

AIDS OF THE FUTURE

A study examining prospective trends
with a subsequent policy proposal

BY

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" 'Alarming projections to the year 2000 anticipate that between 38 million and 110 million adults and more than 10 million children will be infected [with the HIV virus]' " (Pozgar, p.370 from Ehrhardt's "Trends in Sexual Behavior and the HIV Pandemic.")

"Six people somewhere in the world become infected with HIV every minute, making the daily toll 7500 adults and 1000 children," ("AIDS virus hits more lives around world," The Flint Journal, November 29, 1996.)

It is estimated that "the lifetime cost of treating a person with HIV from the time of infection until death is approximately \$119,000," (Hellinger, "Lifetime costs," p.474.) Broken down, the cost of care from HIV infection until AIDS diagnosis is \$50,000 and subsequently, AIDS diagnosis until death is \$69,000, (IBID., p.474.)

These numbers are not public scare tactics. Nor are they misrepresentations of altered or manipulated statistics. They are unfortunate truths forecasting a devastating future, both emotionally and financially. What they leave to question are prospective trends--Who will be paying for HIV/AIDS treatment? Will the methods of treatment be changing? Will specific groups of people become more susceptible than others in the future? Are current funding sources adequate, or will a change be inevitable to make sure that treatment availability and

efficiency is concurrent with increasing need?

With such vast numbers of cases being diagnosed with HIV every year, and because AIDS has the potential to affect all humans, treatment procedures need to be kept abreast for the growing multitudes of infected patients. This study will focus on the HIV/AIDS treatment trends of tomorrow, by attempting to answer the questions posed above, and particularly, to determine whether, if the forecasts are accurate, patients will be supported with the current system of governmental assistance, or whether formulation of a new policy will be required.

On the surface, "Who is paying for HIV/AIDS treatment?" appears to be a simple question to answer. Via their insurance companies, those responsible for payment of treatment will simply be the individual patients themselves. When the various modes of treatment and the subsequent costs are further examined, the answer to who is paying just as easily can become--no one. With the numbers of infected individuals gradually increasing, and treatment costs rising rapidly, steps have to be taken to combat the cost of this disease. Because AIDS has the potential to affect all humans, it is vitally important that the means of funding treatment be established.

WHO IS PAYING FOR TREATMENT?

Data suggest that there are three primary sources of payment for HIV/AIDS related treatment--private insurance carriers, public/governmental assisted plans, and those patients without

