As awareness of the enormity of the AIDS epidemic has grown, Federal funding targeted to AIDS and other HIV disease has increased accordingly. From $\$ 8$ million in fiscal year 1982, the year after AIDS was frost diagnosed in the United States, total Federal spending for medical care, public health activities, and research related to HIV disease has risen steadily and totals $\$ 2.9$ billion for fiscal year 1990 (table 1). Over the same period, federally funded research on HIV disease rose from $\$ 3$ million to $\$ 1.16$ billion (table 2 ).

For fiscal year 1991, the President has requested a 7-percent increase in funding for HIV research, a somewhat smaller percentage and absolute increase than in previous years. Although the increase in total Federal funding for HIV disease would slow under the President's budget request for fiscal year 1991, spending for fields other than research would receive a larger share of the total allotment.

From divergent viewpoints, concern has been expressed that the Federal Government is spending too much and that it is spending too little on HIV research, compared with funding for other medical conditions ( $1,6,7,16$ ). Critics of rising expenditures on HIV disease point out that HIV funding has exceeded funding for heart disease and rivals funding
for cancer, despite the much greater number of deaths from these latter diseases. Although HIV funding makes up about 10 percent of the total budget of the National Institutes of Health in fiscal year 1990, it accounts for 47 percent of the budget of the National Institute for Allergy and Infectious Disease (table 3). Although it is unclear whether the most significant breakthroughs for HIV-infected

> Table I-Total Federal Expenditures on AIDS/HIV, Fiscal Years 1982-1991 (millions of dollars)

| Year | AIDS/HIV expenditures | Percent increase |
| :---: | :---: | :---: |
| 1982. | 8 |  |
| 1983 | 44 | 450\% |
| 1984 | 104 | 136 |
| 1985 | 208 | 100 |
| 1986 | 507 | 144 |
| 1987. | 926 | 83 |
| 1988. | 1,594 | 72 |
| 1989. | 2,227 | 40 |
| 1990 | 2,936 | 32 |
| 1991... | 3,463 | 18 |
| Total | \$12,017 |  |

"Figures for 1990 are appropriations requested in the President's budget.
SOURCE: U.S. Department of Health and Human Services, Public Health Service Budget Office (13).

Table 2-Federal Spending on AIDS/HIV Researcha by Agency, Fiscal Years 1982-1991 (millions of dollars)

| Agency/Department | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | $1991{ }^{\text {b }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Department of Health and Human Services |  |  |  |  |  |  |  |  |  |  |
| Public Health Service | . 3 | 22 | 57 | 83 | 164 | 317 | 607 | 942 | 1,115 | 1,209 |
| Department of Veterans Affairs | 0 | 0 | 2 | 3 | 3 | 6 | 8 | 11 | 14 | 14 |
| Department of Defense | 0 | 0 | 0 | 0 | 38 | 22 | 12 | 27 | 34 | 22 |
| Other | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Total ${ }^{\text {c }}$.................................. | 3 | 22 | 59 | 86 | 204 | 354 | 626 | 980 | 1,163 | 1,245 |

${ }^{\text {a }}$ Methods used in the preparation of the 1982-1988 figures differ from those used for the 1989-1991 figures. If the 1989 figures were prepared using the same methods as were used for the prior years, the figures would be $815,14,27$, and O, for the Public Health Service, ${ }^{\mathrm{b}}$ Department of Veterans Affairs, Department of Defense, and other, respectively.
Figures for 1991 are amounts requested in the President's budget. All other figures are actual appropriations.
'Due to rounding, some columns may not add to totals.
SOURCE: 1982-1988 data: Winkenwerder, W., Kessler, A.R, and Stolec, RM. (16); 1989-1991 data: U.S. DHHS, Public Health Service Budget Office (13).
individuals will come through targeted, missionoriented research or through basic research, targeted HIV research appears to be receiving priority $(3,6)$.

Proponents of greater HIV funding stress that current deaths understate the burden of HIV disease. Perhaps 1 million people in the United States are infected and likely to die from HIV disease, and the disease is spreading at epidemic rates in some populations. Furthermore, AIDS has been concentrated among adults age 25 to 45 . From 1987 to 1988, HIV rose from the seventh to the sixth leading cause of years of potential life lost, a reflection of a $30-$ percent increase in life-years lost in that one year (14). Proponents also view funding for HIV research as a good investment in many other disciplines, since AIDS touches on many basic, clinical, and social sciences.

To provide additional information to clarify this debate, the House Committee on Government Operations, Subcommittee on Human Resources and Intergovernmental Relations, requested the Office of Technology Assessment (OTA) to document the extent to which federally funded research on HIV disease has contributed to advances in other fields. The subcommittee was interested in contributions pertaining to a wide range of fields, including biomedical and behavior research, prevention, patient care, and financing. In response to that
request, OTA undertook a survey of biomedical and social scientists. This Staff Paper reports on the results of that survey.

Table 3-National Institutes of Health Expenditures for AIDS/HIV Research, Fiscal Year 1990 (thousands of dollars)

| Institute | AIDS/HIV expenditures | Percent of Institute's total expenditures |
| :---: | :---: | :---: |
| Cancer | \$150,304 | 9\% |
| Heart, Lung, and Blood | 42,056 | 4 |
| Dental | 4,662 | 3 |
| Diabetes, Digestive, and Kidney | 5,320 | 1 |
| Neurological. | 16,158 | 3 |
| Allergy and Infectious Disease | 393,083 | 47 |
| General Medical Science | 14,614 | 2 |
| Child Health and Human Development | 26,749 | 6 |
| Eye. | 5,533 | 2 |
| Environmental Health Sciences | 4,291 | 2 |
| Aging | 859 | $<1$ |
| Arthritis and Musculoskeletal | 1,238 | 1 |
| Research Resources . | 44,558 | 12 |
| Nursing | 987 | 3 |
| Fogarty International . | 4,898 | 29 |
| National Library of Medicine . | 493 | 1 |
| Other/miscellaneous . | 27,729 | 8 |

SOURCE: U.S. Executive Office of the President, Office of Management and Budget (15).

