%), Dominican Republic (1.3%) and Brazil (1.2%), thus reflecting a more advanced stage of the epidemic in the Caribbean, Brazil and Central America. For the entire Region, the Organization estimated that as of end 1993 there were 2.7 million men, women and children infected with HIV: 1 million in North America and 1.7 million in Latin America and the Caribbean.

Surveillance data for other sexually transmitted diseases (STDs) are scarce, out of date, or of uneven quality. Although it seems that in most countries there has been a reduction in the reported incidence of gonorrhoea, conditions are present in the Region for a new surge of gonococcal infections, facilitated by very high rates of penicillinase-producing _N. gonorrhoeae_ in all of the Caribbean, most of Central America and probably also South America. In many countries of the Region other STDs such as early infectious syphilis, congenital syphilis and complications of untreated chlamydial infections, such as pelvic inflammatory disease, were on the rise. For example, reported cases of congenital syphilis were increasing in more than half of the countries reporting this condition. The prevalence of reactive serological tests for syphilis in pregnant women ranged from just over 1% in Cuba to over 3% in Haiti and Paraguay. Other viral STDs such as human papilloma virus also seemed to be increasing and reported cases of cervical cancer were increasing in over two-thirds of the countries reporting this condition.

During 1992-1993 GPA continued to collaborate with Member countries in strengthening their national AIDS programmes (NAPs). In 1992, second-generation medium-term plans were prepared for Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama and submitted to the donor community for support in May 1993. During 1993, second-generation plans were completed in Chile, Ecuador and Uruguay, and initiated in Bolivia, Colombia, Paraguay, Peru and Venezuela. In 1992-1993, programme reviews were conducted in Belize, Bolivia, Chile, Colombia, Ecuador, Uruguay and territories in the Caribbean dependent on the United Kingdom.

In order to strengthen programme management, meetings with NAP managers took place in 1992 in each of the three subregions: a workshop on programme implementation in Barbados for the English, French and Dutch-speaking Caribbean; a workshop on programme monitoring and reporting for seven countries in the Central American isthmus; and a seminar on planning and policy development for the ten Latin countries in South America. In 1993 the NAP directors of 27 Latin American and Caribbean countries met in Cartagena, Colombia, to review plans for technical cooperation with GPA, and also among indi-
individual countries and at the subregional level. The meeting agreed on 15 regional targets for the 1994-1995 biennium.

For advocacy purposes, high-level GPA staff met with the Presidents of Honduras and Colombia and the First Lady of the state of São Paulo in Brazil to advise them of the serious and increasing threat of AIDS, particularly to women, children and families. At the regional level, a successful meeting of Latin American Ministers of Health was followed by discussion and approval of a resolution on AIDS at the Second Summit of Heads of State and Government of the Ibero American countries held in July 1993 in Brazil.

All but one of the 25 regional targets set for the 1992-1993 biennium by Member Countries were totally or almost totally achieved, including (1) execution by NAPs of at least 85% of all planned activities in all but five countries; (2) continuous increase in the coverage and quality of screening and other measures to ensure blood safety (only eight countries out of 44 had not yet fully achieved this target); (3) participation of nongovernmental organizations (NGOs) in executing at least 15% of activities and budget; and (4) initial, promising collaboration between agencies, sectors, and programmes in AIDS control activities in an increasingly larger number of countries.

Nevertheless, several constraints to programme implementation remained. The major internal constraints included difficulties in reconciling the various administrative procedures of GPA, countries and bilateral and multilateral agencies. The major external constraints, at the country level, included lack of political commitment in some countries, sometimes reflected in the low priority given to AIDS and STD prevention; weak managerial and administrative structures; and the short duration of employment of NAP directors who remain in their position for an average of only 1.5 years. The main obstacles to intersectoral and interagency cooperation and coordination are differences in the mandate, mission, and procedures of the growing number of agencies interested in working on AIDS; the occasionally different positions of NGOs and government agencies on some AIDS-related issues; and the increasing competition between programmes, agencies and sectors for shrinking resources devoted to AIDS prevention and care.

In order to overcome or minimize some of these obstacles, GPA plans to: (a) support the development of management procedures and strengthen the countries’ managerial capacity through training and direct technical cooperation; (b) establish contacts at the highest levels of government and make effective presentations to political and opinion leaders on the socioeconomic consequences of AIDS, so as to elicit a broad-based response; (c) promote the establishment of functional interagency and intersectoral committees.

Box 7.2
Multisectoral and high-level political support in Honduras

The first four cases of AIDS were reported in Honduras in 1985. Since then, a total of 2867 AIDS cases have been reported, with a case rate of 134.2 per million population, one of the highest in the Americas. National estimates indicate that there may be up to 60 000 persons infected with HIV in the country. The epidemic in Honduras has been mostly attributed to heterosexual transmission, with a male/female ratio of around 2.1 since its early stages.

Due to the magnitude and characteristics of the epidemic in Honduras, the national AIDS programme decided that coordination among donor agencies was a priority if the national plan for prevention and control of AIDS was to be successful. In addition, it was decided that the fight against AIDS needed the highest governmental and intersectoral support, and therefore, the NAP embarked on a campaign to mobilize the whole country in support of AIDS prevention.

As a result, in July 1993, an AIDS/STD Interagency Committee was established in Honduras; this Committee is chaired by the Minister of Health. The Committee coordinates the activities of all external cooperation agencies working in AIDS in the country (e.g. USAID, UNICEF, UNDP, PAHO/WHO, Canadian International Development Agency), through regular meetings of agency representatives.

In August 1993, the President of Honduras established a high-level commission against AIDS, and the First Lady was appointed chairperson. The creation of the commission demonstrated the high level of political commitment and multisectoral involvement which could be engendered in response to the epidemic. The main objective of the commission is to collaborate with the NAP in the unification of national efforts against HIV/AIDS. Specific objectives include: (a) promotion of broad participation of public and private sectors in support of AIDS prevention and control activities; (b) resource mobilization in support of the national plan for AIDS prevention and control; (c) promotion, development and follow-up of intrasectoral and intersectoral agreements among social institutions; and (d) promotion of multisectoral political support to strengthen AIDS/HIV prevention activities.
The number of condoms distributed in Jamaica increased from about 2 million in the mid-1980s to around 8.5 million in 1991, of which about 60% were paid for by the users. However, the annual need for HIV/STD prevention is estimated at 30 million condoms. To close this gap, Jamaica started a social marketing programme in 1992, promoting condom use for everyone through advertising, face-to-face interaction and a variety of other culturally appropriate approaches.

An initial six-week condom blitz was conducted at the end of 1992. Throughout 1993 the promotion continued using various marketing approaches and with the participation and support of megastar Shabba Ranks and other musicians. Efforts to promote the image of condoms, to make them acceptable and accessible and to encourage their use with both regular and non-regular partners are beginning to pay off. In only one year condom use among 20-29-year-olds increased from 75% to 84%. Compared to 1992, greater and more consistent use of condoms with regular partners was reported in 1993. Condom use in a stable relationship, traditionally a taboo subject in Jamaica because of the issue of marital fidelity that it raises, increased from 37% to 53% on the last occasion the couple had sex. However, condom use with non-regular partners remained at 48%.

The campaign succeeded in promoting the image of the condom user as young, responsible and monogamous. The perception of condom use as easy increased and the feeling of embarrassment decreased. Condom promotion efforts contributed to an improved image of condoms as safe, reliable and desirable to use. However, females were noticeably slower than males in acquiring these attitudes. Young males reported a higher level of agreement on unconditional use in new or established relationships.

While positive changes in attitudes and actual condom use are taking place in Jamaica, efforts to promote the use of condoms will continue. Widespread promotion and distribution of condoms through the private sector remain a challenge for the coming years.

### South-East Asia Region

HIV arrived in South-East Asia much later than in other parts of the world, but it rapidly spread and by the end of 1993 had emerged as a serious public health problem in the Region. All the countries were concerned with the expanding epidemic.

HIV infection was first recognized in 1984 in Thailand. In most other countries of the Region, HIV infection was not diagnosed until 1986 or later. WHO estimates that there were more than 2 million HIV-infected people in the South-East Asia Region as of December 1993. HIV infection rates have now begun to increase in the general population as well as among people with high-risk behaviours.

Although less than 6000 cases of AIDS had been reported in South-East Asia by the end of 1993, it was estimated that more than 50,000 had occurred. Thailand and India had reported the largest number, accounting for more than 95% of reported cases. Three countries (Bhutan, Democratic People’s Republic of Korea and Maldives) had not yet reported AIDS cases, although HIV infection had been documented in Bhutan and Maldives.

Trend data based on seroprevalence surveys confirm the alarming increase of HIV infection rates in selected high-risk populations. In Thailand, rates of less than 1% among injecting drug-users (IDUs) in Bangkok were found in various ad hoc surveys from 1985 to 1987. However, rates increased sharply to 40% by September 1988 and have now almost stabilized at that level. Rates similar to those for Bangkok were seen in various provinces. This epidemic among IDUs was followed by that among female prostitutes and, by successive waves of transmission, in male clients of the prostitutes, and regular partners of these men. Nationally, the prevalence rates in June 1993 were 35% in IDUs, 29% in prostitutes, 8% in male STD patients and 1.4% among pregnant women.

In Myanmar, explosive increases in HIV seropositivity have been documented among IDUs – from 17% in 1989 to 59% and 71% in 1990 and 1991 respectively. In addition, the rates among STD patients have increased from 1.9% in 1990 to 16% in 1991 and from 8% to 16% among female prostitutes during the corresponding period. Sequential infection starting with IDUs and spreading to female sex workers, to STD patients and to the community was also observed in Myanmar. The national averages of HIV seroprevalence during March 1993 sentinel surveillance were 74% among IDUs, 9% among prostitutes and 1.4% among pregnant women.

In a study in the north-eastern Indian state of Manipur, none of the 2322 IDUs seen from 1986 to 1989 were seropositive for HIV. However, the rate increased to...
54% during the period October 1989 to June 1990, and remains at this level. In Bombay, the HIV seropositivity rate among prostitutes has increased from 2% in 1988–1989 to 45% in 1993. There is also evidence of increase in HIV infection among women attending antenatal clinics, as 0.5–1% are seropositive in Bombay and Manipur.

There is a possibility of similar scenarios being repeated in other countries of the Region. Risk factors which promote the spread of HIV, such as injection of drugs, male patronage of prostitutes, high rates of STD and low condom use, are present in all countries. For example, in Nepal, the HIV infection rates among sex workers and STD patients, although very low, doubled between 1992 and 1993.

In response to the growing pandemic, the governments in the Region accorded AIDS prevention a high priority during 1992–1993. National AIDS committees were established, education of health care workers and the general population was started, and laboratory facilities were strengthened for screening donated blood for HIV and for the diagnosis of HIV infection. Measures to reduce transmission through contaminated injecting equipment were promoted. All countries were implementing medium-term AIDS plans developed in collaboration with GPA. These plans established the aims, targets, strategies and activities directed at AIDS prevention best suited to each country situation. The plans had earlier been funded mainly by GPA. However, given the global economic situation and resource constraints, governments were by 1993 increasingly taking upon themselves the responsibility for AIDS prevention and care. This is exemplified by Thailand’s plan to spend about US$ 46 million in 1994 from government sources, India having obtained a loan of US$ 85 million from the World Bank for AIDS prevention, and Myanmar having established AIDS committees at the township level. However, in some countries, WHO still remained the only agency providing both technical and financial support to national AIDS programmes.

WHO monitors country-level activities on a regular basis through country visits and the receipt of quarterly and annual programme reports. During 1992–1993, GPA participated in the review of national AIDS control programmes in Bangladesh, Bhutan, Indonesia, Mongolia, Myanmar, Nepal, Sri Lanka and Thailand. These reviews resulted in specific recommendations for further strengthening of the programmes. WHO also cooperated with India, Maldives, Mongolia, Myanmar, Nepal and Thailand in developing their strategic plans or second-generation medium-term plans for the prevention and control of HIV/AIDS.

Through its intercountry programme, WHO provided support in the implementation of national AIDS programmes, by offering training to improve AIDS reporting and sentinel surveillance of HIV infection; strengthening laboratory diagnostic capacities through technical advice and on-the-job training; promoting STD diagnosis through the syndromic approach; encouraging condom social marketing; promoting AIDS/STD education in schools; providing health education guidelines and materials related to targeted interventions and to the use of mass media; strengthening all aspects of blood transfusion services; developing or adopting various guidelines, including those on counselling and clinical management; and facilitating the supply of equipment, reagents, condoms and HIV test kits. In both 1992 and 1993 WHO provided a forum, the annual meeting of programme managers, for the exchange of programme experience and the sharing of innovative ideas and approaches suitable for the Region.

To mobilize national and intercountry efforts, WHO played an important advocacy role, highlighting the extent and potential impact of the pandemic on Asia, as well as emphasizing the need to act now. WHO staff participated in national advocacy/consensus workshops for this purpose, and produced and distributed 2000 copies of the booklet AIDS in South-East Asia: No time for complacency. Political commitment to AIDS prevention was uniformly high but many countries are constrained by lack of resources. Various sectors are now being involved in AIDS prevention and control, including NGOs and the private sector, in most countries of the Region.

In Thailand, major businesses, both multinational and national, came together to form a “business coalition against AIDS” and to mount an appropriate business response to AIDS. In India, the Consortium of Indian Industries developed work plans for AIDS prevention activities to be carried out in industry. NGOs’ activities greatly increased during the biennium in all countries, particularly in peripheral areas. Collaboration between NGOs and national programmes and among NGOs themselves increased. In Myanmar, community involvement in AIDS prevention, including contributions from NGOs and the private sector such as small traders and merchants at the township
level, were particularly noteworthy. Government ministries other than health ministries in various countries committed themselves to participate in HIV/AIDS prevention.

Since sexual transmission accounts for more than 80% of HIV infections in the Region, WHO urged countries to focus their efforts and resources for prevention on promoting safer sexual behaviour through education of population groups, by the use of mass media and interpersonal methods; targeted interventions among high-risk behaviour populations, including promotion of condom use; and providing early diagnosis and treatment of sexually transmitted diseases (see below). Although objections to condom promotion from a religious or cultural point of view were a major handicap in some countries, efforts were made to have condoms available in as many outlets as possible. By 1993, condom social marketing was operational in Bangladesh, India, Indonesia, Nepal, Sri Lanka and Thailand.

