IV INTERNATIONAL CONFERENCE ON AIDS

STOCKHOLM, SWEDEN, 16 JULY 1988

CLOSING PLENARY V

AIDS - REPORT FROM THE STOCKHOLM CONFERENCE

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The Honourable Justice Michael Kirby CMG*
Australia

PULLING TOGETHER THE THEMES

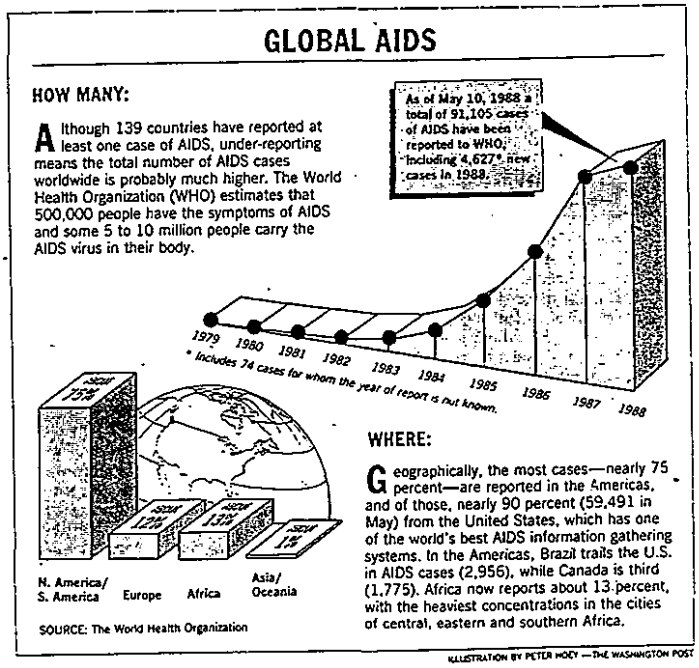
In these closing moments of this large international enterprise the last thing you will want is the speech ascribed to me in the program, unresponsive to the events of the last four days. Even the most rigorous statisticians amongst you might be willing to concede that this audience can read. Those who really wish to know about the three new strains of the AIDS virus, previously announced by me in Paris[1], (HIL I, II and III - "HIL" being "highly inefficient laws") can get my paper from the secretariat. It is all there. It catalogues what Sandra Wallman described[2] as the "third epidemic of AIDS" - frantic, ill judged, stigmatizing policies and laws. These may indeed disclose the "darker side of ourselves"[3], even more than the tiny virus which is our true enemy.

Instead, let me endeavour, on your behalf, to pull together a few of the major themes of this conference. Of necessity, my insights are governed - as yours would be - by experience and interests. Returning to the four corners of the world, you will doubtless write your own reports - if only in your mind's eye. This is mine.

BASIC DATA OF THE EPIDEMIC

The basic data were supplied at the outset by Jonathan Mann. And let me say at once how fortunate we have been - amidst the shattering tragedy of AIDS - that the World Health Organisation (WHO) was there to mobilize us. And that, in Dr Mahler, Dr Mann and their colleagues, we chanced upon international civil servants of rare dedication, professionalism and imagination. We might have had bland, passive and supine bureaucrats. In AIDS, we need all the lucky breaks we can get. We have had a few, and this was surely one.

But Dr Mann's data were sobering[4].



By June 1988 nearly 100,000 cases of AIDS were reported to WHO from 136 countries. Estimates given of a true number twice that figure, at least. Gross estimates of those infected with an HIV virus range from Mann's 5 million to Wallman's 10 million. And then the other data to be absorbed and appreciated. At the present rate of increase, a million cases worldwide in the next 5 years. 365,000 in the United States alone by 1992, according to James Curran of CDC[5]. One person receiving the news in that country every 14 minutes. In most places the graphs continue to climb. Dr N'Galy of Zaire showed[6] the rapid rise in seroconversions amongst prostitutes in a test group - 20% infected in 1983. 90% infected by 1987. Yet, despite this, Dr Mann soberly cautioned that the epidemic has not yet reached its full explosive potential. Given what we know of past epidemics, the insidious nature of this "sleeper" infection, its modes of transmission and the mobility of people today, we must expect more bad news before it gets better.