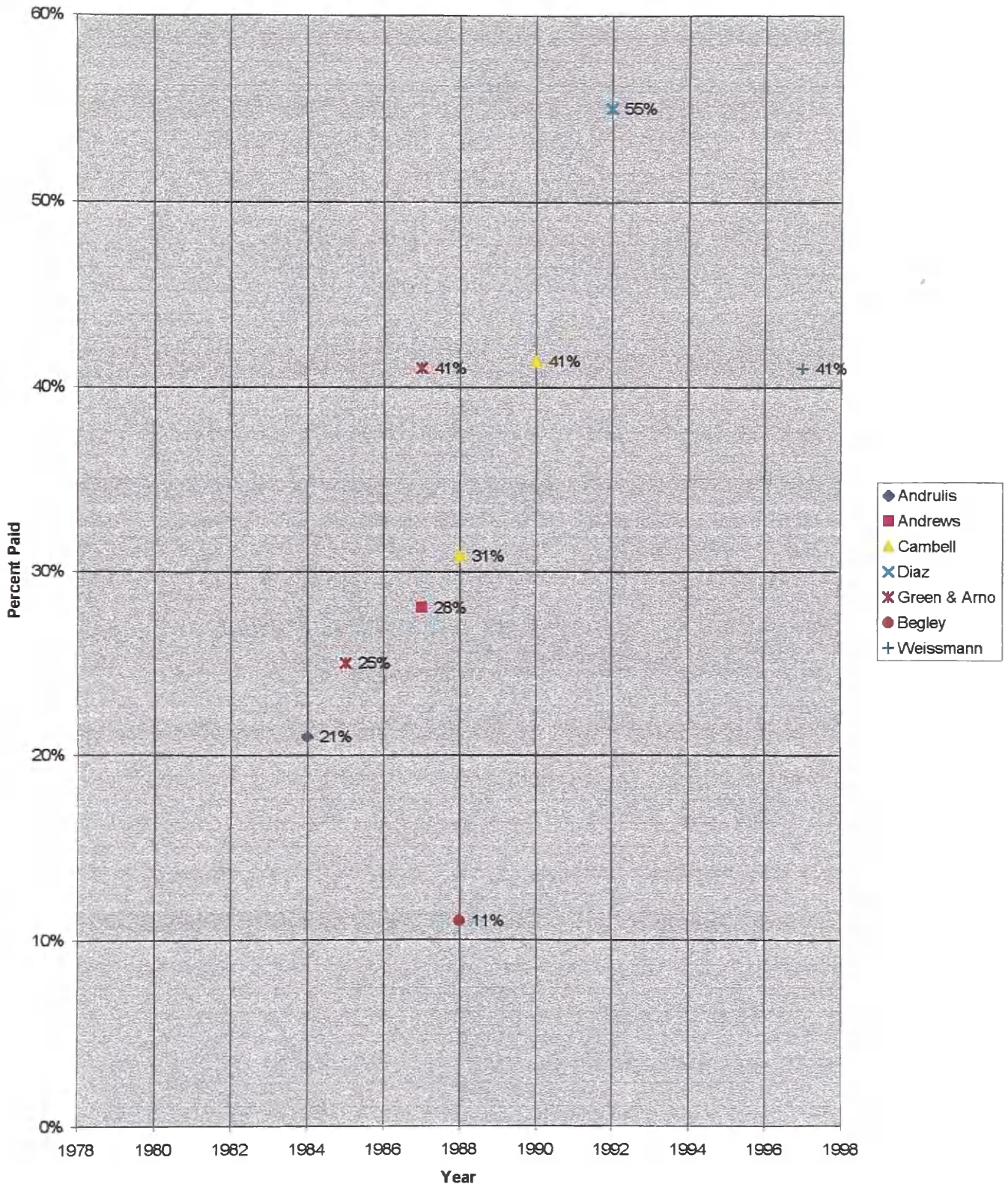
insurance--left to fend for themselves--who become "self-payers."

When the first traces of HIV/AIDS disease were identified almost two decades ago, AIDS was more of a "self-contained" disease (versus its current epidemic status,) and private insurance carriers had more of an active role in the paying of treatment for these patients. Studies conducted in the mid-to-late 1980s indicate that private health insurance carriers absorbed the majority of hospitalization costs, along with Medicaid which paid an almost equal amount, although actual results varied from study to study. It should be noted that the costs for other areas of care (such as prescription drugs, lab tests, and physician fees,) were not as equally distributed between Medicaid and the private carriers, as the hospital costs were.

The following graph shows Medicaid payment trends from the early 1980's until the present. Each author cites a percentage of Medicaid payment for a given year. By examining the graph, it can be seen that Medicaid payments increase as the years progress.

The lowest percentage of Medicaid payout, 11%, occurred from a study conducted in Texas, where the corresponding private payers were found to pay 40%, (Begley, p.60.) The authors were unable to specify why payment rates in Texas depicted an opposite trend from other findings. One simple reason may be because of variation in study approach and the authors' different focus areas of funding, for as I gathered data, I did not note any regional trends indicating such an extensive disparity as in Texas. Andrulis, et al., presented hospital discharge data from