In view of the association between HIV and STD and the role played by STD, particularly genital ulcer disease, in the acquisition and transmission of HIV, WHO encouraged the strengthening of STD services in the countries. National programmes began to focus on diagnosis of STD using the syndromic approach and providing the most effective drugs at the first contact with health services. In many countries, STD and AIDS programmes were integrated, but lack of drugs for treating STD often remained a major constraint.

With AIDS being increasingly diagnosed, HIV/AIDS care became a major issue in the Region. WHO therefore organized an intercountry workshop in March-April 1993 in Bangkok to discuss the HIV/AIDS continuum of care in institutions, the community and the home. Representatives of AIDS programmes, primary health care services, nursing associations and NGOs involved in care formulated approaches needed in their respective countries to strengthen HIV/AIDS care. They recommended that such care should be integrated with primary health care and that care at all levels should be strengthened in view of the anticipated increase in AIDS cases in the future. This model of HIV/AIDS care is now being applied in north-eastern India and in Thailand. WHO also promoted counselling as part of comprehensive HIV/AIDS care, and an intercountry workshop on training in skills to develop counselling training and services was held in Surakjund, India, in March 1993. WHO produced a regional training guide on counselling, and adapted Living with AIDS in the community for use in the Region.

The Organization provided technical and material support to various scientific workshops including one organized by the Commonwealth Medical Association on the role of women in prevention of AIDS, in Colombo, Sri Lanka, in June 1993. It also played an important advocacy role in countering discrimination and discouraging countries from applying short-term travel restrictions to people with HIV/AIDS.

WHO support in the area of laboratory diagnosis during 1992-1993 included the assessment of laboratory capabilities in countries, provision of supplies and equipment, assistance in conducting on-the-bench training, dissemination of safety guidelines for laboratory workers, and promotion of quality assurance programmes through WHO collaborating centres. The Organization promoted cost-effective approaches in HIV testing, including testing of pooled sera in populations with low HIV seroprevalence, and provided guidelines for the use of simpler testing approaches, thereby discouraging the use of the expensive Western blot assay. In accordance with this policy, an intercountry workshop on cost-effective approaches to laboratory diagnosis of HIV infection (Jakarta, Indonesia, October 1992) provided practical training in the respective laboratory procedures; the organization of national quality control systems was also discussed during the workshop. These policies and approaches became operational in the countries of the Region.

To promote alternative strategies for HIV testing and to emphasize the importance of quality control, WHO organized an interregional (South-East Asia and Western Pacific) laboratory workshop in Bangkok, Thailand, in February 1992 which acquainted participants with a range of currently available laboratory tests for the detection of both HIV-1 and HIV-2. Besides quality control practices and biosafety measures in the HIV screening laboratory, the workshop presented an extensive overview of screening and confirmatory procedures in the determination of HIV-1 and HIV-2 antibodies, together with the rational use of screening assays.

Surveillance data are essential not only for determining the magnitude of the HIV/AIDS problem and monitoring trends but also for advocacy and planning purposes. A WHO intercountry workshop on HIV sentinel surveillance (Bali, Indonesia, January 1992) reviewed sentinel surveillance of HIV/AIDS infection in countries, identified the constraints encountered in its implementation and updated the regional guidelines for epidemiological evaluation of the HIV epi-
demic. The HIV sentinel surveillance module used in this workshop was adapted for use in India in 1993. WHO also produced a regional guide on HIV sentinel surveillance for the use of programme managers.

In short, much was achieved at the country level in the South-East Asia Region during the biennium in terms of increasing knowledge about the epidemic and strengthening support capacities through laboratory health education and the establishment of management structures. In many countries, all donated blood

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**Box 7.5**

100% condom use programme in Thailand

The most important factor relating to the rapid heterosexual HIV transmission in Thailand is the sex entertainment industry. The total number of female sex workers in the country is estimated at 100,000. It has been consistently observed that the majority of the sex workers want their clients to use condoms. However, they are unable to enforce this practice regularly because of client refusal. In some cases, even the owners of sex establishments pressure sex workers to yield to the demand of their customers to have unprotected sex.

In order to meet this challenge, a 100% condom programme was initiated in August 1989 with the aim of promoting the use of condoms in sex establishments in Ratchaburi, a province in the central region, south of Bangkok. The principle of the programme was to gain the cooperation of the government authorities in influencing owners of the sex establishments in the province to require their sex workers to use condoms in all sexual encounters. If their customers refuse to use a condom, sex workers are urged to withhold service and refund those customers' money. It was important that these measures be taken by all sex establishments in the area so that it would be impossible to purchase sex services without using condoms in any sex establishment in the province.

After successful implementation in Ratchaburi, the 100% condom programme was expanded to cover neighbouring provinces as from 1990. In August 1991, the national AIDS committee approved the nationwide expansion of the 100% condom programme. Since April 1992, all 73 provinces have reported the implementation of the programme to the Ministry of Public Health.

It is still early to detect any decrease in HIV infection rates due to the 100% condom programme. However, in most provinces there has been a marked increase in condom use in sex establishments. At the same time, the incidence of sexually transmitted diseases has gradually decreased from 6.5 per 1000 population in 1989 to 2.07 in 1992, the lowest incidence recorded during the last 20 years.

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**Box 7.6**

Peer education among sex workers in Calcutta

Sonagechi is one of the oldest and biggest "red light" districts in Calcutta, with 5000 commercial sex workers. A survey conducted in April-June 1992 revealed an alarmingly high prevalence of sexually transmitted diseases (STDs) among the sex workers: syphilis, 63%; vaginal candidiasis, 25%; and gonorrhoea, 13%. About 81% of sex workers are infected with one or more STD pathogens. Hardly any of the sex workers were found to use condoms regularly. The prevalence of HIV infection was extremely low, however.

An STD/HIV intervention programme was started among the sex workers in September 1992, consisting of early diagnosis and treatment of STDs, promotion of condoms and health education activities. Peer educators were identified from among the sex workers and trained for a period of six weeks. Sixty-one peer educators make house-to-house visits in Sonagechi. They are divided into 12 groups, seven of which are headed by one field supervisor (social worker). Each of the 12 groups visits seven to eight brothels daily, communicating with around 40-50 sex workers and five to six "madams". They discuss with the sex workers different issues related to STDs and AIDS, educate them regarding condom use with the help of flip charts and other materials and provide condoms according to the need and demand of the sex workers. They revisit the same brothel after six to seven days.

When this intervention programme was started only 2500 condoms were distributed throughout the month of September 1992. The use of condoms by the clients of sex workers has been rapidly increasing, as shown by a study conducted in May-June 1993. At that time 42% of sex workers were using condoms on a regular basis, compared to 1% one year previously. Roughly 62,000 condoms are distributed among the sex workers per month, satisfying 80% of their demands. The prevalence of sexually transmitted diseases has fallen sharply. Pimps, "madams" and brothel owners, and also youth club members are all becoming actively involved in this effort.
was being screened prior to transfusion by the end of 1993. Much was learned about which approaches or interventions could influence behavioural change. For example, innovative strategies, such as the establishment of “100% condom-use only brothels” and other interventions in Thailand, were followed by a marked increase in rates of condom use and a dramatic decline in STD rates among female prostitutes as well as in the number of male cases of gonococcal urethritis at STD clinics. In India, an intervention project implemented in Calcutta in close collaboration with WHO was accompanied by a remarkable increase in condom use among clients of prostitutes during the first year. The Indian AIDS awareness campaign “Universities talk AIDS” continued, with the participation of more than 60 universities; it was a collaborative effort between the Ministry of Human Resources Development, the Ministry of Health and WHO. In all countries of the Region, early diagnosis and treatment of STDs was given high priority as a primary prevention measure against HIV infection.

**European Region**

At the beginning of the 1992-1993 biennium the situation in the European Region was characterized by considerable differences in the prevalence of HIV infection and in responses from European Member States. Western Europe saw the start of a possible levelling off of the pandemic, especially in the north, while prevalence rates continued to rise in the south, in particular in areas affected by the drug-use-related pandemic. In western Europe in general, there had already been major achievements with the establishment of comprehensive national AIDS programmes and the policy consensus reached on the basic principles of the global AIDS strategy. There was therefore less need for direct technical and financial assistance from WHO. GPA’s leadership role was focused on collaboration in the areas of policy formulation, development of models of good practice, advocacy and coordination, as follows:

- **sustaining and improving the progress made by fighting complacency and denial;**
- **serving as a policy-formulating body, particularly in the fields of human rights and anti-discrimination;**
- **coordinating efforts among governments and international and nongovernmental organizations, paying special attention to the need to establish collaboration between the western and eastern parts of the region;**
- **overcoming barriers to cooperation at the intergovernmental level related to incompatibility and uncertainty about the future mandates and roles of the various organizations, in particular the Commission of the European Communities; and**
- **supporting the development of Europe-wide structures to facilitate networking among local and national NGOs, as a key tool to adjust and increase their capacity to address needs arising from the still highly volatile epidemiological and social dynamics of the pandemic.**

The continuing social, economic and political changes in the countries of central and eastern Europe played a key role in shaping the Region’s programme. Major efforts were made to strengthen technical collaboration with national programmes in this area. New Member States emerged from the former USSR, Yugoslavia and Czechoslovakia, increasing the number of countries in the Region from 32 to 50 (at present), each of these new countries being in need of assistance to establish national programmes.

In central and eastern Europe the process of social change greatly increased the potential for a rapid increase in HIV transmission, but it has also offered a remarkable chance and better opportunities for prevention. At the same time, the increasing political volatility, the economic crisis and civil strife in many areas greatly influenced programme direction and planning at national level, presenting barriers to successful reorientation and implementation.

In most of these countries the national AIDS programmes were still characterized by traditional biomedical top-down oriented approaches, not in accordance with the principles of the global AIDS strategy, and with little being done in the field of prevention/health promotion. People living with HIV/AIDS or people at particular risk were subject to discrimination and severe legal oppression. At local and national level a number of NGOs active or with a potential to become active in the AIDS field had been established in most of the countries, but they were still in a very vulnerable and fragile position, highly dependent on individuals and outside support and hampered by lack of knowledge, skills and resources.

Several consultations during 1992 assisted GPA in the planning and orientation of its strategy: a consultation on HIV/AIDS prevention and care in
low-prevalence countries, held in the Regional Office in March 1992; a subregional consultation on national programme development, held in Minsk, Belarus, in July 1992; and, a national programme review consultation, also in the Regional Office, in September 1992. GPA’s main priorities were identified as continuing support to the further development of existing national AIDS programmes in countries of central and eastern Europe; and intensified collaboration and assistance in the establishment of national AIDS programmes in new Member States.

Consequently, in countries of central and eastern Europe substantial technical and economic assistance was offered to the national AIDS programmes and to the development and implementation of medium-term plans. Using well-developed mechanisms in place, GPA conducted assessment visits and policy and programme development in the Baltic States and some of the Newly Independent States of the former USSR. Testing new approaches for the development of medium-term plans, successful national consensus policy meetings were held in Albania and Romania, and are planned for several other countries. The aim of this new approach is to help Member States in developing medium-term plans, including long-term strategic plans and one to two-year workplans, through a series of workshops.

Intercountry and country workshops were held, often in cooperation with other intergovernmental agencies inside and outside the United Nations family, covering areas such as blood safety, infection control and sentinel surveillance/epidemiology.

With the aim of strengthening the health promotion component of national AIDS programmes, needs assessments and identification of potential counterparts and resource organizations were made through a series of country visits. Special efforts were made to assist Member States in the organization of a wide range of “training-of-trainers” workshops covering all aspects of health promotion. Fundamental to this approach was the development of modules and training materials which will form the core of future workshops.

WHO took action to support the development and consolidation of NGOs active in AIDS, and to ensure their full involvement in national AIDS programmes. At regional and subregional levels technical and financial support was given in the organization of a wide range of workshops and twinning projects, aiming to build bridges of cooperation and orient activities towards the specific needs of the new organizations. A module for training workshops at national level on management issues for NGOs was developed: the objectives of the workshops are to strengthen collaboration among organizations and increase their organizational capacity, and the module forms the basis for organizing a series of national workshops to be implemented with support from GPA in a number of Member States.

At regional and local level, the Europe-wide project Multi-City Action Plan on AIDS addresses the key role of cities in the effort against AIDS. Through active involvement of community-based organizations the aim of the project is to create supportive environments, to stimulate and set standards for city action in HIV prevention and care. The first stage of the project focused on developing models of good practice for comprehensive care and services. In its second stage, the project was geared more towards the specific needs of countries of central and eastern Europe in the field of HIV prevention.

For the implementation and follow-up of these activities, two meetings for national AIDS programme managers were held in Dresden, Germany, in February 1993, and in Berne, Switzerland, in November 1993, bringing together for the first time representatives of the Newly Independent States with counterparts from the rest of the Region for discussions on managerial and technical matters.

The “Investment in Health” meeting of ministers of health and finance from more than 35 countries on the prevention of HIV/AIDS in countries of central and eastern Europe, held in Riga, Latvia, from 31 March to 2 April 1993, was directed towards strengthening top-level political commitment to meeting needs for intersectoral HIV/AIDS prevention and care programmes and developing consensus on the principles of the global AIDS strategy. Addressing the links between economics and public health, the meeting set a precedent for similar efforts in the field of AIDS and other public health fields. The resulting Riga Statement and Riga Initiative (see Box 2.7 in Chapter 2) prepared the ground for a successful reorientation of national AIDS programmes away from previous policies of mandatory mass screening and coercive measures.

The Riga Initiative prepared the ground for a successful reorientation of NAPs away from mandatory mass screening and coercive measures.
A survey instrument to analyse resource needs for HIV/AIDS prevention programmes has been developed based on a model from the London School of Hygiene and Tropical Medicine. The methodology has been pilot-tested in five countries: Albania, Latvia, Poland, Romania and Ukraine.

Legislative changes have been facilitated by the positive political environment created by the Initiative. In the months following Riga, the Russian Federation and Lithuania had both decriminalized homosexuality, a crucial first step towards combating the discrimination and social vulnerability of HIV-infected people.

A workshop on sentinel surveillance was held in Kiev, Ukraine. Albania has increased the number of staff working in the AIDS unit; the Bulgarian Minister of Finance has increased the allocation to the National AIDS programme; and Belarus, Estonia, the Russian Federation and Ukraine have made significant progress in integrating their HIV/AIDS programmes with STD control, shifting away from mandatory testing and strengthening health promotion.