DRUG USE - THE URGENT DIMENSION

Amongst particularly worrying reports were those of the increasing cohort of seroconversions amongst drug users[7]. You will note that I call them "drug users". Lawyers develop ears attuned to words carrying value judgments. There is no place in science, or in stemming an international epidemic, for value-loaded words like "intravenous drug abusers". Let us drop that phrase once and for all. The business we are in - or should be in - is saving lives and protecting communities and individuals from a lethal virus. Calling a major cohort (which may become a main vector of this virus to previously untouched

heterosexual people) "abusers" is the surest way to scramble the message to them and to reinforce obstacles in the path of vital preventive strategies. Nor is "drug addict" right. The risk of infection may be run by occasional recreational drug users too. So let us get back to value neutral scientific language, as befits scientists.

The figures coming in show that the proportion of IV drug users presenting with seroconversion is rising steeply. Dr Des Jarlais estimates that it is, by now, 25% of the United States total. The latest figures from Europe suggest it is hitting 30% there[8]. What was unthinkable even a year ago is now on the political agenda, lest this means of transmission become a growing stream into North America, Europe and even seemingly isolated Asia. Needle exchange is now in place in many countries, including parts of my own. Methadone treatment for heroin users is being stepped up. A rare moment of Swedish emotion emerged in a discussion of Dr Christenssen's report on the needle exchange program in Lund, in Southern Sweden[9]. An angry speaker - apparently a scientist - attacked the restrictions in the law against adopting such a program nationwide throughout Sweden. In the United States, still the epicentre, laws permit the supply of cleaning bleach; but almost universally deny the possibly life saving exchanges for sterile needles. This is a sensitive subject for politicians. But change must come quickly here. Sadly, it may take AIDS finally to force drugs out of courtrooms and prisons into the public health issue they really are. But many will die first. Rare political courage will be required as we approach the climax of the failure of the Second Prohibition.

FALL IN HOMOSEXUAL SEROCONVERSIONS

If these reports were sobering there were a few bright lights on the horizon, beckoning us to hope. The first arises from some evidence of some containment of the virus in homosexual communities in the developed world. I choose cautious words deliberately. No-one should extrapolate from the reports of the San Francisco studies on rapidly declining seroconversions to a position for the whole of the United States - let alone Wagga Wagga, Australia or Harare, Zimbabwe. Large sums were spent in San Francisco on public education. A magnificent supportive network grew up around the dying and grieving. Funerals reinforced changing individual behaviour. And as Frank Judson pointed out in the context of like figures in Colorado, very many were already dead, infected or were never at risk. Just the same, we can allow two cheers for Stephen Morin's report[10] that three separate longitudinal studies on gay men in San Francisco show a curve now mercifully flattened. Professor Anderson described these apparent changes in male homosexual behaviour in developed countries as "dramatic"[11]. Considering what had gone before, they would need to be. But they did not come quickly enough for those infected as the band played on - a point emphasised by Dr Curran[12]. And, even now, about a thousand gay men present with seroconversion each year in San Francisco. Most are young. And those who are not, prove the need for constant reinforcement of behaviour modification - something which lawmakers on sex and drugs all too often blithely overlook.

Another reason for caution was stressed by Dr June Osborn[13]. This was that the often unreachable bisexual male

frequently slips through the network of the homosexual support systems. He presents special problems and added risks. Yet reach him we must, with the same messages of self protection and the protection of others. Clearly, more research is needed here, particularly in the light of Dr Holmes' report[14] of a rapid recent increase in HIV amongst groups of women in the United States.

THE TOOLS OF MOLECULAR BIOLOGY

Other lights on the horizon come from keeping our sense of proportion in this crisis. Many speakers stressed this need. I have already mentioned the rare degree of international and national cooperation, achieved in such a short time. When Prime Minister Carlsson, at the opening, talked[15] of the ultimate "solidarity of humanity", it rang mainly true. It was not, for once, a social democratic slogan but a substantial fact.