Medicaid Payment Trends



1984 and 1985 which suggested that "55% of the patients with AIDS were privately insured, 21% were covered by Medicaid, and 21% were classified as 'other'," (Andrulis, p.1343.) By the mid-to-late 1980's a pattern emerged which would gradually expand the amount Medicaid paid for treatment. Medicaid payments began to increase, from paying 28% of HIV hospital admissions in 1986-1987 (Andrews, p.1,) to paying 30.8% of inpatients charges from 1987-1988, while the private carriers were covering as much as 40.0% (as set forth by data from the large hospitals in North Carolina,) (Campbell, p.449.) Finally in 1989-1990 Medicaid's pattern of payment had a large increase, as they were paying 41.4% of inpatient charges, while correspondingly, the private carriers exemplified a decline to 31.2%. By the early to mid-1990's, the shift toward Medicaid becoming the primary source of payment for the treatment of HIV/AIDS patients became more pronounced. A study conducted in 1992 in 11 states reported that 55% of patients had public insurance (of which 90% was Medicaid,) 20% had private insurance, and 25% did not have any insurance (Diaz, p.1015.) By 1995, almost a decade-and-a-half after the first case of AIDS was discovered, a report on increasing expenditures of the Medicaid plan concluded that "Medicaid is the single largest source of coverage for AIDS patients," (Wade, p.13.)

The shift from private insurance carriers paying for the majority of AIDS treatment toward Medicaid absorbing most of the costs was indentified in the mid-to late 1980's in a study examining the payment trends of Los Angeles, San Francisco and

New York, by Green and Arno. From the concluding data in this study, I found it interesting to note that future patterns of payment can be accurately forecast by looking at earlier data from the cities with the highest prevalence of HIV/AIDS. Because these studies were conducted in three cities which had high incidences of HIV/AIDS in the early 1980's, their experience (shown by data) can predict what should take place in the future for other cities. This is proven, because while the rest of the country was experiencing high private insurance payouts for AIDS treatment, Green and Arno reported that treatment financed by Medicaid "rose from 25% in the 1984-1985 period to 41% in the 1986-1987 period, while private insurance share declined from 49% to 43%," (p.1261.) This increase in Medicaid-financed hospitalizations was exhibited in all three cities. This was broken down further to a five year period which included results based on race, showing that the most dramatic increase in the percentage of AIDS patients dependent on Medicaid were found in New York and San Francisco. In 1983 16.6% of white AIDS patients had Medicaid; this expanded to 29.6% in 1988. Blacks/Hispanics with Medicaid went from 57.9% in 1983 to 67.0% in 1988. San Francisco had somewhat similar results for the white population; 19.2% had Medicaid insurance in 1983 and 28.5% in 1987. However, with a lesser number of blacks/hispanics needing public health care assistance, the numbers in San Francisco were a bit lower, but still produced outcomes that showed an overall increase in Medicaid coverage, from 22.4% in 1984 to 37.3% in 1987, (Green and Arno, p.1263, Table 1.)

All of these analyses conclude that Medicaid financing of HIV/AIDS related treatment is increasing, while the number of Medicaid recipients is also on the rise. It is thus safe to presume with all things staying constant in the near future, that Medicaid (with its increasing enrollment,) will be paying for the majority of treatment rendered to HIV/AIDS patients. This being the case, I believe that the current Medicaid system may have a problem delivering efficient and vital care. It may be necessary to specifically address the issue of AIDS funding and the corresponding need, in light of the expanding future increase of recipients. In order to determine what kind of assistance is needed (in the form of a policy,) and possibly where future trends are heading, it will be important to understand the reasons why a shift occurred in treatment financing.

It is true that in the early 1980's AIDS became a disease which was quickly given disability status, in turn increasing the availability of Medicaid to infected individuals (Green and Arno, p.1265.) Yet, there are more reasons to support the rise in Medicaid recipient numbers--those specifically related to the patient's employment status.

It was quite common prior to the early 1990's that an HIV-infected person, with physical weakness and other disease-related disabilities, would have been unable, at some point, to continue working. When employment was terminated, the problem then became the loss of health insurance. In San Francisco, "40% [of AIDS patients] stopped working within a year of their diagnosis" (Green and Arno, p.1265, from Greenblatt, et al.,) which was also

paralleled in Texas where "63% became unemployed, [of which] 30% of those who previously had private health insurance had lost it," (p.1265, from "AIDS in Texas".)