The annual World AIDS Days in European Member States involved the active participation of thousands of organizations at international, national and local levels. The large number of active organizations at every level of society now present a significant communication vehicle for promoting the global AIDS strategy, which was used very successfully in 1992 with the theme "AIDS: A Community Commitment".

Considerable knowledge and experience of successful programme implementation has been acquired through both negative and positive lessons learned from European Member States. GPA has maintained a leadership role in coordinating and facilitating networking at all levels within the Region.

**Eastern Mediterranean Region**

The HIV/AIDS situation in the Eastern Mediterranean Region during 1992-1993 was characterized by a slow but steady increase in the number of reported AIDS cases and HIV infections in practically all countries of the Region, more developed programme interventions at country level and extensive involvement of NGOs in prevention activities.

The epidemiological situation of HIV/AIDS in the Region has undergone considerable change since the first cases were detected. While early cases were largely due to imported blood and blood products or to sexual contact with persons in areas where HIV infection is prevalent, indigenuous heterosexual transmission in almost all countries of the Region now predominates.

Certain factors affect the epidemiology of HIV/AIDS in the Region and also prevention and control efforts. The emphasis on high moral values in the countries discourages practices related to the spread of HIV infection. Homosexuality is often illegal and is stigmatized, though it does exist. Prostitution is often illegal but it exists and is practised clandestinely; its magnitude is not known. The extent of injecting drug abuse is not known but is not insignificant.

The reporting of HIV/AIDS cases has been improving gradually. By the end of 1993, a cumulative total of 2076 AIDS cases had been reported from countries of the Region. However, the actual number of cases is undoubtedly much larger (perhaps 4.5 times greater), because of considerable under-recognition and under-reporting in many countries. Three-quarters of AIDS cases were among males and the age group 15-49 years accounted for 50% of the total cases. Sexual transmission was predominant, being responsible for 80% of the cases (heterosexual transmission 75%, homosexual transmission 5%). Transmission through blood and blood products was reported to be responsible for 12% of cases, 5% were due to intravenous drug use, and perinatal transmission accounted for 2% of the cases, while 1% had multiple exposure.

By the end of the biennium, sentinel surveillance, mainly of STD patients, was being carried out in 14 countries, though with limited success. The main problem lies in reaching these patients, very few of whom seek treatment from public sector clinics. As a result the number of samples collected is small in most countries. Because of the practical problems of detecting all HIV infections in any country, the reporting of asymptomatic HIV infection is far from complete. At the end of 1993, the number of identified asymptomatic HIV infections reported to WHO was 7427, but between 100,000 and 200,000 cases of HIV infection were estimated to have occurred.

Various aspects of surveillance were reviewed during the third regional workshop on epidemiological surveillance of HIV infection and AIDS, held in April 1993. Its objectives were to exchange experience on HIV surveillance, to orient participants on the development of HIV/AIDS surveillance techniques and to review and update HIV surveillance protocols and prepare plans of action. Particular emphasis was placed on selected groups at high risk of HIV infection. Country surveillance protocols were refined and general issues and problems in implementing HIV surveillance activities were discussed.

Available reports indicated that the prevalence rate of HIV infection had increased rapidly among certain groups with high-risk behaviour, such as STD patients, prostitutes and bar girls. This trend was seen in many countries of the Region. The prevalence data among the intravenous drug users showed high rates in certain countries and low rates in others. There was a consistent decreasing trend in HIV infection among blood recipients as a result of screening of donated blood and
blood products. The number of homosexual and bisexual men tested was too small to give any indication of the trend.

Local and cultural sensitivities were fully considered in applying global strategies on AIDS in the Region, and the following targets were set for 1992-1993: (1) all countries will have national or long-term plans for the control of HIV infection; (2) all countries will implement the essential elements of these plans (surveillance aspects, information/education components, and counselling, care and support of AIDS patients and HIV-infected persons); (3) all countries will screen all blood and blood products used in the national health care system for evidence of HIV infection; and (4) the various sociocultural factors related to the occurrence of HIV infection will be clarified in all countries and population groups in the Region. Barring a few exceptions where the implementation was disrupted due to internal strife, or restricted due to internal or external reasons, most national AIDS programmes have achieved most of their planned targets.

In the area of prevention of sexual transmission of HIV, two intercountry workshops were conducted in 1992, one on AIDS health promotion, to lay the foundation for effective interventions in HIV/AIDS prevention, and one on prevention of sexual transmission, including the use of condoms, which focused exclusively on developing strategies for designing interventions in this area taking into consideration the sociocultural and religious norms in the Region. These workshops had a considerable impact on the design of 1993 workplan activities at national level: interventions started to be more targeted at high-risk behaviour related to sexual transmission, and activities were planned to desensitize sexual behaviour issues, e.g. by involving influential personalities.

Educational materials were produced with a more explicit content on prevention of sexual transmission. Mass media messages increasingly highlighted sexual transmission as the predominant mode for HIV transmission. NGOs began to conduct outreach activities among groups with high-risk sexual behaviour. A further intercountry meeting on research on AIDS, in 1992, helped national programmes design sociobehavioural research activities (e.g. focus groups and in-depth interventions) to be used as a basis for immediate interventions in the prevention of sexual transmission.

As regards prevention of transmission through blood and blood products, national programmes were encouraged to plan training activities in the areas of infection control and blood safety. In addition, WHO provided considerable assistance in the form of supplies, equipment and consultants. The target of screening all blood and blood products used in the national health system was achieved in most countries. However, in a few countries, screening is being implemented in a phased manner, mainly because of shortage of resources. The Global Blood Safety Initiative to ensure adequate and safe blood supply to all was promoted and incorporated in all national programmes. The incidence of HIV/AIDS among the recipients of blood and blood products declined, and it is hoped that this vehicle of transmission will be eliminated in the Region in the near future.

In the area of prevention of perinatal transmission, collaboration was sought with maternal and child health and family planning programmes at regional as well as national levels. Regional staff participated in the intercountry workshops and meetings on population and family planning to stimulate integration of HIV prevention and family planning activities. At country level, family planning programmes were encouraged to participate in activities aimed at the prevention of HIV transmission.

A number of training activities in the area of care of people with HIV/AIDS were implemented for those involved in clinical management in national AIDS programmes. Guidelines on clinical management were developed and distributed to all countries. Training in counselling was included in all country workplans. Management of persons with HIV/AIDS needs to be given further consideration in the future, with the development of a system in each country to ensure that this programme component is properly implemented, eventually including combined hospital and home-based care.

Support provided to national AIDS programmes included technical support for planning, implementation and monitoring of the national programmes (missions, with visits by experts); organization and conduct of national training activities, support to the production and distribution of educational materials; fellowships for enhancing national capabilities; provision of supplies and equipment; and allocation of funds for priority activities within the national plans. At the regional level, the sixth and seventh intercountry meetings for the national AIDS programme managers were held in 1992 and 1993; their recommendations emphasized the importance of reporting, monitoring and
the multisectoral approach to programming, including the role of NGOs.

Collaboration with NGOs increased during the biennium. By 1993 half the countries of the Region had an average of three to four NGOs taking up responsibilities in HIV/AIDS prevention, making a total of over 40 active NGOs in the Region. These NGOs were assisting government programmes in 10 countries in reaching groups such as prostitutes, juvenile delinquents and drug addicts. During 1992-1993 more than 50 NGO projects were developed in collaboration with national AIDS programmes.

Several managerial tools were used to monitor achievements and progress of national programmes. These included updating of country profiles, monitoring of the financial status and preparation of regular reports for the Regional Committee and other governing bodies. Monitoring of the national programmes was carried out through periodic reports and country visits. Continuous efforts were made to improve the reporting from the countries. External reviews were carried out in Djibouti, Egypt and Tunisia in 1992, and in Cyprus, Jordan, Morocco, Pakistan and Syria in 1993. The findings and recommendations of the reviews are used for reprogramming of the current workplans and preparation of subsequent workplans and medium-term plans.

A regional AIDS information centre was established in August 1990, with two objectives: to strengthen the process of exchange of information and experiences on AIDS, particularly in the field of health education, between countries of the Region, as well as with other centres outside the Region; and to open fully the channels of communication on AIDS in countries of the Region, so as to inform and educate people more widely and intensively. During the 1992-1993 biennium the centre compiled, documented and indexed a growing number of printed and audiovisual materials, which are available for use by the general public. A network of national and regional contact points was developed and updated. The centre also facilitated the exchange of information and experiences among national AIDS programmes and it functioned as the focal point, at the regional level, for the World AIDS Day activities.

The four designated collaborating centres for laboratory diagnosis of AIDS in the Region (NAMRU-3, Egypt; Faculty of Medicine, Kuwait; Pasteur Institute, Morocco; and National Institute of Health, Pakistan), originally engaged mainly in providing supplemental testing of samples found to be positive in countries where such testing is not available, extended their functions as national capabilities for supplemental testing expanded. During the biennium the centres also undertook training of laboratory staff in HIV testing and in quality control, and supported research in priority areas such as tuberculosis and AIDS.

In summary, the AIDS epidemic is still at an early stage in the Eastern Mediterranean Region, but the available evidence indicates that it is spreading fast. Therefore, effective preventive interventions to encourage risk-free behaviours or to change high-risk behaviours must be strengthened in order to halt the further spread of the epidemic. Since transmission is closely linked with individual behaviour and sociocultural traditions, it is obvious that it cannot be prevented or even controlled by health personnel alone. Other relevant national sectors and NGOs are being increasingly involved in prevention and control activities. Without urgent action the AIDS problem will become unmanageable.

**Western Pacific Region**

Available evidence suggests that the HIV epidemic in the Western Pacific Region is at a relatively early stage compared with other parts of the world. Few countries in the Region reported significant numbers of AIDS cases or HIV infections prior to 1987. Since that time, the epidemic has gradually spread and now involves most countries of the Region. However, eight of the 35 countries and areas (predominantly the smaller Pacific island nations) have yet to report any case of AIDS or HIV infection.
As of December 1993, 6582 cases of AIDS had been reported from countries in the Region. Almost 90% of AIDS cases have been reported from three countries: Australia, Japan and New Zealand. Of the reported AIDS cases, the vast majority are men (94%) and less than 1% are children under 15 years of age.

A cumulative total of 34 094 HIV infections had been reported in the Region as of December 1993. Reported rates of HIV infection vary from 100 per 100 000 population in Australia and 62 per 100 000 in French Polynesia, to fewer than 7 per 100 000 reported in Hong Kong and 0.1 per 100 000 in China. Eighty-three per cent of reported infections in the Region have occurred in men, and the proportion of HIV infections among children remains small, about 1% of the total.

The annual incidence of HIV for the Region as a whole has been increasing since 1989. Several countries have recently experienced a dramatic rise in the number of HIV infections being detected. In Cambodia, for example, figures from 1993 show a two-and-a-half-fold increase in the number of HIV infections diagnosed, as compared to 1992. Approximately half of all these infections have been attributed to heterosexual contact.

In other countries the role of injecting drug use in the transmission of HIV is becoming increasingly prominent. HIV infections in Malaysia accounted for just under 50% of all HIV infections reported in the Region in 1993, and 77% of HIV infections in Malaysia have been attributed to injecting drug use. Viet Nam has also experienced a marked increase in reported HIV infections. Of the cumulative HIV infections reported by the end of 1993, over 90% were detected during 1993 alone. Most new infections in Viet Nam have also been attributed to injecting drug use (80%).

Present WHO estimates suggest a two-fold to four-fold increase in the prevalence of HIV infection for the Region by the year 2000. This would mean a total of 100 000 to 400 000 infected individuals. Many factors unique to the Region may alter the course of the epidemic, however.

Some of the factors that may lead to a lower prevalence of HIV infection are the high level of literacy in most countries in the Region; the fact that large numbers of people have access to radio and television; the wide circulation of newspapers, magazines and books; and the generally well-developed health infrastructure, especially with regard to maternal and child health and family planning services.

Other factors suggest, however, that there is great potential for HIV to spread widely throughout the Western Pacific. Epidemiological and behavioural information obtained from Member States indicates generally high rates of commercial sex activity, unprotected sexual contact with multiple partners, injecting drug use, and sexually transmitted disease within the Region. The significance of each of these factors varies from country to country. An essential component of HIV surveillance and control programmes is therefore to identify important risk behaviours and implement locally appropriate preventive strategies.

Many parts of Asia and the Pacific are undergoing rapid development. As trade, migration, and tourism increase with neighbouring countries where the prevalence of HIV infections is already high, opportunities for spread within the Region will also increase. The proximity of some Western Pacific countries to the "Golden Triangle" requires that strategies aimed at preventing the further spread of AIDS have a regional perspective which fosters international collaboration.

Effective management is crucial to the successful implementation of national AIDS programmes. By the end of 1993, all countries had established national AIDS committees to oversee the management of national programmes. Separate AIDS units to monitor daily operations, however, were not yet in place in all countries. There was a clear but gradual tendency to expand the AIDS committees to include more sectors of government and representatives from NGOs.

WHO technical support provided in this area resulted in a transfer of skills to national counterparts and improved capacity to undertake planning, implementation and monitoring activities. An added benefit was their impact on other related fields; for example, the multisectoral approach was found to be useful in other fields such as noncommunicable diseases. WHO has collaborated with 21 countries in developing short-term plans and with 19 countries in developing medium-term plans. The remainder developed their own national programmes in line with global AIDS strategies.

An essential part of managing national programmes is a systematic process of monitoring and evaluation. WHO was instrumental in facilitating these processes for individual countries. An external programme review is a major priority in this area, intended to be carried out towards the end of the medium-term period. In 1993, such reviews were undertaken in China, Papua New Guinea, the Philippines, Viet Nam, and half the countries in the South Pacific.
The reviews resulted in the development of strategic national plans which form the basis of the second-generation medium-term plans. Developing second-generation plans calls for extensive involvement of all sectors of society as well as governmental and nongovernmental agencies. A process of achieving consensus to arrive at programme priorities is undertaken during a special workshop intended for this purpose. These activities were initiated in the Cook Islands, the Federated States of Micronesia, Fiji, Kiribati, the Philippines, Tonga, Vanuatu and Viet Nam.