Then we can be grateful that this is still, apparently, a virus quite difficult to contract. If it had not been so - if, for example, it had shared the contagion of the Spanish influenza after the First World War - its devastation would have been even more profound. No virus will entirely destroy its host. The mutation which produced HIV - more than 25 years ago - was a tragedy for the world. But also, in a sense, for the virus. Had it come just a few years earlier, we would have been watching this pandemic with impotent horror. Yet what progress we have made in such a short time, thanks to the new tools of molecular biology. Drs Gallo and Montagnier and their colleagues isolated the virus. And every AIDS conference brings reports of new discoveries about its structure, its

complex life cycle, its envelope and the factors which seem to trigger its two separated peaks of urgent activity.

OF MOSQUITOS, TOILET SEATS AND KEEPING PERSPECTIVES

One of the chief messages to come from Stockholm may be found in no paper - but in the absence of reports. I refer to the continuing clarity of the primary modes of HIV infection. If by now, mosquitos, toilet seats, sneezing, mothering love, shared utensils or the man who mixes the salad at the deli, were vectors for AIDS - we would surely expect reports of new patient profiles by now. They are deafening by their absence. This is not a reason for complacency. There is still a need for differential research on the detail of sexual modes of transmission. But in a bleak landscape, the flatter seroconversion graphs for homosexual men in San Francisco and elsewhere suggest that "safe sex" guidelines generally work and help to contain the epidemic. The absence of new patterns emerging from the data confirms that HIV is not an easy virus to acquire, unless you are unaware or unable to protect yourself from what is, by now, fairly well defined high risk behaviour.

There are other reasons to keep our sense of proportion. Sandra Wallman pointed out[16] that nuclear weapons, famine in Africa and unemployment at home remain large scourges of humankind - still there to appeal to our consciences. And Tony Pinching pointed out[17] that tuberculosis control and treatment of treatable sexually transmitted diseases may not only be good expenditure of the scarce health dollar, particularly in developing countries. It might also be a cost effective target in the containment of AIDS. The same point

was made by Dr Holmes[18]. For depressed immune systems appear to mark the patient out as a target for HIV infection. And all of this says nothing about tobacco, Alzheimer's disease, rheumatism, malaria and the treatable as well as incurable conditions which must be faced daily in medical clinics in the six continents.

Constance Wofsy, in her brilliant review[19], reminded us that even health care workers have rights. I do not refer to the right to protection against acquiring the virus from treating AIDS patients. That is further good news from Stockholm. The cases are few and mainly accidental needle sticks. I refer, rather, to the growing recognition that there are limits to what can be done even by a compassionate worker. Even by Richard Selzer's tender nurse who brings sleep to the febrile insomniac by smoothing the pillow[20].

We all put great demands on such people - and few conditions do so more than AIDS. A recognition of the human limits and of the need to prepare some patients for a quiet death was Tony Pinching's direct and honest acknowledgment of the existence of frontiers, even in the age of technological medicine[21]. AIDS makes us recognise anew the brief journey we are each taking.

THE SILENT INFECTION

But we keep pushing the medical frontiers back. This conference has been no exception. Gone is the excitement of the unmasking of the virus. We all now know that a "miracle cure" for AIDS is a media invention. Yet for all that, important scientific reports have been given here. It is wrong to think of them as bearing good news or bad news. For

science, there is only news. Its value lies in its approximation to truth.

Probably the most worrying insight of all was offered to the conference by Luc Montagnier[22]. It is etched on our collective memory by his silent submarine cartoon. By using DNA probes, which are not reliant upon the presence of antibodies, it may prove possible to disclose a suspected "hidden infection". Why do some people who report positive to the antibody test suddenly become negative? Do the babies born with apparent infection, acquired neonatally, really throw off the virus? Are the sexual partners of infected people truly uninfected? Or is there a still hidden reservoir of infection awaiting discovery by new tools? These are frightening questions. Yet they must be pursued. The answers will be just further parts of Lars Olof Kallings' jigsaw puzzle, awaiting the missing pieces[23]. The possibility of a completely silent infection cannot yet be entirely discounted. It may be the counterpart to a virus which flourishes, becomes dormant and then (for reasons which we do not yet fully understand) is activated again. You will all remember William Haseltine's speculation[24] that the virus may be hiding itself from the immune system. How we can track it down and attack it, without lethal consequences for the cell and the patient in the ensuing battle - that is the dilemma.