Since the early-to-mid-1980's, the development of new drugs which moderately break down HIV and it affects, allow more patients to return to work. Even though patients are able to maintain employment throughout the course of their illness, they now encounter a new, more current obstacle. Private insurance companies are using HIV testing "so they [can] screen out HIV-positive applicants" (Green, p.84,) to avoid the potentially catastrophic high costs of AIDS. On the same exclusionary note, employers that are self-insured (and are part of the ERISA self-funded plan) are also able to capitate benefits and modify benefit limits to employees covered under their plan. A decision was made by the Fifth Circuit Court of Texas, in McGann v. H&H Music Company which stated that the capping of medical benefits was legally permissible, which means that the rights of the employer outweigh the entitlements of the employee (Henry, pp. 410-412.) This is a non-discriminatory act as it applies to all employees equally. Nevertheless, the severely ill, especially those with HIV/AIDS, can be rapidly dropped by the plan with the employer's permission, suffer with an immediate and exhausting effect.

These developments contribute to the increase in Medicaid recipients and consequently, in overall Medicaid payments. They support Andrews' statement that "approximately 40 percent of AIDS patients are on Medicaid at some time during their illness,"

(Andrews, p.1.) I would estimate that this rate is even higher now than in 1987.

Medicaid costs for AIDS care may also expand in the future, given the "disproportionately affected low-income persons whose whose only possible source of insurance is Medicaid," (Markson, p.44.) Eventually, even those who currently have private health insurance or supplemental financial resources available, may find themselves depending on Medicaid more quickly than before, due to the rapid depletion of other sources. In addition, the rise of the new protease inhibitors, which at the present time are not fully covered by public dollars, may also cause costs to accelerate sharply. Further, the end stages of the illness will more than likely always require additional treatment of an expensive magnitude coupled with quite lengthy inpatient stays, which in turn, will increase future Medicaid costs.

Another important facet in studying the reasons for Medicaid's expanded role in treating AIDS, is the pattern of change in insurance status (usually from no insurance to Medicaid, or in some cases, from private insurance to Medicaid,) which occurs quickly in HIV/AIDS patients. A study conducted by Weissman et al., entitled "Changes in Insurance Status and Access to Care for Persons with AIDS in the Boston Health Study," indicated that 36% of those studied had a change in their insurance from the time the study began until the concluding data were obtained--a one year period! Following that, Medicaid coverage increased considerably from 14% to 41%, (Weissman et al., p.1997.) It was also significant that those "who had a

change in their insurance status had had AIDS longer than those who did not," (p.1998,) and those patients who switched from a private health carrier to Medicaid "also had had AIDS longer than those who did not," (IBID., p.1998.)

These findings suggest a broader trend, that employment terminations and the exclusion of employment-based health insurance, are the main reasons for an increase and shift in Medicaid financing.

If there was a way to implement a policy which would adequately lower the amount of public dollars spent on Medicaid, it would have already been accomplished. However, I think the approach taken should not only involve curbing the costs at hand, but doing so by concentrating on possibly shifting costs to another source other than just Medicaid. The best way to begin to develop a policy would be to examine past and current treatment trends, with an educated idea of where these trends are heading in the future. It is vital to first define where, how, and for whom allocated money will be spent before elements of a policy can be identified.

WILL THE METHODS OF TREATMENT BE CHANGING?

How has treatment shifted?

Fred Hellinger, in "Forecasts of the Costs of Medical Care for Persons with HIV: 1992-1995," contends that the cost of treating a patient with HIV/AIDS has been, and will continue to

be, on the rise in light of the escalation of both inpatient and outpatient hospital costs, along with the "widespread use of new and expensive drugs," for palliative therapy (Hellinger, p.364.) His estimates for the projected yearly cost of treating people with HIV depicted a gradual increase from \$6.77 billion in 1992, to \$7.78 billion in 1993; \$8.86 billion in 1994; and \$9.99 billion in 1995, (p.362 from Table 4.) Corresponding data compiled by Hellinger for the lifetime costs of treating a patient with HIV, demonstrated substantial growth, ranging from \$57,000 in 1988, to \$102,000 in 1992, (Hellinger, "Lifetime Costs" p.478,) to \$119,000 in 1995 (IBID., p.474.) Both sets of data indeed exhibit an increased trend in treatment expenses, but also generate further the questions: Why is there an increase? How is this measured? Whom does it effect? These questions need to be addressed.