In order to provide more up-to-date and useful information on the HIV epidemic, WHO improved its surveillance system for HIV/AIDS in the Region. In 1993 a standard reporting form was introduced. Cooperation in using the form was excellent and this greatly facilitated data management.

An important component of HIV surveillance is ensuring that the information obtained is available to decision-makers in order that it may be used for developing effective prevention and control programmes. The new standardized format for reporting enhances WHO's ability to provide feedback to the reporting parties, and allows for more meaningful comparisons within the Region.

In addition to compiling surveillance reports on HIV/AIDS, GPA established a data bank on seroprevalence surveys conducted within the Region, covering over 300 published and unpublished surveys. These studies can be searched according to country, year, and target population. This database will be updated on a yearly basis. A form useful for communicating survey information was developed and distributed. Epidemiological support and technical cooperation was also provided through meetings in Cambodia, China, Malaysia and Viet Nam.

The potential for spread of HIV through commercial sex activity in the Region is well recognized. A major problem is migration. Commercial sex workers move from areas of high HIV prevalence to those with little or no HIV infection and also migrate within the Region. Prevention strategies have taken this factor into consideration. The exchange of materials in different languages from different countries was supported; for example, materials in Thai, Vietnamese and Bahasa-Malaysia were sent for use in Australia, Macao and New Zealand.

Outreach education programmes were employed first in Australia, New Zealand and the Philippines and later in Cambodia and Macao. A special aspect of this approach was the use of peers to determine needs, find ways of meeting them and act as catalysts for behaviour change; the cooperation of NGOs was especially useful in these activities.

A new focus of the regional programme was support for the provision of accessible and acceptable STD services to sex workers in an atmosphere of trust, compassion and confidentiality. A project was piloted in Phnom Penh, Cambodia, where a clinic was set up to provide a service for the commercial sex workers, situated in the middle of the biggest "red light" district. For approximately 2000 sex workers, some of whom may have difficulty with the language and restrictions on their personal freedom, the clinic provides not only appropriate STD services but also functions as an overall community health centre.

Strategies introduced in Australia and New Zealand have been successful in limiting the spread of HIV among injecting drug users. These consist of needle and syringe exchange programmes, and preparation of educational materials by users themselves. In some countries, such as China and Viet Nam, the focus has been on rehabilitation programmes for injecting drug users. There is a steady exchange of ideas among China, Hong Kong and Macao, which has enabled them to learn from each other about new or successful efforts to deal with this high risk population.

Following a report from Viet Nam regarding an increase in the number of HIV-positive injecting drug users, particularly in Ho Chi Minh City, WHO investigated the extent of the epidemic and examined surveillance practices. The spread of infection has been rapid among injecting drug users, and the potential for further spread is enormous as most are injected with unsterile equipment that is provided by the dealer from whom they purchase drugs. Several intervention projects are in the planning stage which make use of peer support and education in partnership with local NGOs.

Another approach was developed in Malaysia, where the spread of HIV through injecting drug use is a major concern. School AIDS education programmes introduced at the secondary level include considerable material on injecting drug use. The goal is to discourage the entry of vulnerable young people into the drug-using population. Similar campaigns are planned in the Lao People's Democratic Republic and the Philippines. WHO was also instrumental in the training of nationals to train peer educators for outreach purposes.
in the Lao People’s Democratic Republic and Viet Nam.

Women tend to be at increased risk of acquiring HIV infection due to a variety of social and biological factors; therefore support for women’s groups was encouraged at the national and regional level. A seminar on AIDS and Asian women was supported; its objective was to strengthen and mobilize NGOs working with women in Asia to reduce and prevent HIV transmission in this population.

The introduction of a school AIDS education curriculum is at different stages of implementation in the Region. A project was undertaken in 1989-1991 in collaboration with UNESCO to establish school AIDS education programmes in Pacific island countries, through the development of teaching materials and the training of teachers. To stimulate AIDS education in ASEAN schools, a consultative seminar was organized by WHO and UNESCO in 1990. These initial joint initiatives resulted in the introduction of an STD and AIDS element into the curricula of all secondary schools of South Pacific countries. To a limited extent, this was also done in other countries of the Region.

Viet Nam and Papua New Guinea introduced HIV/AIDS education in the curriculum of secondary schools as part of health education or science subject areas. Teacher guides were prepared to train teachers to teach sensitive subjects. In addition, HIV/AIDS education was incorporated in several relevant subject areas throughout the curriculum. Both countries plan to introduce HIV/AIDS education in lower grades.

In the Philippines, the Department of Culture, Education and Sports revised the secondary school curriculum to introduce the subject of HIV/AIDS. A teachers’ guide and educational materials were prepared for the training of teachers. There is a plan to start AIDS education nationwide from 1994.

WHO supported youth and women unions in Viet Nam and the People’s Democratic Republic of Laos in conducting out-of-school youth activities; they are active in developing educational materials, conducting group meetings and training trainers. In Viet Nam various activities were organized to make young people and the general public aware of HIV/AIDS. In an effort to influence the attitudes and practices of various youth groups who are exposed to high-risk behaviour, peer education activities were initiated. Similarly, the Organization supported church groups, musicians, and theatrical groups in influencing the behaviour of young people in the countries and areas of the Pacific including Papua New Guinea, Solomon Islands and Vanuatu. WHO also participated in the regional seminar for youth action on AIDS, organized by the Commonwealth Youth Programme: Asia Centre; the objective was to exchange ideas to develop planning skills and publicity material and educational kits on AIDS prevention work.

The recognition of sexually transmitted diseases as a significant factor in the spread of HIV led to their resurgence as a major public health issue in the Region. Because of the interrelationship between STD and HIV, programmes aimed at addressing these health concerns should be well coordinated. Regional activities during the biennium were directed towards integrating STD services into the existing infrastructure in order to improve access to care and encourage those affected to seek care. Improving the care and management of STD and strengthening STD surveillance were also priorities.

In 1993 a 4-week comprehensive training course in the care and management of sexually transmitted diseases was given in Fiji, attended by 19 health officers from 11 Pacific island countries. The training manual used for the course covers diagnosis, treatment, health education, counselling, partner notification, and reporting. It is being developed into a regional publication and a draft edition was used as reference material for national courses in Cambodia, the Federated States of Micronesia and the Philippines.

Special attention was given to developing treatment algorithms appropriate for the syndromic management of STD in the Region. GPA staff in Papua New Guinea assisted in developing syndromic treatment approaches that take the local situation into account, such as the prevalence of donovanosis. Training courses emphasizing the syndromic approach to STD were held in all the country’s provinces. The syndromic approach was also implemented in Fiji and is being extended to other island countries of the South Pacific.

Reporting by syndromes is a logical extension of the syndromic approach to STD management that is being promoted for areas where diagnostic capabilities are limited. Treatment flow-sheets are therefore being designed so that they may serve as the patient encounter form and later be tallied for surveillance purposes.

In some countries sentinel surveillance sites have been established as part of the national STD/HIV control programme. In at least one Member State, Papua New Guinea, these sites provide information
about the prevention activities which were conducted, as well as the illnesses that were treated (e.g. number of condoms given out per client, number of contacts treated, etc.). An STD quarterly report summarizes this information and is disseminated to a wide range of interested parties.

Providing access to STD services by utilizing the existing infrastructure is efficient and cost-effective. A programme being piloted in Viet Nam involves maternal and child health and family planning services as an entry point to STD care for both men and women. Condoms are already an acceptable family planning method: men now need to be persuaded to see them as effective tools for disease prevention, particularly during casual sex.

An initial response to the HIV epidemic in the Region was the training of health care workers. One strategy employed was to make use of the knowledge gained by countries in the Region that had experience of HIV and AIDS early on. Fellowships in clinical management, laboratory technology and counselling were conducted in Australia and New Zealand for medical, nursing and laboratory personnel of Member States. Upon their return home, fellows became trainers and focal points in their respective specialities.

National guidelines and protocols for HIV testing and clinical management were developed and implemented in Fiji, French Polynesia, Federated States of Micronesia, Guam, New Caledonia, Palau and Samoa, and are being developed in other countries in the Region.

Materials to encourage countries to integrate AIDS education into existing health care workers' curricula were also emphasized. The HIV/AIDS Reference Library for Nurses and other health care workers was designed, pilot-tested, and translated into a number of languages. The Library has now become an official WHO publication. The latest addition to the Library is the draft of teaching modules for education in human sexuality.

A gradual but definite move is being made towards the training of health care providers in the public health approach to the management of STD. Course materials tested as an intercountry activity have also been used nationally, and these are in the process of finalization.

Health promotion and counselling have been found to be skills which need enhancing among health professionals. A counselling training manual was developed and pilot-tested in Cambodia, Fiji, Solomon Islands and Vanuatu.

Although the number of AIDS cases in the Region is relatively low at present, technical support for programmes for health care workers on the continuum of care have been provided. As the need increases, activities in this area will be augmented.

Studies to assess the existing level of knowledge, attitudes, beliefs and practices related to AIDS are an important step towards developing appropriate and targeted programme activities and educational materials. They also serve as a baseline against which change brought about by programme activities can be measured.

As of 1993, 40 social and behavioural studies had been conducted in the countries and areas of the Region. Major findings of these studies were that multiple sex partnership does occur, that the age of first sexual intercourse is relatively early in some countries, and that condom use is practised only sporadically. An initial inventory of these studies has been prepared. A critical analysis of their reports is planned for cross-cultural comparison in order to identify the relative levels of reported risk behaviour. An analysis of the determinants of these behaviours will be undertaken to determine whether there are identifiable behavioural "regions of affinity" in Asia and the Pacific. This analysis will also be important for future policy development, prevention activities, and evaluation of national and regional programme strategies.
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New publications and documents

Publications

School health education to prevent AIDS and sexually transmitted diseases.

The Global AIDS Strategy

1991 Progress Report: Global Programme on AIDS.


AIDS: images of the epidemic.

Technical documents (including priced documents)


Document GPA/RES/92.4. 7 pages. Available in English only.

Document GPA/RES/92.5. 5 pages. Available in English only.

Document GPA/RES/92.6. 7 pages. Available in English only.


Potential for WHO-industry collaboration on drug and vaccine development for HIV/AIDS – a briefing document for the pharmaceutical industry.

Document GPA/RES/93.2. 16 pages. Available in English only.

*priced document.


Tabular information on legal instruments dealing with AIDS and HIV infection.


Document GPA/GMC(E)/92.7. 27 pages. Available in English and French.

Document GPA/GCA(5)/92.6. 21 pages. Available in English and French.

Document GPA/ACA(1)/93.11. 19 pages. Available in English and French.

Bulletin of the World Health Organization


Weekly Epidemiological Record


World Health Statistics Quarterly

World Health

Additional materials in outside journals
Lange JMA et al. Boost for vaginal microbicides against HIV. Lancet 1993;341: 1356.
### ANNEX 2

**Membership of the GPA Management Committee in 1992**

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<th>Donors</th>
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**United Nations organizations and specialized agencies**

- United Nations Children’s Fund (UNICEF)
- United Nations Development Programme (UNDP)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- United Nations Population Fund (UNFPA)
- World Bank

**Intergovernmental organization**

Commission of the European Communities
## ANNEX 3

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- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- United Nations Population Fund (UNFPA)
- World Bank

**Intergovernmental organization**
- Commission of the European Communities
ANNEX 4

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Professor M. Gaib,
Chairman, Advisory Committee on Health Research (ACHR)

*Dr A. McLaren,
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ANNEX 5
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Denmark (Rapporteur)

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Professor G. ROSSI,
Director, Laboratory of Virology, Rome, Italy

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*Dr T. J. COATES,
Chairman, Steering Committee on Social and Behavioural Research

*Dr D. COOPER,
Chairman, Steering Committee on Clinical Research and Drug Development

Dr J. DECOAS,
Chairman, Global Programme on AIDS Management Committee
PROFESSOR M. GABR,
Chairman, Advisory Committee on Health Research (ACHR)

DR K. KALIMBA,
Chairman, Intervention Development and Support Technical Working Group

*DR A. McLaren,
Chairman, Scientific and Technical Advisory Group, Special Programme of Research, Development and Research Training in Human Reproduction

DR M. O'SHAUGHNESSY,
Chairman, Steering Committee on Diagnostics

PROFESSOR C. PECKHAM,
Chairman, Steering Committee on Epidemiological Research, Surveillance and Forecasting

DR H. WIGZELL,
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*Unable to attend.
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President, Russian Academy of Medical Sciences, Moscow, Russian Federation

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Copenhagen, Denmark (Rapporteur)

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Dr D. Cooper,
Chairman, Steering Committee on Clinical Research and Drug Development

Professor M. Gabs,
Chairman, Advisory Committee on Health Research (ACHR)

Dr K. Kalumba,
Chairman, Intervention Development and Support Technical Working Group
*Dr. A. McLaren,
    Chairman, Scientific and Technical Advisory Group,
    Special Programme of Research, Development and
    Research Training in Human Reproduction

Dr. J.-P. Moatti,
    Representative, Steering Committee on Social and
    Behavioural Studies and Support

Dr. H. Moerkerr,
    Chairman, Global Programme on AIDS Management Committee

Dr. M. O'Shaughnessy,
    Chairman, Steering Committee on Diagnostics

Professor C. Peckham,
    Chairman, Steering Committee on Epidemiological
    Research and Forecasting

Dr. H. Wigzell,
    Chairman, Steering Committee on Vaccine Development

*Unable to attend.
ANNEX 7
Membership of the GPA Management Committee Task Force on HIV/AIDS Coordination

Governments financially contributing to international AIDS activities:

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**Sweden**

Mr Nils-Arne Kastberg,
Counsellor, Permanent Mission of Sweden to the United Nations Office and other International Organizations at Geneva, Switzerland

**United States**

Dr Helene Gayle,
AIDS Coordinator, United States Agency for International Development, Department of State, Washington, DC, USA

Governments cooperating with external support agencies:

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Dr M. Moeti,
Manager, National AIDS Control Programme, Gaborone, Botswana

**Bulgaria**

Dr Radka Argirova,
Chief, Central AIDS Laboratory, Sofia, Bulgaria

**India**

Dr P.R. Dasgupta,
Project Director, National AIDS Control Organization, Ministry of Health and Family Welfare, Government of India, New Delhi, India

Inter-Agency Advisory Group on AIDS (IAAG) – UN system organizations:

**UNDP**

Ms Elizabeth Reid,
Director, HIV and Development Programme, UNDP, New York, NY, USA

**The World Bank**

Dr A. Measham,
Manager, Health, Population, Health and Nutrition Division, The World Bank, Washington, DC, USA

**WHO – ex officio**

Dr M.H. Merson,
Director, Global Programme on AIDS, WHO, Geneva, Switzerland

Nongovernmental organizations:

**AIDS Coordination Group**

Ms Maria de Bruyn,
AIDS Coordination Group, c/o Royal Tropical Institute, Amsterdam, Netherlands

**ENDA-Tiers Monde**

Mr El Hadj Sy,
Coordinator, Health Programme, ENDA-Tiers Monde, Dakar, Senegal

**Global Network of People Living with HIV/AIDS**

Mr Don de Gagne,
Vancouver Persons with AIDS Society, Vancouver BC, Canada
ANNEX 8

Membership of GPA Research Steering Committees in 1992

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PROFESSOR CLAUDE GRISCHELLI,
Chief, Immunology and Haematology Unit, Department of Paediatrics, Necker Hospital for Sick Children, Paris, France (served until November 1992)

DR DANIEL HOITH,
Director, AIDS Program, National Institutes of Allergy and Infectious Diseases, National Institutes of Health, Rockville, MD, USA

DR BILA KAPITA,
Chief, Department of Internal Medicine, Mama Yemo General Hospital, Kinshasa, Zaire

DR JEAN PAPPE,
Associate Professor of Medicine, National Laboratory and Research Institute, Port-au-Prince, Haiti

PROFESSOR PRAPHAN PRANUPHAK,
Director, Program on AIDS, Thai Red Cross Society, Bangkok, Thailand

DR ANTHONY PINCHING,
Reader and Honorary Consultant in Clinical Immunology, Department of Immunology, St Mary's Hospital Medical School, London, England

PROFESSOR DOUGLAS RICHMAN,
Professor of Pathology and Medicine/Director, Research Center for AIDS and HIV Infection, Veterans Administration Medical Center, University of California at San Diego, San Diego, CA, USA

PROFESSOR GUILLERMO RUIZ-PALACIOS,
Head, Department of Infectious Diseases, National Institute of Nutrition, Mexico City, Mexico

DR JACk WIRIMA,
Associate Professor of Medicine, College of Medicine, Blantyre, Malawi

Steering Committee on Diagnostics

PROFESSOR GUNNEL BIBERFELD,
Head, Department of Immunology, National Bacteriological Laboratory, Stockholm, Sweden

PROFESSOR FRANCOISE BRUN-VEZINET,
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DR GEOFFREY SCHILD,
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DR HANS WIGZELL,
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ANNEX 9
Membership of GPA Research Steering Committees in 1993

Steering Committee on Clinical Research and Drug Development

**Professor David A. Cooper,**
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**Dr David W. Feigal,**
Director, Division of Antiviral Drug Products, Center for Drug Evaluation and Research, Food and Drug Administration, Rockville, MD, USA

**Dr Bila Kapita,**
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**Professor Praphan Phanuphak,**
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**Professor Douglas Richman,**
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**Professor Guillermo Ruiz-Palacios,**
Head, Department of Infectious Diseases, National Institute of Nutrition, Mexico City, Mexico

**Dr Jack Warma,**
Associate Professor of Medicine, College of Medicine, Blantyre, Malawi

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Steering Committee on Social and Behavioural Research

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Dr Geoffrey Schild,
National Institute of Biological Standards and Control, Potters Bar, Hertfordshire, England

Dr Hans Wigzell,
Department of Immunology, Swedish Institute for Infectious Disease Control, Stockholm, Sweden
### ANNEX 10

**Research projects supported by GPA during 1992-1993**

<table>
<thead>
<tr>
<th>Headquarters Project No.</th>
<th>Title</th>
<th>Principal investigator and institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>91055</td>
<td>International survey of the frequency of the HIV-1 major neutralization epitope</td>
<td>Dr. J. Weber, Department of Genito-Urinary Medicine, St Mary's Hospital Medical School, London, England</td>
</tr>
<tr>
<td>91060</td>
<td>WHO network on HIV isolation and characterization</td>
<td>Dr. B. Hahn, Department of Medicine University of Alabama, Birmingham, AL, USA</td>
</tr>
<tr>
<td>91064</td>
<td>WHO network on HIV isolation and characterization</td>
<td>Professor J.J. Mullins, School of Medicine, Stanford University Stanford, CA, USA</td>
</tr>
<tr>
<td>92015</td>
<td>Development and use of an HIV-1 hyperimmune globulin preparation for the prevention of HIV-1 vertical transmission in Ugandan mothers and infants</td>
<td>Dr Brooks Jackson, Case Western Reserve University, Cleveland, OH, USA</td>
</tr>
<tr>
<td>92030</td>
<td>Genotype analysis of HIV-isolates</td>
<td>Dr. H. Rübsamen-Waigmann, Chemothrapeutical Research Institute Frankfurt, Germany</td>
</tr>
<tr>
<td>92031</td>
<td>An international collaborative study on HIV isolation and characterization: Pilot study in Uganda</td>
<td>Dr. S. Sempala, Uganda Virus Institute, Entebbe, Uganda</td>
</tr>
<tr>
<td>92033</td>
<td>Initial characterization of HIV-isolates from WHO potential candidate vaccine sites – Function as central laboratory for virus isolation</td>
<td>Professor H. Rübsamen-Waigmann, Chemothrapeutical Research Institute Frankfurt, Germany</td>
</tr>
<tr>
<td>92047</td>
<td>Initial characterization of HIV-1 isolates from WHO-sponsored vaccine evaluation sites (Rwanda)</td>
<td>Dr. P. van de Perre, HIV Reference Laboratory, National AIDS Control Programme, Kigali, Rwanda</td>
</tr>
<tr>
<td>92048</td>
<td>Genetic characterization of HIV-1 isolates from potential vaccine evaluation sites by PCR typing</td>
<td>Dr F.E. McCutchan, Henry M. Jackson Foundation Research Laboratory, Rockville, MD, USA</td>
</tr>
<tr>
<td>92049</td>
<td>Genetic characterization of HIV-1 isolates by the RNase A mismatch method</td>
<td>Dr. C. Lopez-Galindez, Instituto de Salud Carlos III, Madrid, Spain</td>
</tr>
<tr>
<td>92050</td>
<td>Heteroduplex gel shift analysis of HIV-1 env genes from candidate WHO vaccine trial sites</td>
<td>Professor J.J. Mullins, Stanford University, Stanford, CA, USA</td>
</tr>
<tr>
<td>92051</td>
<td>Analysis of HIV-1 V3 RNA from primary and secondary virus stocks, and from plasma and serum as a reference</td>
<td>Professor Jaap Goudsmit, University of Amsterdam, Amsterdam, Netherlands</td>
</tr>
<tr>
<td>92054</td>
<td>Sequencing C2-V3 envelope proviral DNA of representative strains from vaccine sites</td>
<td>Dr G. Schochetman, Centers for Disease Control, Atlanta, GA, USA</td>
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</table>
### Office of Research/Clinical research and drug development (continued)

<table>
<thead>
<tr>
<th>Code</th>
<th>Project Description</th>
<th>Collaborator(s)</th>
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</thead>
<tbody>
<tr>
<td>92055</td>
<td>Serologic characterization of HIV-1 from WHO candidate vaccine sites</td>
<td>Dr G. Schochetman, Centers for Disease Control, Atlanta, GA, USA</td>
</tr>
<tr>
<td>92063</td>
<td>Biological characterization of HIV isolates</td>
<td>Professor Eva-Maria Fenyo, Karolinska Institute, Stockholm, Sweden</td>
</tr>
<tr>
<td>92065</td>
<td>Epidemiological/behavioural research to prepare the Rakai Cohort, Uganda, for HIV vaccine trials</td>
<td>Dr N. Sewankambo, Uganda Virus Research Institute, Ministry of Health, Entebbe, Uganda</td>
</tr>
<tr>
<td>92066</td>
<td>Characterization of HIV-1 from WHO candidate vaccine sites: Serotyping by analysis of antibody response to the principal</td>
<td>Dr R. Cheingson-Popov, St. Mary's Hospital Medical School, London, England</td>
</tr>
<tr>
<td>92070</td>
<td>A WHO international study on HIV isolation and characterization: Pilot study in Brazil</td>
<td>Dr B. Galvao-Castro, Fundacao Oswaldo Cruz, Salvador, Bahia Brazil</td>
</tr>
<tr>
<td>92073</td>
<td>International training courses on basic clinical, epidemiological primary health care, behavioural and social aspects of AIDS</td>
<td>Dr Kampol Sriwatanakul, Mahidol University, Bangkok, Thailand</td>
</tr>
<tr>
<td>92074</td>
<td>Immuno-virological studies of perinatal transmission of the human immunodeficiency virus (HIV): feasibility of immunological interventions to reduce transmission rate</td>
<td>Dr Hans Wigzell, Karolinska Institute, Stockholm, Sweden</td>
</tr>
<tr>
<td>93016</td>
<td>Implementation of the National Plan for HIV/AIDS Vaccine</td>
<td>Dr Lair Guerra de Macedo Rodrigues, Ministerio de Salud, Brasilia, Brazil</td>
</tr>
<tr>
<td>93018</td>
<td>Isolation and characterization of HIV in Brazil: network of HIV characterization</td>
<td>Dr B. Galvao-Castro, Centro Goncalo Moniz/Fiocruz, Salvador, Bahia, Brazil</td>
</tr>
<tr>
<td>93026</td>
<td>HIV infection seroincidence study (HISS)</td>
<td>Dr J. Gasekurume, Ministry of Health, Kigali, Rwanda</td>
</tr>
<tr>
<td>93028</td>
<td>Mise en oeuvre du Plan d’Action pour la Mise au point et l’Evaluation du Vaccin</td>
<td>Dr J. Gasekurume, Ministère de la Sante, Kigali, Rwanda</td>
</tr>
<tr>
<td>93030</td>
<td>Preparing for AIDS Vaccine Evaluations: A Workshop on Epidemiology and Methodology</td>
<td>Dr Chirasak Khamboonruang, Chiang Mai University, Chiang Mai, Thailand</td>
</tr>
<tr>
<td>93031</td>
<td>WHO network for HIV isolation and characterization - a 1992-1993 pilot study</td>
<td>Dr Chantapong Wasi, Mahidol University, Bangkok, Thailand</td>
</tr>
<tr>
<td>93040</td>
<td>Implementation of the National Plan for HIV/AIDS Vaccine</td>
<td>Dr Prayura Kunasol, Ministry of Public Health, Bangkok, Thailand</td>
</tr>
<tr>
<td>93042</td>
<td>Strengthening of virus isolation and characterization facilities for the long-term monitoring of HIV genetic, antigenic and biological characteristics in Thailand</td>
<td>Dr Chantapong Wasi, Mahidol University, Bangkok, Thailand</td>
</tr>
</tbody>
</table>

### Office of Research/Clinical research and drug development

<table>
<thead>
<tr>
<th>Code</th>
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<th>Collaborator(s)</th>
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<tbody>
<tr>
<td>89010</td>
<td>Study of pulmonary complications of HIV infection (TUB)</td>
<td>Dr I. Mbaga, Muhimbili Medical Centre Dar es Salaam, United Republic of Tanzania</td>
</tr>
<tr>
<td>90001</td>
<td>Study of HIV infection in persons with African trypanosomiasis (TDR)</td>
<td>Dr F. Doua, Clinical Research Project on Trypanosomiasis, Daloa, Côte d'Ivoire</td>
</tr>
<tr>
<td>90021</td>
<td>Childhood tuberculosis and HIV infection in Zambia (TUB)</td>
<td>Dr C. Chintu, University Teaching Hospital, Lusaka, Zambia</td>
</tr>
<tr>
<td>90038</td>
<td>Identification of cross-reactive antigens in Schistosoma mansoni (TDR)</td>
<td>Dr J. Khalife, Pasteur Institute Lille, France</td>
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</tbody>
</table>
### Office of Research/Drug development (continued)

<table>
<thead>
<tr>
<th>Code</th>
<th>Project Title</th>
<th>Principal Investigator(s)</th>
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</thead>
<tbody>
<tr>
<td>91002</td>
<td>Short-course chemotherapy for tuberculosis with HIV-1 infection (TUB)</td>
<td>Dr R. Boulos, Centers for Development and Health, Port-au-Prince, Haiti</td>
</tr>
<tr>
<td>91007</td>
<td>Efficacy of low-dose oral interferon alpha in symptomatic HIV-infected patients</td>
<td>Dr T.E. Katabira, Mulago Hospital Kampala, Uganda</td>
</tr>
<tr>
<td>91045</td>
<td>Prevention of HIV-related tuberculosis in Zambia (TUB)</td>
<td>Professor K.P.W.J. McAdam, London School of Hygiene and Tropical Medicine, London, England</td>
</tr>
<tr>
<td>91080</td>
<td>Randomized, placebo-controlled clinical trial to evaluate the safety of COL-1492 in healthy women at low risk of HIV infection</td>
<td>Dr D. Reinprayoon, Department of Obstetrics and Gynaecology, Medical School Chulalongkorn Hospital, Bangkok Thailand</td>
</tr>
<tr>
<td>91084</td>
<td>HIV infection among children with tuberculosis (TUB)</td>
<td>Dr M. Espinal, National Centre for Research on Maternal and Child Health Children's Hospital, Santo Domingo, Dominican Republic</td>
</tr>
<tr>
<td>91099</td>
<td>Randomized, placebo-controlled clinical trial to evaluate the safety of COL-1492 in healthy women at low risk of HIV infection</td>
<td>Dr Ronachai Atisook, Siriraj Family Planning Research Center, Siriraj Hospital, Bangkok, Thailand</td>
</tr>
<tr>
<td>92005</td>
<td>Interactions HIV/Leishmania (TDR)</td>
<td>Dr Francisco Veas, Institut français de Recherche scientifique pour le Développement en Coopération, Montpellier, France</td>
</tr>
<tr>
<td>92045</td>
<td>Prevention of tuberculosis by INH or INH/rifampicin in asymptomatic and early symptomatic HIV patients in Thailand: a multicentre, randomized clinical trial</td>
<td>Dr Mattana Hanvanich, Chulalongkorn University Hospital, Bangkok, Thailand</td>
</tr>
<tr>
<td>92053</td>
<td>Treatment for chronic diarrhoea in persons with HIV infection</td>
<td>Professor A. Kadio, CHU Treichville, Abidjan, Côte d'Ivoire</td>
</tr>
<tr>
<td>92059</td>
<td>Comparison of different treatment regimens for oropharyngeal candidiasis: a multicentre cost-effectiveness study in African HIV seropositive subjects</td>
<td>Dr Elly Katabira, Mulago Hospital, Kampala, Uganda</td>
</tr>
<tr>
<td>92075</td>
<td>The effect of chloroquine prophylaxis on HIV-infected women during pregnancy (TDR)</td>
<td>Dr J.M. Kofi Ekue, Tropical Diseases Research Centre, Ndola, Zambia</td>
</tr>
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</table>