VACCINES AND ANTI VIRAL THERAPY

Winston Churchill once described an earlier Russia - as a "riddle, wrapped in a mystery, inside an enigma". So with AIDS. We are at the first stage of puzzling out the enigma. The contributions at this conference offered both speculation

and practical experiments. Robin Weiss suggested that HIV-2 sera might neutralize the virus in both HIV-1 and HIV-2 patients[25]. If this proves to be so, the result might be promising for long term vaccine development. The fabled Jonas Salk reported on early work in which he is engaged in California - outside Federal U.S. regulation - on the development of a human vaccine[26]. That was a particularly vigorous meeting. The cautious may gasp at this development, considering it premature in our present knowledge of the virus. The impatient will count some risks as entirely defensible in a macro equation of this global scale. What is significant is that trials are now occurring - and not only with animals - and not only in California[27].

Haseltine postulates an alternative route for us to go - anti viral therapy of increasing specificity and sophistication[28]. According to this view, the clue to outsmarting this virus may be derived from its peculiar two peaked cycle. If we can only find out what it is that causes it to be triggered off into its fatal second phase - after an incubation typically quite long and quiescent - we may be able to control the on-and-off switch. Whilst not as welcome for a world at risk as a vaccine or total cure, this hypothesis may be more promising - at least in the short run. It envisages that we will have to live with AIDS for the lifetime of all of us present. Some of Haseltine's data suggests that a vaccine, and a cure, may be many years away. Indeed, a vaccine may even present special risks of harm with this particular virus in our present knowledge of it. If it were a simple matter of creating antibodies, the body does this naturally. If natural

antibodies do not provide immunity - why should vaccine-produced antibodies miraculously do so?

THE NEED FOR RIGOROUS TRIALS

Meanwhile patients must be treated. There were few new compounds reported to us this conference. But as Drs Pinching, Öberg[29] and Redfield[30] pointed out, there is already a sizeable armory, quite apart from the most promising, AZT. More differential tests are needed, of more combinations of drugs and therapy. Dr Redfield stressed the universal importance of early diagnosis and intervention[31].

The importance of markers was given new emphasis at this conference. Do the presence of herpes, syphilis and Hepatitis B as markers simply confirm a person at risk by his or her behaviour? - Or do they play a part in activating the HIV trigger?

The acceptance of 3,100 abstracts by the conference, the variety and quality of the posters and the technology appearing amongst the exhibitors all speak of the unprecedented scientific attention which, belatedly, has been focused on AIDS. It is growing exponentially. But we should heed Dr Pinching's warnings. Hopes will be dashed cruelly if we repeatedly stray from scientifically rigorous trials. Scientists and health care workers must be ever on their guard, lest they lose integrity to wishful thinking, or worse still, to profitable treatments. More pure science (as stressed by David Baltimore[32] and Gordon Ada[33]) rigorous experimentation and a little luck are what we need in therapy between now and Montréal.

THE IMPACT OF DEVELOPING COUNTRIES

Many other issues began to emerge with clearer focus at this conference, as vital aspects of AIDS. Dominating them all was the impact of the virus on the developing world - especially Africa, the Carribean and Latin America. There, the pattern of transmission is mainly heterosexual. It has great demographic implications, as Professor Anderson's fascinating models showed[34]. This disease, he declared soberly, has the capacity in those countries, actually to reverse population growth rates. It is true, as Dr N'Galy pointed out, that the impact in Africa is very uneven[35]. But where HIV has struck, it has had an enormous personal and economic impact. It affects disproportionately the educated and productive members of already poor societies. How will their rudimentary health care systems cope? What can be done? Condoms are not available, are not culturally condoned, or are too expensive. Yet is it seriously to be proposed to tell infected people in a shanty town in Uganda or Brazil to accept chastity for the public good? Sexual activity may be a rare joy in an otherwise bleak life. These problems seem intractable. And above them all is the moral question. Will developed countries feel the ethical imperative to contribute to the cost of expensive anti viral or other therapy for our African brothers and sisters? Or will they fall victim to the remorseless economics of AIDS?