Another important trend, documented by Cheryl Merzels, et al., is that treatment of "persons with HIV disease is shifting from the acute care inpatient hospital setting to outpatient and community based modalities," (p.27.) This is confirmed more specifically in Hellinger's study and in two similar London-based studies by Beck, et al., "Changing presentation and survival service utilization and costs for AIDS patients: Insights from a London referral centre," and "Changing use of hospital services and costs at a London AIDS referral centre, 1983-1989."

The two London studies were written simultaneously with data from St. Mary's hospital in London, and reflect the same trends presented in the United States for the same time period.

Beck's first study examined the costs and treatment shifts for two groups of AIDS diagnosed patients: one which involved patients diagnosed before 1987 (a group of 152,) and another, those diagnosed after 1987 (consisting of 183,) (Beck,(A) p.379.) Each group was then subdivided and classified into three categories according to their stage of disease: asymptomatic, symptomatic non-AIDS, and AIDS. Results showed that there was a decrease in the number of inpatient hospitalization days for the group 2 patients in comparison with the group 1 patients in each of the three disease categories. The results also indicated that the mean number of outpatient visits increased for group 2 patients in comparison with group 1 patients, confirming that a shift occurred from inpatient services to outpatient treatment.

Beck's other study complements his first in that inpatient tests performed on the asymptomatic patients decreased from 2.7 in 1984 to 0.3 in 1989, and following the trend, the costs of administering these inpatient tests decreased as well. Correspondingly, like the asymptomatic patients, the number of inpatient tests for the symptomatic patients likewise decreased, along with the costs of performing such tests. The results for the patients with AIDS follow much the same pattern as the asymptomatic and the symptomatic patients. The decline in inpatient treatment signified a related rise in outpatient treatment. The outpatient visits for the symptomatic non-AIDS patient increased from 8.3 in 1984 to 13.3 visits in 1989; and routine outpatient visits increased from 5.3 in 1984 to 11.5 in 1989. As would follow, the number of outpatient tests and their

costs increased as well.

Further confirming the shift, drug costs for inpatient care decreased (following the decrease in inpatient treatment,) while the outpatient drug costs increased substantially from 31.7 pounds per patient in 1983 to 2748.9 pounds per patient in 1989, (Beck et al., (B) p.374.) It is not necessary to be familiar with the current British exchange rate to recognize the dramatic growth reported by Beck and colleagues. The results of these studies suggest that treatment has indeed shifted, with the primary focus of outpatient treatment centering around drug therapy to lessen and suppress the symptoms of HIV, thus producing a substantial increase in outpatient costs. This will be a point of focus in the future as the necessity and desire for drug therapy increases, so will the costs, which can be shown by observing the patterns the drug AZT followed in the past. This appears to be a valid assumption because "of the total average expenditure per AIDS patient-year in 1989, 7.4% was directly attributable to [the drug] zidovudine [or AZT]," (IBID., p.374.)

What are the Treatment Trends

Past treatment methods for HIV/AIDS patients focused on maintaining the comfort level of the patient--knowing that the quantity of life would be short, attempts were made to minimize any discomfort--merely making existence bearable until the end. Current treatment places an emphasis on fighting the disease by way of drug treatment. The focus now has shifted toward the once

unattainable, gradual breakdown and subsequent elimination of the virus. Treatment to destroy the last trace of HIV is currently at a very early, still experimental, stage. Even though this treatment is a positive progression, questions about future use and subsequent results remain.

The drug zidovudine (popularly known by its brand name, AZT,) has been around experimentally since the mid-1980's, and was approved for treatment purposes by the Food and Drug Administration in April 1987, (Solomon, p.464.) Since then it has been used widely, not only in prolonging survival in AIDS patients and fighting off the onset of AIDS in otherwise healthy HIV-positive patients, but also by being a "less costly alternative than other existing palliatives for AIDS," (Meyer, p.1093.) Early studies on patients treated with AZT exemplified substantial declines in hospitalization costs and overall caring costs, in addition to providing patients with the opportunity to be active participants (economically) in society longer than without the use of AZT, (Meyer, p.1093.) This is a vital issue, since the majority of HIV/AIDS patients are part of the younger portion of our community, that have a greater possibility of returning to work as soon as physically able.