### Office of Research/Diagnostics

<table>
<thead>
<tr>
<th>Code</th>
<th>Project Title</th>
<th>Principal Investigator(s)</th>
</tr>
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<tbody>
<tr>
<td>88002</td>
<td>A comparative evaluation of commercial HIV diagnostic assays</td>
<td>Dr G. van der Groen, Prince Leopold Institute of Tropical Medicine, Antwerp Belgium</td>
</tr>
<tr>
<td>90024</td>
<td>Project for the evaluation of diagnostic assays for HTLV-1 infection</td>
<td>Dr S. Sonoda, Department of Virology Kagoshima University, Kagoshima, Japan</td>
</tr>
<tr>
<td>91005</td>
<td>Dual (HIV-1 and HIV-2) seropositive blood samples and the risk of dual infection</td>
<td>Dr G. van der Groen, Prince Leopold Institute of Tropical Medicine Antwerp, Belgium</td>
</tr>
<tr>
<td>91020</td>
<td>Development and evaluation of guidelines for the use of blood transfusion services in developing countries</td>
<td>Dr C.C. Campbell, Malaria Branch, Centers for Disease Control, Atlanta GA, USA</td>
</tr>
<tr>
<td>91036</td>
<td>Comparison between immunocytochemical measurement of CD4 and CD8 positive lymphocytes and measurement by flow cytometry</td>
<td>Dr I. Lisse, Department of Pathology Hvidovre Hospital, Copenhagen, Denmark</td>
</tr>
<tr>
<td>91081</td>
<td>Diagnosis of perinatal transmission of HIV and natural history of HIV infection in the Bahamas</td>
<td>Professor S. Read, Division of Infectious Diseases, Hospital for Sick Children, Toronto, Canada</td>
</tr>
<tr>
<td>91096</td>
<td>Interregional workshop on alternative strategies for HIV testing</td>
<td>Professor Prasert Thongcharoen Mahidol University, Bangkok, Thailand</td>
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</tbody>
</table>
### Office of Research/Diagnostics (continued)

<table>
<thead>
<tr>
<th>Code</th>
<th>Study Description</th>
<th>Collaborator(s)</th>
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<tbody>
<tr>
<td>91104</td>
<td>Field evaluation of combined assays for HIV-1 and HIV-2 antibodies in Dakar</td>
<td>Professor S. M'Boup, Faculté de Médecine, Centre Hospitalier Universitaire, Dakar, Senegal</td>
</tr>
<tr>
<td>92057</td>
<td>Evaluation sur le terrain des prélèvements des secretions buccales pour le dépistage des anticorps anti-VIH au Rwanda</td>
<td>Dr P. van de Perre, Laboratoire National de Reference (PNLS), Kigali Rwanda</td>
</tr>
<tr>
<td>92069</td>
<td>A multicentre evaluation of alternative methodologies for CD4 lymphocyte determination in Thailand</td>
<td>Dr Chantapong Wasi, Mahidol University, Bangkok, Thailand</td>
</tr>
<tr>
<td>93007</td>
<td>A multicentre evaluation of alternative methodologies for CD4 lymphocyte determination in Rio de Janeiro, Brazil</td>
<td>Dr M. Schechter, Hospital Universitario Clementino Fraga Filho, Rio de Janeiro, Brazil</td>
</tr>
<tr>
<td>93008</td>
<td>A multicentre evaluation of alternative methodologies for CD4 lymphocyte determination in Dar es Salaam</td>
<td>Professor F. Mhalu, Muhimbili Medical Center, Dar es Salaam, United Republic of Tanzania</td>
</tr>
<tr>
<td>93010</td>
<td>Field evaluation of WHO/GPA alternative HIV testing strategies</td>
<td>Dr O. Libonatti, School of Medicine, Buenos Aires, Argentina</td>
</tr>
<tr>
<td>93011</td>
<td>Protocol for field evaluation in Mexico of WHO’s alternative testing strategies in Mexico</td>
<td>Dr C. Soler, Instituto Nacional de Diagnóstico y Referencia, Col Santo Tomas, Mexico</td>
</tr>
<tr>
<td>93012</td>
<td>A multicentre evaluation of alternative methodologies for CD4 lymphocyte determination</td>
<td>Dr L. Deibis, Institute of Immunology, Caracas, Venezuela</td>
</tr>
<tr>
<td>93017</td>
<td>Field evaluation of assays for detecting HIV antibody in saliva and serum specimens</td>
<td>Dr P. Kabutura, Laboratoire Medical National, Bujumbura, Burundi</td>
</tr>
</tbody>
</table>

### Epidemiological research, surveillance and forecasting

<table>
<thead>
<tr>
<th>Code</th>
<th>Study Description</th>
<th>Collaborator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90006</td>
<td>Monitoring of tuberculosis/HIV infection trends in Uganda (TUB)</td>
<td>Dr T. Aisu, National Tuberculosis and Leprosy Control Programme Kampala, Uganda</td>
</tr>
<tr>
<td>90009</td>
<td>Studies of interaction between tuberculosis and HIV infection (TUB)</td>
<td>Dr H.J. Chum, National Tuberculosis and Leprosy Programme, Ministry of Health, Dar es Salaam, United Republic of Tanzania</td>
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<tr>
<td>90013</td>
<td>HIV infection of mother and child in the Congo. Clinical aspects of early infection in children (significance of antibody to gp120 in perinatal transmission of HIV)</td>
<td>Dr M. Lallemant, General Hospital Brazzaville, Congo</td>
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<td>90018</td>
<td>Epidemiology of perinatal and infant morbidity and mortality in association with maternal HIV infection in a rural community in Malawi</td>
<td>Dr J. Wnimna, National Malaria and Diarrhoeal Disease Programme, Kamuzu Central Hospital, Lilongwe, Malawi</td>
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<td>90028</td>
<td>Multicentre study on the risk of transmission of HIV infection to paediatric care units in developing countries</td>
<td>Dr E. MwaiKambo, Department of Paediatrics, Muhimbili Medical Centre Dar es Salaam, United Republic of Tanzania</td>
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<tr>
<td>90029</td>
<td>Study on maternal antibody to the principal neutralizing domain of HIV and the risk of perinatal HIV transmission in a large cohort of African children</td>
<td>Dr W.L. Heyward, AIDS Project, Kinshasa, Zaire</td>
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<td>90034</td>
<td>An investigation into possible association between HIV infection and clinical leprosy in Karonga District (LEP)</td>
<td>Dr J.M. Ponninghaus, LEPRO Evaluation Project, Chilumba, Malawi</td>
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<tr>
<td>90035</td>
<td>The role of HIV infection in adverse pregnancy outcome</td>
<td>Dr M. Temmerman, Department of Medical Microbiology, University of Nairobi, Nairobi, Kenya</td>
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<td>90055</td>
<td>Multicentre study on consequences of HIV-1 infection in pregnancy with special reference to determinants of mother-to-fetus/infant HIV-1 transmission and to the consequences for the child (HRP)</td>
<td>Professor F.A. Mmiro, Department of Obstetrics and Gynaecology, Makerere University, Kampala, Uganda</td>
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<td>90057</td>
<td>Multicentre study on the risk of transmission of HIV infection in paediatric care units in developing countries</td>
<td>Dr C. Luo-Mutti, Department of Pediatrics, University Teaching Hospital, Lusaka, Zambia</td>
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<td>90068</td>
<td>Multicentre study on the risk of transmission of HIV infection in paediatric care units in developing countries</td>
<td>Dr D. Hitimana, General Hospital Kigali, Rwanda</td>
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<td>91001</td>
<td>Study on mother-to-child transmission of HIV-1 in Brazzaville</td>
<td>Dr M. Lallemand, General Hospital Brazzaville, Congo</td>
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<td>91010</td>
<td>Study on the impact of occupational risk of HIV infection on retention of nurses involved in bedside nursing in Zambia</td>
<td>Mrs J.K. Chime, School of Medicine University of Zambia, Lusaka, Zambia</td>
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<td>91028</td>
<td>Multicentre study of consequences of HIV-1 infection in pregnancy with special reference to determinants of mother-to-fetus/infant HIV-1 transmission and to the consequences for the child (HRP)</td>
<td>Dr J. Kasule, Department of Obstetrics and Gynaecology, University of Zimbabwe, Harare, Zimbabwe</td>
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<td>91029</td>
<td>The risk of occupational exposure to HIV infection for midwives and traditional birth attendants (multicentre study)</td>
<td>Dr I. Kanyama, Tropical Diseases Research Centre, Ndola, Zambia</td>
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<td>91030</td>
<td>The risk of occupational exposure to HIV infection for midwives and traditional birth attendants (multicentre study)</td>
<td>Professor F.A. Mmiro, Department of Obstetrics and Gynaecology, Makerere University, Kampala, Uganda</td>
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<td>91034</td>
<td>Evaluating HIV-1 transmission through breast-feeding</td>
<td>Dr F. Boulos, Centers for Development and Health, Port-au-Prince, Haiti</td>
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<td>91041</td>
<td>Compilation of all unpublished data on the evidence of lack of male circumcision as a risk factor for HIV infection</td>
<td>Dr S. Moses, College of Health Sciences Department of Community Health University of Nairobi, Kenya</td>
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<td>Pilot study on the risk of transmission of HIV infection in paediatric care units in developing countries</td>
<td>Dr B. Madraa, Child Nutrition Unit Mulago Hospital, Kampala, Uganda</td>
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<td>91044</td>
<td>Review of currently available evidence on lack of male circumcision as a risk factor for HIV infection with particular emphasis on developing countries</td>
<td>Dr I. Vincenzi, WHO-EC Collaboration Centre, European Centre for the Epidemiological Monitoring of AIDS, Hôpital National de Saint-Maurice, Saint-Maurice, France</td>
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<td>91067</td>
<td>Maternal HIV infection as a risk factor for adverse obstetrical outcome: A cohort study</td>
<td>Dr A. De Clercq, Department of Paediatrics, Centre Hospitalier de Kigali, Kigali, Rwanda</td>
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<td>Evaluation of the impact of genital ulcer disease (GUD) control and its impact on HIV transmission</td>
<td>Dr O.L. Mbengeranwa, Harare City Health Department, Harare, Zimbabwe</td>
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<td>Pilot study of HIV-1 and HIV-2 infections in patients attending STD clinics in Maharashtra State</td>
<td>Dr S.P. Tripathy, Indian Council for Medical Research, New Delhi, India</td>
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<td>A study of the consequences of HIV-2 infection in pregnant Gambian women</td>
<td>Dr A. Wilkins, Medical Research Council Banjul, Gambia</td>
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<td>91107</td>
<td>Review of literature on condom technology and priorities for research</td>
<td>Dr Brenda Spencer, INSERM, Paris, France</td>
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<td>92034</td>
<td>The infectiousness of tuberculosis in HIV-infected people (TUB)</td>
<td>Dr Marcos A. Espinal, Hospital de Niños, Santo Domingo, Dominican Republic</td>
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### Epidemiological research, surveillance and forecasting (continued)

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<th>93043</th>
<th>Working group on mother-to-child transmission of the human immunodeficiency virus with special reference to developing countries</th>
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<td></td>
<td>Dr Francois Dabis, INSERM, Université de Bordeaux II, Bordeaux, France</td>
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### Office of Intervention Development and Support, 1992

<table>
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<th>39</th>
<th>Costing of preventive strategies for HIV/AIDS</th>
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<td></td>
<td>Dr A. Mills, London School of Hygiene and Tropical Medicine, London, England</td>
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### Office of Intervention Development and Support/High-Risk Behaviour Unit

<table>
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<tr>
<th>40</th>
<th>Etudes d'intervention sur les maladies sexuellement transmissibles et l'infection à VIH chez les prostituées à Abidjan, Côte d'Ivoire</th>
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<tr>
<td></td>
<td>Dr M. Laga, Institut de Médecine Tropicale &quot;Prince Leopold&quot;, Antwerp, Belgium</td>
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### Office of Intervention Development and Support/Health Care Support Unit

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<th>41</th>
<th>Feasibility of preventive tuberculosis chemotherapy for dually (TB/HIV) infected individuals in Uganda</th>
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<td>Dr T. Aisu, Uganda National Tuberculosis Control Programme, Kampala, Uganda</td>
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<th>Development of protocols for field studies of STD algorithms</th>
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<td>Professor P. Piot, Institut de Médecine Tropicale &quot;Prince Leopold&quot;, Antwerp, Belgium</td>
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### Office of Intervention Development and Support/Social and Behavioural Studies and Support Unit

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<th>43</th>
<th>Evaluation of reliability/validity of WHO/GPA survey data on sexual behaviour in Uganda</th>
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<td>Dr Mary Inez Lyons, Institute of Commonwealth Studies, University of London, London, England</td>
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<th>To test/retest reliability/vality study on social and behavioural science research on sexual behaviour related to HIV and AIDS</th>
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<td>Professor Teodora V. Tiglao, College of Public Health, University of the Philippines, Manila, Philippines</td>
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<th>Comparative analysis of diary and questionnaire survey responses on sexual behaviour in Guinea-Bissau</th>
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<td>Dr Marianne Hogsborg, Projecto DCA/MINSAP, BANDIM, Bissau, Guinea-Bissau</td>
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<table>
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<th>Assessment of quality of WHO survey data on sexual behaviour: a methodological study in Zimbabwe</th>
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<td>Dr John McMaster, University of Zimbabwe, Harare, Zimbabwe</td>
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<th>A study on networks of sexual contacts in Thailand</th>
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<tr>
<td></td>
<td>Dr Werasit Sittirai, Thai Red Cross Society, Programme on AIDS, Bangkok, Thailand</td>
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### Office of Intervention Development and Support (1993)