At least with the help of Anderson and Curran we can now project, with increasing precision, the short term patterns of this epidemic. This facility will allow us to see the economic implications of AIDS - the health resources, the opportunity costs, the implications for the national medical and social

security systems. These will be big issues next year, as we all do more sums.

A CATALOGUE OF NEW MORAL QUESTIONS

Just as those sums necessarily put economic values on the human lives prolonged, so other moral dilemmas were debated at this conference:

* When may a physician tell the sexual partner of an uninfected person who will not disclose the risk?[36]
* Does an infected woman have a right to exercise her reproductive nature?[37]
* Should anonymous tests of HIV be universally available?[38]
* Do special rules operate in the defence forces because of their vital mission in times of national emergency?[39]
* Do insurers or employers have a right to know the HIV status of some employees?[40]

One common feature to be watched most carefully is the new dangers to so-called "marginalized people". Governments, under pressure to be seen to be doing something to contain the epidemic, may impose ineffective laws on voiceless, powerless groups. Prisoners. Drug users. Migrant workers. The WHO returns show the variety of border checks which have now sprung up. It is rare that tourists or, dare I say it conference goers, must be tested. But Cyprus, for example, has required HIV certificates from all who "work in night clubs and as cabaret artistes"! In Lybia, only official delegations and visitors are exempt. The list grows with every issue of the WHO report on legal developments.

There is a further trend to be watched. It was called to

attention during this conference. This is the attempt to impose, on all, a sexual expression suitable only to some. It is only because of sexual liberation that we have been able to talk frankly about the risk behaviour which can transmit the AIDS virus. Yet this talk is vital to containment strategies. Chastity, fidelity and abstinence will certainly be avoidance options for some people. But sexual expression is not bad or shameful of itself. Being natural, it is usually good. It may reinforce tenderness and love - which are sublime human emotions. Morally responsible, safe sexual expression may be better for the individual, and for society, than a return to sexual repression and a withering of the individual spirit and of the human right to the pursuit of happiness. I was glad Professors Klein[41] and Gagnon[42] made a similar point.

As Jonathan Mann constantly stresses, human rights and public health march hand in hand on the AIDS issue. Each is needed to reinforce the effectiveness of the other. No-one has a human right to spread a deadly virus. But a society protecting itself from that virus will respect the person who carries the burden of the knowledge of HIV infection[43]. Unless it does so, that society will destroy all effective chance of modifying that person's behaviour to help contain the spread of the virus. As Admiral Watkins revealed last week to the United States[44], effective anti-discrimination protection is, paradoxically, the sine qua non of an effective HIV containment policy.

VOICES AS WELL AS FACES OF AIDS

This brings me to three final comments. I have heard some criticism of the absence, at any plenary, of speakers who

acknowledge that they have AIDS or HIV themselves and, likewise, of representatives of the homosexual, drug user, prostitute and haemophiliac organisations. I agree with such criticism. They have been the sentinels for a wider world. Like it or not, they have specifically useful messages of experience to bring to the world. Constance Wofsy paid tribute to the fact that homosexual men in San Francisco had done "more than their fair share of caring for the sick and dying[45]. Tony Pinching[46] called his patients "our very special teachers". If they are so good as teachers, - why did we all not hear from them? In the neutral business of science and in the urgent task of epidemic control before us all, the luxury of prejudice must give way to the searing light of the search for knowledge and of useful practical experience.

