

as a result of the "exhausting of susceptibles" and perhaps also due to the impact of health education campaigns directed toward the homosexual population. However, heterosexual transmission may continue to increase in the foreseeable future. This is likely to be an area of great concern, especially because of the number of susceptibles and because of the relatively low emphasis that public education has placed on heterosexual transmission so far. Therefore, the importance of heterosexual transmission must be stressed worldwide, and this problem should be emphasized when charting the future course of action in our fight against AIDS.

## REFERENCES

1. Selic, R. M., K. B. Castro, and M. Papaioanou. Distribution of AIDS cases, by racial ethnic group and exposure category, United States, June 1, 1981–July 4, 1988. *MMWR* 37(SS-3):1–10, 1988.
2. Chamberland, M., L. Conley, and T. Dondero. Epidemiology and Evolution of Heterosexually Acquired AIDS—United States. Paper presented at the IV International Conference on AIDS, Stockholm, 12–16 June 1988. Book of Abstracts 1, Abstract No. 4107, p. 264.
3. Centers for Disease Control. Human immunodeficiency virus infection in the United States: A review of current knowledge. *MMWR* 38(56, Suppl.):30–31, Dec. 1987.
4. Jagdeo, T. P. Myths, misconceptions and mistakes: A study of Trinidad adolescents. The Family Planning Association of Trinidad and Tobago, 1986.
5. Kerr, M. *Personality and Conflict in Jamaica*. Collins, London, 1963.



## Who Is Really Right?

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**D**r. Langmuir's presentation addresses the highly controversial subject of AIDS projections in the United States. It is Dr. Langmuir's personal view that no communicable disease has an incidence that progresses geometrically over the long run. This is quite true, and I fully agree with him; no communicable disease until now has ever behaved this way.

Dr. Langmuir further argues, with much reason, that the modes of AIDS

transmission are unlikely to affect with any great intensity groups other than those already involved. So far the figures bear him out, for in heterosexuals, for example, the frequency of the disease, though somewhat higher, has not risen as much as it was expected to rise a few years ago. In general, the heterosexual case of AIDS is still the exception, male homosexuals/bisexuals and intravenous drug abusers remaining the two major groups at risk in the United States.

We have lately seen the rate of increase of AIDS cases among homosexuals decline, but this is counterbalanced by pro-

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gressively greater increases among intravenous drug abusers, so the rate of increase for these two groups combined has held more or less steady as a proportion of all new cases.

Proceeding from this point, Dr. Langmuir makes a projection utilizing a normal curve, the type of curve followed by most infectious disease epidemics—notably those of acute diseases with incubation periods shorter than that of AIDS. In this respect it appears that Dr. Langmuir may be somewhat optimistic in predicting that the incidence of AIDS cases among homosexuals and intravenous drug abusers will peak in 1988, turn downward in 1989, and descend to almost zero by 1995.

In my view, AIDS more closely resembles a chronic disease, and so the incidence curve should level out to a plateau—a plateau that will probably persist for many years at a high and stable

rate. The downturn in this curve, coming sooner or later, could well occur very late, in which case the incidence of AIDS in the United States could stay high for many years without any further marked increase.

Regarding the first part of Dr. Langmuir's presentation, I fully agree that predictions based on geometric progressions are probably in error, but I differ on the use of a normal curve as he has suggested for making a short-term projection. Perhaps a closer approximation to reality could be obtained by using a logistic curve, at least for the middle term during which the disease reaches a plateau. That plateau would be the limit of the logistic curve, a limit that should be possible to estimate when the rate of increase in incidence has been decelerating for three years in succession.

As Dr. Langmuir says, only the future will tell who is really right.