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<tr>
<th>48</th>
<th>Work on costing guidelines for AIDS prevention activities</th>
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<tr>
<td></td>
<td>Dr Anne Mills, London School of Hygiene and Tropical Medicine, London, England</td>
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### Office of Intervention Development and Support/High-Risk Behaviour Unit

<table>
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<tr>
<th>49</th>
<th>A study of HIV infection among injecting drug users in Manipur, emphasizing behavioural and clinical factors</th>
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<td></td>
<td>Dr B.C. Deb, Indian Council for Medical Research, Calcutta, India</td>
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<th>50</th>
<th>A study of availability and use of condoms in hotels and motels in the Dominican Republic</th>
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<tr>
<td></td>
<td>Dr Ernesto Guerrero, Dominican Republic Union against Sexually Transmitted Diseases, Santo Domingo, Dominican Republic</td>
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<table>
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<th>51</th>
<th>An assessment research for an intervention project to minimize HIV among injecting drug users in Madras</th>
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<tr>
<td></td>
<td>Dr S. Sundaraman, AIDS Research Foundation of India, Madras, India</td>
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<tr>
<td>Office of Intervention Development and Support/High-Risk Behaviour Unit (continued)</td>
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<tr>
<td><strong>52</strong></td>
<td>Prévention des MST/SIDA chez les prostituées et leurs clients à Abidjan</td>
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<tr>
<td><strong>53</strong></td>
<td>Intervention research on increasing the safety of sex work in Chiapas, Mexico</td>
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<tr>
<td><strong>54</strong></td>
<td>Situation assessment of prostitutes in Port Moresby and Goroka, Papua New Guinea</td>
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<tr>
<td><strong>55</strong></td>
<td>IEC/STD intervention study in Masaka District, Uganda</td>
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<tr>
<td><strong>56</strong></td>
<td>Situation assessment of the population of men who have sex with men in Kuala Lumpur</td>
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<tr>
<td><strong>57</strong></td>
<td>A situation assessment of the population of men who have sex with men in Surabaya</td>
</tr>
<tr>
<td><strong>58</strong></td>
<td>Etude des caractéristiques des prostituées masculins au Maroc et évaluation de leurs risques d'exposition à l'infection à VIH</td>
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<tr>
<td><strong>59</strong></td>
<td>An intervention research trial for men who have sex with men in Madras</td>
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### ANNEX 11

**Contributions to the Trust Fund for undesignated activities at all levels of the Programme from 1987 to 1993**

(expressed in US dollars)

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* Germany: Contribution for 1992 received in 1991. USSR 2,567,52 received in 1992, of which US$ 2,100,000 were multi-lateral.
** USA: includes US$ 7,250,000 letter of credit called forward in 1993.
ANNEX 12

WHO/IFPMA Statement of Intent: Commitment to action on HIV/AIDS

Purpose of Statement

The World Health Organization (WHO) and the International Federation of Pharmaceutical Manufacturers Associations (IFPMA) are deeply concerned about the devastating health, social and economic impact of the HIV/AIDS pandemic worldwide.

This statement expresses each party’s commitment to effectively use its expertise towards the resolution of the HIV/AIDS pandemic and to explore all possible areas for cooperation towards this goal.

Background

The HIV/AIDS pandemic will have a severe impact on all countries, particularly developing countries with a high incidence of HIV infection and limited health care resources. Because all countries face competing demands for finite resources, it is imperative that they develop strategies to maximize, and cost-effectively utilize, all their existing resources, expertise and talent.

Above all, it is important to stress that AIDS is a fatal, predominantly sexually transmitted disease which is preventable.

To date, no vaccine or curative treatment for HIV/AIDS exists. As such, enhanced research and development work and the implementation of preventive strategies, including education, behaviour modification and condom use, are most critical. Furthermore, in anticipation of the increasing number of AIDS patients worldwide, strategies to strengthen national health care and social infrastructures are also essential.

Everyone – governments, intergovernmental organizations, development agencies, health care policy groups, educational institutions, foundations, the private sector, health professionals, religious organizations, nongovernmental organizations (NGOs), pharmaceutical and all other industries, and individuals – has an interest in limiting the impact of HIV/AIDS and in preventing future HIV infections.

WHO and IFPMA Commitment

WHO and IFPMA each have a unique capability and expertise to contribute to the prevention and management of HIV infection and HIV-related diseases. In view of the gravity of the pandemic, each party agrees that it is important to promote collaboration between the public and private sectors whenever possible. WHO and IFPMA have accordingly agreed on the following commitments of principle as part of an overall collaborative effort to combat the AIDS pandemic.

A. The Role of the Pharmaceutical Industry

The pharmaceutical industry’s primary expertise is in the area of research, development, marketing and distribution of drugs and vaccines.

1. The pharmaceutical industry commits itself to work as rapidly as possible towards the discovery and development of new, safe and effective drugs and vaccines against HIV/AIDS. This research will be conducted with the same level of integrity, attention to detail and thoroughness with which it develops products for other diseases.

2. The pharmaceutical industry is sensitive to the worldwide budgetary constraints in health care, particularly for developing countries. HIV/AIDS products are viewed in light of this overall context. It also recognizes the objectives of WHO in working with the pharmaceutical industry in the development of these new products. When feasible, individual pharmaceutical companies, and, when appropriate, industry organizations will explore with WHO, governments and other parties, innovative means and partnerships to facilitate the rapid development and widest access to HIV/AIDS drugs and vaccines as they become available as approved products.

3. HIV/AIDS poses new and complex ethical challenges which IFPMA is committed to meeting in close collaboration with WHO and other parties. The member companies which comprise the associations within IFPMA are committed to clear internationally accepted guidelines on the ethical conduct of epidemiological and clinical research conducted in developing countries, such as the CIOMS 1993 revised International Guidelines for Biomedical Research Involving Human Subjects.
In this light, it will ensure that, in accordance with such internationally acceptable ethical standards, patients in clinical trials will continue to be provided with the drug or vaccine under study after the end of the study period when evidence demonstrates potential benefit and further administration of the drug or vaccine is medically indicated.

4. Companies within the IFPMA member associations also agree that once the safety and efficacy of a drug or vaccine has been established for regulatory purposes, they will give early attention to the registration and marketing of the product worldwide in particular in the developing countries in which trials were carried out, in order to make such a drug or vaccine available and accessible to the population of those countries.

5. Informed publics are healthier publics who are better able to make efficient and productive choices. IFPMA recognizes that industry’s own expertise may be applied to a variety of education and prevention efforts.

- Pharmaceutical companies are committed to promoting “AIDS in the Workplace” policies to educate their employees, and to protect against discrimination of employees who are HIV-infected or who have developed AIDS.
- IFPMA will urge its member associations, and the companies they represent, individually or collectively to support physician, patient and public education activities, i.e. public health messages and community-based programmes.

B. The Role of WHO

1. WHO is committed to playing a coordinating role for international AIDS research in key areas, whenever appropriate.

2. WHO will put forward, for consideration by all interested groups, proposals for collaborative projects aimed at promoting the availability of drugs and vaccines of assured quality and efficacy for the treatment and prevention of HIV/AIDS. In so doing, one of WHO’s main objectives is to promote the development of safe and effective new HIV/AIDS products that will be made available at prices that take into account the limited financial means of the public sector to purchase medical supplies for use in developing countries. Collaborative projects in which WHO becomes involved will be judged in this light. These proposals will also take account of the respective strengths of each partner organization. In particular, WHO respects the intellectual property rights of its collaborating partners and the need for commercial companies to obtain a reasonable return on their investment in research, development and production.

3. WHO will continue to work with governments of its Member States with a view to ensuring that systematic and quantitative estimates of priority drug and vaccine requirements for the treatment of HIV/AIDS are undertaken so as to provide collaborating pharmaceutical companies with improved assessments of public sector needs in developing countries.

4. WHO will continue to promote in selected developing countries the strengthening of the research capacity to conduct evaluations of drugs and vaccines for HIV/AIDS in accordance with international standards for Good Clinical and Laboratory Practices, thereby enhancing the general acceptability of the resulting data for registration purposes.

5. WHO is committed to work with interested drug regulatory agencies in order to facilitate appropriate harmonization of requirements for the licensing of drugs and vaccines for HIV/AIDS, such as on definitions and guidelines for the acceptability of clinical and field data.

6. WHO is committed to assisting governments in formulating and strengthening national AIDS policies, programmes and strategies, particularly in the area of HIV/AIDS prevention and education.

7. WHO, furthermore, will draw to the attention of Member States the importance of ensuring that additional resources are made available to cope with the expected increase in demand for health services, including training for proper patient management and monitoring.

8. WHO will encourage governments to develop suitable administrative procedures and facilities to increase the accessibility of safe and effective drugs and vaccines for treatment of HIV/AIDS at all levels of the health care system, to ensure that the drugs and vaccines are administered with the maximum levels of safety and efficacy.

9. WHO will work, in collaboration with governments and industry, in the establishment of effective safeguards against the diversion to other markets of drugs and vaccines made available to the public sector of developing countries, in a manner that promotes WHO’s objective of availability referred to above.

December 1993
ANNEX 13

GPA organizational structure at headquarters,
31 December 1993

Executive Director’s Office
- Planning & Policy Coordination (PPC)
- Administration, Management & Information (AMI)
- External Coordination & Mobilization (ECM)

Sexually Transmitted Diseases (STD)

Division of Research and Intervention (RID)
- Vaccine Development (VAD)
- Clinical Research and Product Development (CRD)
- Social and Behavioural Studies (SSB)
- Prevention Research (PRS)

Division of Technical Cooperation (TCO)
- Coordination Monitoring of National Programme Support (CPS)
- Planning, Management and Training (PMT)
- Prevention (PRV)
- Health Care and Support (HCS)
- Surveillance, Evaluation and Forecasting (SEF)
# ANNEX 14

**GPA fixed-term and short-term staff working against established posts, 31 December 1993**

## Office of the Director

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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</thead>
<tbody>
<tr>
<td>M.H. Merson</td>
<td>Director</td>
</tr>
<tr>
<td>F. McCaul</td>
<td>Admin. Assist.</td>
</tr>
<tr>
<td>G. Mignon</td>
<td>Secretary</td>
</tr>
<tr>
<td>P. Griffiths</td>
<td>Secretary</td>
</tr>
<tr>
<td>C. Schmitz</td>
<td>Secretary</td>
</tr>
<tr>
<td>C. Gregory</td>
<td>Secretary</td>
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## Office of the Deputy Director

<table>
<thead>
<tr>
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<th>Position</th>
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<tbody>
<tr>
<td>D. Blake</td>
<td>Deputy Director</td>
</tr>
<tr>
<td>K. Widdows</td>
<td>Legal Officer</td>
</tr>
<tr>
<td>K. Cravero</td>
<td>External Relations Officer</td>
</tr>
<tr>
<td>P. Brice</td>
<td>Admin. Officer</td>
</tr>
<tr>
<td>T. Wiseman</td>
<td>External Relations Officer</td>
</tr>
<tr>
<td>D. French</td>
<td>Secretary</td>
</tr>
<tr>
<td>M. Simango</td>
<td>Secretary</td>
</tr>
<tr>
<td>C. Brenner</td>
<td>Secretary</td>
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<tr>
<td>J. Neracher</td>
<td>Secretary</td>
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<tr>
<td>G. Treso</td>
<td>Secretary</td>
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## Associate Director’s Office

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<tr>
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<tbody>
<tr>
<td>P. Piot</td>
<td>Associate Director (STD)</td>
</tr>
<tr>
<td>Q. Islam</td>
<td>Medical Officer</td>
</tr>
<tr>
<td>J. Nallet</td>
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</tr>
<tr>
<td>V. Gramiccia</td>
<td>Secretary</td>
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<tr>
<td>P. Hindle</td>
<td>Secretary</td>
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</table>

## Planning and Policy Coordination

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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</thead>
<tbody>
<tr>
<td>S. Holck</td>
<td>Chief</td>
</tr>
<tr>
<td>S. Cherney</td>
<td>Senior Editor</td>
</tr>
<tr>
<td>D. Lewis</td>
<td>Writer/Editor</td>
</tr>
<tr>
<td>T. France</td>
<td>Technical Editor</td>
</tr>
<tr>
<td>C. Powell</td>
<td>Public Information Officer</td>
</tr>
<tr>
<td>S. Bertozzi</td>
<td>Health Economist</td>
</tr>
<tr>
<td>D. Schopper</td>
<td>Scientist</td>
</tr>
<tr>
<td>L. Wolf</td>
<td>Secretary</td>
</tr>
<tr>
<td>J. Ballour</td>
<td>Secretary</td>
</tr>
<tr>
<td>A. Severino</td>
<td>Document Production Assistant</td>
</tr>
<tr>
<td>M.-L. Granchamp</td>
<td>Typist</td>
</tr>
<tr>
<td>T. Harryman</td>
<td>Secretary</td>
</tr>
<tr>
<td>B. Baigrie</td>
<td>Document Centre Assistant</td>
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## Administrative Support Services

<table>
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<tbody>
<tr>
<td>G. Ernberg</td>
<td>Chief</td>
</tr>
<tr>
<td>J. Hargreaves</td>
<td>Administrative Officer</td>
</tr>
<tr>
<td>P. Hennessy</td>
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</tr>
<tr>
<td>S. Ray Tabora</td>
<td>Programme Officer</td>
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<tr>
<td>M. Wallace</td>
<td>Systems Analyst</td>
</tr>
<tr>
<td>J. Habgood</td>
<td>Administrative Assistant</td>
</tr>
<tr>
<td>Y. Cabrer</td>
<td>Secretary</td>
</tr>
<tr>
<td>A. Prazak</td>
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<tr>
<td>S. Angulo</td>
<td>Clerk</td>
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<tr>
<td>S. Fonteyne</td>
<td>Secretary</td>
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<tr>
<td>G. Samarine</td>
<td>Secretary</td>
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<tr>
<td>Z. Zutomayor</td>
<td>Secretary</td>
</tr>
<tr>
<td>S. Bell</td>
<td>Clerk</td>
</tr>
<tr>
<td>H. Parisi</td>
<td>Clerk</td>
</tr>
<tr>
<td>T. Le Minh</td>
<td>Assistant</td>
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## Office of Research