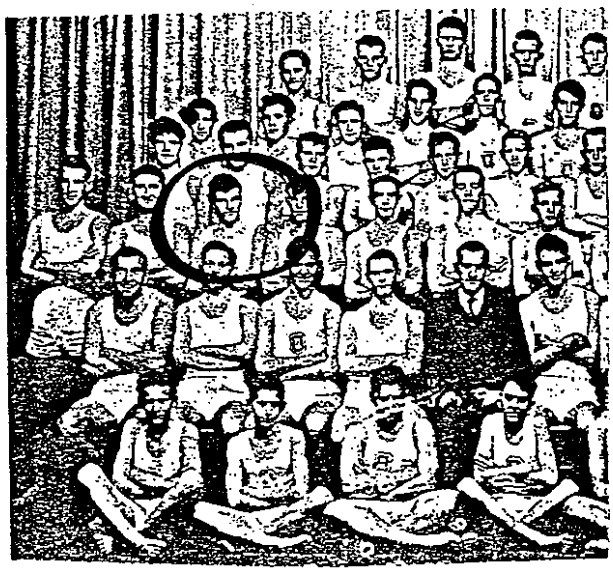
PERCEIVING THE WHOLE LANDSCAPE

Secondly, I have heard many calls to split this conference. Indeed, the Minister referred to them[47]. Of course, the size has become almost unmanageable. The papers have become almost indigestible. We are all suffering from information overload. But we certainly still need regular opportunities for the disciplines involved to come together. Social scientists without the help of those skilled in the physical sciences are neutered. But even more dangerous may be physical scientists without insight into the myriad of moral dilemmas, economic implications and political impacts of AIDS. We still need to come together. A technique of expert rapporteurs and chairmen's summaries, used in conjunction with the general conference, may help us to digest the main trends and to put the jigsaw pieces in their probable places.

AIDS TOUCHES US ALL

Thirdly, I want to finish on a personal note. The theme of this conference was the Faces of AIDS. Like many in this hall, I have suffered losses to AIDS. Of this we can be sure, few will escape its touch entirely. We have not had a plenary speaker with AIDS. But we have all wandered under the quilts[48]. Who was Ricky? Who was Jenny? Who were these unexpected dead?

Mark, a friend of mine, was civilized, well educated and gentle. He did no-one harm, so far as I knew. His mother gave me his photo before I came to Stockholm. He was a friend. He went to the same public high school in far-away Sydney, Australia as I attended. He was younger than I. A school photo taken in about 1960 shows him, full of hope on the very beginning of his short life. He is in the middle of the second row of athletes. My brother is also in the photo - trying desperately, at the time, to look like Elvis Presley. He is now one of Her Majesty's counsel in Sydney: such is the cycle of life.



At about the time as the image of these schoolboys froze on that film and the boys went back to class, an extraordinary viral mutation took place, possibly in Africa. It was to affect Mark, and all of us. At about the same time in Africa, a distinguished Swede - an earlier servant of the world community - died in that service. Dag Hammarskjöld's book "Vägmärken" is called, in English, "Markings" - possibly "Landmarks" would be more accurate. One of his poems must be said in Swedish - the warm, lyrical, confident tongue of our generous and creative hosts. Two thousand of them spent this conference speaking English. Imperfectly, I will now repay the compliment.

WITH AN EYE ON THE HORIZON

När människan sänker blicken
från horisonten
Ner på de slingriga små stigarna
går hon vilse
Och förlorar målet i livet.

Freely translated, this means:

Whenever you look away
from the horizon,
Lowering your eyes to the small and winding paths,
You are liable to get lost;
And to miss the goal of life

We, the delegates who met here in these blue and sunny days in Stockholm, may be divided by continents and experience;

by race and profession; by discipline, faith and philosophy; by experience with drugs and by sexual expression. But we are all part of the great family of humanity facing a common enemy.

During our meeting we have explored many small and winding paths which lead, we know not where. But we have also kept our eyes steadfastly on the horizon. May our contributions - large and small - have furthered the goal which each one of us seeks - the goal of a full life for all - eventually free once again from the scourge of AIDS.

FOOTNOTES

* President, Court of Appeal, Supreme Court of New South Wales, Australia. Commissioner of the International Commission of Jurists, Geneva. The views stated are personal views only.

1. See M D Kirby "The New AIDS Virus: Ineffective and Unjust Laws" in France, Ministry of Foreign Affairs etc, Symposium International de Reflexion sur le Sida, Paris, 22-23 October 1987 (Version Anglaise), Papers, 203, 209ff.

2. S Wallman, "Sex and Death: The AIDS Crisis in Social and Cultural Context" in Papers of the IV International Conference on AIDS, Stockholm, Sweden (hereafter "Papers").

3. This was a phrase used by Mr Ingvar Carlsson, Prime Minister of Sweden in the Opening Ceremony of the IV International Conference on AIDS. See Papers.

4. J Mann, "The Global Picture of AIDS" in Papers. The accompanying graph is extracted from the Washington Post Weekly Journal of Health, 7 June 1988, 5.

5. J W Curran, "The Epidemiology of HIV Infection and AIDS in the United States" in Papers.

6. B N'Galy, "The Epidemiology of HIV Infection in Africa" in Papers.

7. See eg D C Des Jarlais, "HIV Infection among persons who inject illicit drugs: problems and progress" in Papers.

8. Ibid.

9. B Ursing, B Christensson and Ors, "Distribution of Sterile Equipment to IV Drug Abusers as part of an HIV Prevention Program" in Papers.

10. S F Morin, "Behaviour Change and Prevention of Sexual Transmission of HIV" in Papers.

11. R Anderson, "The Role of Mathematical Models in the Study of the Epidemiology of AIDS" in Papers.

12. J W Curran, op cit, n 5.

13. J E Osborn, "Importance of Provision for Anonymity in Public Health Programs using Screening Tests for HIV" in Papers.

14. K K Holmes, "Heterosexual Transmission of HIV: Current Evidence and Future Prospects" in Papers.

15. I Carlsson, op cit, n 3 in Papers.

16. S Wallman, op cit, n 2 ibid.

17. A J Pinching, "Recent Developments in the Management of AIDS Patients" in Papers.

18. K K Holmes, op cit, n 14, ibid.

19. C B Wofsy, "AIDS Care: Meeting the Health Care Needs of the HIV Infected" in Papers.

20. R Selzer, "Letters to a Young Doctor", cited by Wofsy, ibid.

21. A J Pinching, op cit, ibid.

22. L Montagnier, "The Evolution of HIVS and Their Role in the Pathogenesis of AIDS", address at the Opening Ceremony in Papers.

23. L O Kallings, Chairman's Keynote Address at the Opening Ceremony" in Papers.

24. W A Haseltine, "Replication and Pathogenesis of the AIDS Virus" in Papers.

25. R A Weiss, "Human Immunodeficiency Viruses: Neutralisation and Receptors" in Papers.

26. J Salk, Chairman's Comments at Plenary Session 2 and Provisional Report in Papers.

27. This is a reference to a reported trial in England. It is to be noted that the reports suggest the trials of vaccines on persons who have already manifested AIDS. See also D Zagury, "Immunization against HIV" in Papers.

28. W A Haseltine, op cit, n 24, ibid.

29. B Öberg, "Anti-Viral Therapy" in Papers.

30. R Redfield, "Clinical Picture and Prognosis" in Papers.

31. Ibid.

32. D Baltimore, "A Virologists View of HIV's Successes and Failures" in Papers.

33. G L Ada, "Prospects for HIV Vaccines" in Papers.

34. R Anderson, op cit, n 11, ibid.

35. B N'Galy, op cit, n 6, ibid.

36. R Bayer, "AIDS and the Duty to Treat: Risk, Responsibility and Health Care" in Papers.

37. W A Andiman, "Perspective Studies of Cohort of 50 Infants Born to Human Immuno Deficiency Virus (HIV) Sero positive Mothers" in Papers.

38. J E Osborn, op cit, n 13, ibid; J Levi, "The use of Anti-body Testing as Part of an AIDS Control Program" in Papers.

39. P W Kelley, "Demographic Risk Factors for HIV Infection in the US Army" in Papers.

40. W Winkelstein Jr, "Feasibility of Sample Surveys of HIV Serostatus and Risk Factors for Infection in General Populations" in Papers.

41. G Klein, "The Role of Science" address to Closing Session in Papers.

42. J J Gagnon, "Sexual Conduct and Sex Research" in Papers.

43. This was a comment made by Prime Minister I Carlsson at the Opening Ceremony in Papers.

44. J D Watkins, Report on AIDS. See summary, S Squires, "Setting the Course on AIDS" in Washington Post, Health Report, 7 June 1988, 14 ff, esp 17.

45. C B Wofsy, op cit, n 19, ibid in Papers.

46. A J Pinching, op cit, n 17, ibid in Papers.

47. Opening comments to the Closing Plenary Session by Mrs Gertrud Sigurdsen, Minister of Health of Sweden, in Papers.

48. This is a reference to the quilts bearing the names of United States citizens who had died of AIDS which were displayed at the Stockholm Conference.