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<tbody>
<tr>
<td>D. Heymann</td>
<td>Chief</td>
</tr>
<tr>
<td>E. Belsey</td>
<td>Statistician</td>
</tr>
<tr>
<td>A. Sow</td>
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</tr>
<tr>
<td>C. Norton</td>
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</tr>
<tr>
<td>P. Ratcliffe</td>
<td>Technical Assistant</td>
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<tr>
<td>R. Fanals</td>
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<tr>
<td>C. Buencamino</td>
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<tr>
<td>S. Swannell</td>
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<tr>
<td>S. Kristofferson</td>
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## Clinical Research and Drug Development

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<tbody>
<tr>
<td>J. Lange</td>
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</tr>
<tr>
<td>M. Karam</td>
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</tr>
<tr>
<td>J. Perriens</td>
<td>Medical Officer</td>
</tr>
<tr>
<td>A. F. Canaud</td>
<td>Secretary</td>
</tr>
<tr>
<td>M. Kigundu</td>
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## Vaccine Development

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<tbody>
<tr>
<td>J. Espana</td>
<td>Chief</td>
</tr>
<tr>
<td>W. Heyward</td>
<td>Scientist</td>
</tr>
<tr>
<td>S. Osmanov</td>
<td>Scientist</td>
</tr>
<tr>
<td>J. Halpin</td>
<td>Secretary</td>
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<tr>
<td>J. Rey-Millet</td>
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## Diagnostics

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<tr>
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<tr>
<td>H. Tamashiro</td>
<td>Chief</td>
</tr>
<tr>
<td>A. Fauquex</td>
<td>Scientist</td>
</tr>
<tr>
<td>D. Appiah</td>
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</table>
Epidemiological Research and Forecasting
B. Nkowane Chief
R. Stoneburner Medical Officer
C. Gray Secretary
M. Brown Secretary

Office of Cooperation with National Programmes
S.E. Ekeid Chief
S. Kingma Medical Officer (AFRO liaison)
C. Bwkirira Technical Officer
P. Friell Medical Officer
M. Vernerey Medical Officer
J. Emmanuel Scientist
O. Brasseur Scientist
E. Bernard Administrative Assist.
M. Rafahelimanana Administrative Assist.
J. Clemens Secretary
T. Ryle Secretary
E. Kortum Secretary
C. Lichtenstein Secretary

Operational Support and Monitoring
L. Jansegers Chief
R. Widy-Wirski Medical Officer
C. Chan Kam Medical Officer
G. Poumerol Medical Officer
E. Blas Technical Officer
P. Howard Administrative Officer
J. Wickett Technical Officer
M. Wernette Technical Officer
A. Buckley Technical Officer
H. Dassanayake Technical Officer
M. Szczeniowski Technical Officer
R. Kissenberger Secretary
C. Chirapaqui Secretary
C. Jouan Secretary
A. Chua Secretary
A. Cordero Secretary
T. Kuo Secretary
E. Regan Secretary

Evaluation
T. Mertens Chief
P. Sato Scientist
M. Caraël Scientist
A. Burton Systems Analyst
J. Brun Secretary
R. Guin Secretary
C. Forbes-Hedberg Secretary

Training and Materials Development
D. R. Billington Chief
M.A. Neill Training Officer
J. Robson Technical Officer
M.T. Brahmchaa Secretary
C. Quay Secretary

Office of Intervention Development and Support
G. Slutkin Chief
P. Soper Secretary
E. Matt Secretary
V. Allsebrook Secretary

High Risk Behaviour
K. O'Reilly Chief
N. Ferencic Scientist
K. Connor Scientist
A. Abdul Quader Scientist
V. Chandra Mouli Scientist
M. Horton Scientist
P. Bevin Secretary
C. Marclay Secretary
V. Arbogast Secretary

Youth and General Public
F. Elkamel Chief
F. Yao Scientist
M. Baldo Scientist
M. Youssef Scientist
C. Kennedy Secretary
E. Salvador Secretary

Health Care Support
E. Van Praag Chief
R. Wabitsch Medical Officer
S. Anderson Public Health Nurse
S. Kalibala Scientist
J. Stoeckel Scientist
J. Watters Secretary
E. O'Reilly Secretary
S. Ager-Harris Secretary

Social and Behavioural Studies and Support
P. Aggleton Chief
B. Ferry Scientist
E. Rodrigues Secretary
S. Schaller Secretary

Africa
Regional and Subregional Offices
P. Fasan Medical Officer
S. Kingma Scientist
G.M. Gersby Damet Health Education Spec.
E. Joe Health Education Specialist
G. Shaw Technical Officer
M. Foulquie Technical Officer
A. Bouekassa Technical Officer
K. Ward Brew Medical Officer
R. Louya Nurse
J.S. Kalilani Medical Officer
V.N. Ngongco Nurse
A. Clarke Technical Officer
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<td>M. Weissnibacher</td>
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<td>F. Del Castillo</td>
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<td>L. Khodakevich</td>
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<td>J. Hallauer</td>
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<tr>
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<tr>
<td>C. Edlund</td>
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<tr>
<td>H. Mikkelsen</td>
<td>Technical Officer</td>
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</tbody>
</table>
**Eastern Mediterranean**

**Regional Office**
- P.N. Shrestha: Medical Officer
- A. Thraya: Health Education Specialist
- E. Ramadan: Technical Officer

**Country Posts**
- A. Ntilivamunda: Medical Officer
- Z. Najjar: Health Education Specialist
- R.J. Voetsch: Technical Officer

**Western Pacific**

**Regional Office**
- G. Petersen: Medical Officer
- R. Sarda: Medical Officer
- D. Shrestha: Health Education Specialist
- L.V. Kerse: Nurse
- R. Preston: Technical Officer

**Country Posts**
- R. Renas: Technical Officer
- J. Mullally: Technical Officer
- K. Osuga: Medical Officer
- L. Folkers: Health Education Specialist
- M. O'Leary: Medical Officer
- T.V. Tu: Technical Officer
- Manthey: Technical Officer
- P. Crippen: Technical Officer
We, the Heads of State and Government of the Organization of African Unity, meeting at the Twenty-eighth Ordinary Session of our Assembly in Dakar, from 29 June to 1 July 1992,

Bearing in mind:

• That AIDS is one other disease among the myriad health problems of the African Continent.
• That, unlike many or almost all other diseases, AIDS has no drugs or vaccines to prevent or cure it and those supportive drugs that are presently available pose a particular challenge to our health budgets.
• That it is estimated that, by the year 2000, 20 million Africans will be HIV-positive, causing approximately 1 million deaths annually.
• That, with the emergence of AIDS, some diseases that were almost under control, notably tuberculosis, are becoming public health problems once again.
• That, with the emergence of AIDS, millions of children will be orphaned over the coming decade.
• That the positive gains in health status of children and women brought about by successful primary health care programmes of immunization in most African states are being threatened and will actually be reversed by AIDS.
• That HIV, the AIDS virus, spreads through the basic human drive for love, intimacy, physical closeness and the reproduction of the species and that controlling and channelling this drive is the only way to ensure our species' survival.
• That AIDS leads to frustration and despair, and kills young and middle-aged adults, who are the mainstay of the family, the backbone of the workforce, and the key to development.
• That AIDS is a major health problem affecting the socioeconomic situation of our continent.

Declare that:

1. Prevention is the key to slowing the spread of AIDS in Africa and containing its ultimate impact. This is a national responsibility and an international challenge.

2. Community and home-based care, integrating AIDS activities into primary health care, improving management capabilities, undertaking sentinel surveillance, improving nursing care and counselling skills, ensuring the safety of blood and supporting special activities targeted at youth and women are among the rational strategies to be followed by all our Member States.

Commit ourselves to this Agenda for Action

1. By giving our fullest political commitment to mobilizing society as a whole for the fight against AIDS.

We must emphasize the gravity and urgency of the epidemic, and announce to our people that the country's stability and survival are at stake. We must overcome any sensitivities and speak out frankly about how to prevent AIDS; no taboo should be allowed to interfere with the saving of millions of lives. We must find imaginative ways of accommodating clear prevention messages within the context of our country's social, cultural and religious norms, and exercise moral leadership to bring about life-saving changes in individual and collective behaviour. We must encourage traditional and religious leaders to do the same and thereby protect
their own communities from AIDS. We must see to it that all existing communication channels, both traditional and non-traditional, are used to explain how HIV is transmitted and how it is not transmitted, so that all people understand they run no risk from social contact with HIV-infected individuals. We must counter the impression that AIDS is a disease that only attacks certain groups or populations, and show by our personal example that people with HIV or AIDS are to be treated with respect and compassion, in keeping with Africa's age-old tradition of tolerance.

Target: By the end of 1992, each one of us will be publicly recognized as the leader of the fight against AIDS in our own country.

2. **By stepping up action to prevent the sexual transmission of HIV.**

While the tragedy of Africa is that AIDS spread so far before scientists recognized how HIV was transmitted, the hope of Africa is its younger generation, who still have a chance to escape infection. We must seize this opportunity and ensure that today's girls and boys, who will be the mothers and fathers of tomorrow's children – are safe from HIV. We must see to it that all young people are given frank information about how the virus spreads; educated in life-saving skills – including the strength to say no to sex and the skill to negotiate safer sex; and given access to condoms, family planning services, and appropriate management of sexually transmitted diseases, which greatly increase the risk of HIV transmission if left untreated. At the same time, the older generation must accept their responsibility to protect the young from exposure to HIV. Women are another vulnerable group. We must take decisive action including legislation to improve their education, economic prospects and social status so that women gain better control over their sex life and that of their partners. AIDS menaces not only women themselves but Africa's newborn, since one in three babies born to an HIV-infected woman is itself infected.

Target: By mid-1993, all of us will have ensured that 100% of our country's adults, including young adults, know how HIV is transmitted and how they can protect themselves and others from infection.

3. **By planning for the care of people with HIV infection and AIDS and the support of their families and survivors.**

In just eight years, Africa will have had a cumulative total of 18 million HIV infections. Already, hospitals are overwhelmed by the needs of HIV-infected people, and their families are disrupted by illness and death in their most productive members. We must see to it that a rational care plan is drawn up, with funding from national and external resources. We must ensure that our national essential drugs programme makes provision for the millions of infected Africans who will need, at minimum, pain relief and treatment for the common HIV-related illness, such as sexually transmitted diseases, diarrhoea, fungal infections, pneumonia and tuberculosis. We must ensure links and collaboration between the formal health sector and community structures, including religious, charitable and other nongovernmental organizations (NGOs), so that patients can be cared for primarily at home or on an outpatient basis. We must at the same time anticipate the family and community disruption that will result from AIDS deaths, and plan now for ways of caring for and supporting the survivors, including the projected 10 million AIDS orphans of the 1990s – again, in close collaboration with community-based organizations. Special attention must be paid to the education and care of mobile populations.

Target: By mid-1993, we will have adopted a rational AIDS care plan, including essential drugs for HIV-related illness, and a rational plan for family-based or community care and support of AIDS survivors, including orphans.

4. **By supporting appropriate and relevant AIDS research.**

Research is a necessary component for the development of knowledge towards an understanding of the problem of AIDS in Africa and control of HIV infection. While collaboration between scientists from developed countries and those from Africa should continue to be promoted and supported, it is important to strengthen and promote research capacity in Africa. AIDS research should be directed towards AIDS problems specific to Africa.

There should be a mechanism in place to ensure coordination of AIDS research between countries and the application of an ethical code.

Efforts should also be aimed at researching medicinal herbs since some have been shown to have potency.

Target: By the end of 1993, we will have endorsed a national plan of action for the promotion and coordination of AIDS research in our countries including an operational ethical code in AIDS research.
5. By using our leadership position to ensure that all sectors of society work together to tackle the AIDS epidemic.

We must see to it that each and every sector, private and governmental, understands what it stands to lose because of AIDS and its socioeconomic repercussions, and consequently how it can benefit from and contribute to effective AIDS prevention and control. We must direct Ministers from each sector to develop and implement the relevant plans and provide the necessary resources. To take but a few examples, the Ministry responsible for Health must play a key role in developing appropriate strategies for behaviour change and in preventing the spread of HIV through infected blood or unsterilized needles and skin-piercing equipment, as well as in patient care and in surveillance of the epidemic; sustainability must be ensured through strengthening of all health infrastructures and the integration of all health programmes. The Ministry responsible for Labour must undertake studies of the impact of AIDS on labour availability and plan AIDS education at the workplace; the Ministry responsible for Education must develop school curricula for age and culture-specific AIDS education; the Ministry responsible for Social Affairs must design appropriate educational and condom supply programmes for clients and workers in the commercial sex trade. Finally, we must reach out to community-based and other NGOs, which have been a mainstay of AIDS prevention and care since the start of the epidemic, and ensure that NGOs are part of the national AIDS programme.

Target: By the end of 1993, we will have ensured that every sector has worked out a plan, that takes into account the sectoral implications and consequences of AIDS, and allocated funds to it, and will have established an effective high-level mechanism for the multisectoral coordination of the planned activities.

6. We must make AIDS a top priority for external resource allocation so that our continent benefits from maximum international cooperation and solidarity in overcoming the epidemic and its impact.

Financial requirements for AIDS prevention, care and control will place a heavy burden on countries around the world, developed and developing, but the gap between the resources needed and those available will be especially wide in Africa, against the background of the continent's heavy load of foreign debt, famine, and other diseases. The AIDS epidemic is certain to place a drain on Africa's health care resources, decimate its workforce, reduce industrial and agricultural production, and result in loss of educated professionals, consumers and purchasing power. A Plan of Action for Africa must be developed, costed and presented to the private sector, NGOs, philanthropic foundations and trusts, development assistance agencies of wealthier nations, and international organizations such as WHO, the World Bank, UNDP, UNICEF and others. At the same time, we must help ensure solidarity in the sharing of knowledge. We must see to it that local public opinion understands how important it is for Africa to participate on an equal footing with the industrialized countries in the global research effort to find effective drugs and vaccines against AIDS. Active participation in the process of research and development will help ensure that the products of research are both appropriate for and accessible to Africa.

Target: By the end of 1994, we will have collaborated in and produced a consolidated Plan of Action for Africa to attract the financing needed for controlling AIDS and containing the epidemic's consequences, and will begin to promote this Plan of Action at all international and donor forums.