Hellinger, in early 1990 data provided an example of a significant, extremely positive condition attributed to the use of AZT. "Over the past five years the average survival time of AIDS patients has increased from one to almost two years," (Hellinger, (A) p.214,) with the average being 20 months from the time of AIDS diagnosis until the subsequent death, (p.216.) Even

though the survival rate is currently higher now (especially with the continuous examination of new drugs,) this early increase in survival indicates that drug therapy is an effective method for treating HIV/AIDS, and should be the focus of the future.

Hellinger's early estimates also provided data on the cost and usage of AZT, which on the surface appear to be minimal. He has estimated that 30% of HIV-positive, non-AIDS patients received AZT during the year without interruptions in acquired treatment. (An interruption could be triggered, for example, by lack of medical insurance, or from questions rising concerning insurance eligibility status.) Hellinger also has estimated that 30% of patients received the drug aerosol pentamidine in an uninterrupted case (a slightly more expensive form of drug treatment, quite similar to AZT.) These costs are estimated at \$2700 per year and \$3000 per year, respectively, (Hellinger, (A) p.219.) Some states have higher utilization rates than others, which happens in New York, where over a five-year time span, the use of "AZT and other AIDS related drugs more than tripled in New York state," (Hellinger, p.214.) In some instances, Medicaid even pays for the use of AZT. Mid-1987 data showed that 61.4% of Medicaid eligible men had received at least one paid zidovudine prescription, (Solomon, p.464,) which is almost equal to a nationwide percentage of AIDS patients taking zidovudine, (IBID., p .467.) Even those patients who qualify for Medicaid through AFDC receive AZT prescription benefits (38% of the men and 9.8% of the women,) (IBID., p.465.) So it appears as though numerous patients have the potential to receive coverage for AZT, but

ideally it should be available exclusively to all needy recipients. Ideally, yes, but realistically the accessibility of AZT is quite an obstacle. Studies have shown that drug treatment works--an answer was found to the question of "is there a cure?"--so why is this drug so difficult to receive? It appears as though the main hindrance to receiving drug treatment is lack of funding, or particularly, the decreasing amounts of Medicaid reimbursement.

Going on its tenth year of FDA approval, the use and availability of AZT is now more prevalent than it ever was, yet another drug (or set of drugs) was recently introduced which make the use of AZT alone, a less effective method of treatment. It is currently going through the same beginning cycles AZT did at its inception, (not affordable and not yet approved by the FDA.) Enter protease inhibitors.

In December 1995, the FDA approved five new drugs, one called saquinavir--a protease inhibitor--when combined with two other drugs, usually AZT and 3TC, (a drug having a chemical make-up like AZT,) a drug "cocktail" is produced (Gorman, pp.64-65,) which drops the HIV virus to an "undetectable level in [the] blood stream," (Foster, p.A5.)

The technical use of this specific drug therapy is actually quite simple to understand. The HIV virus is almost invincible because it is able to reproduce itself at a rate near "a billion copies a day," (Gorman, p.65.) Dr. David Ho of the Aaron Diamond AIDS Research Center in New York City explained that it is vital to attack the HIV in its earliest stages--when it emerges in the

patient's lymph nodes. Because HIV is so powerful it is important to attempt to conquer it at the beginning, with a correspondingly stronger drug. So what appears to occur (or what should occur,) is the "cocktail" will work to break down the HIV virus and prevent it from reproducing itself, in turn allowing the patient's immune system to build up so it "will not have to waste a billion cells a day in defense," (IBID., p.65.) The reason the HIV virus is able to take over the body is because all of the cells work solely to battle HIV, causing breakdown in other areas, leading to sickness. By using protease inhibitors to decrease the strength of the HIV virus, the cells can then work exclusively to destroy the limited amount of HIV left in the body's system.

The use of protease inhibitors is still in the early, experimental stages. Even though the HIV virus becomes undetectable in the blood with their use, the virus still can be disclosed in the lymph nodes (Gorman, p.65,) in the intestines or even in the brain (Foster, p.A5.) There is also the future possibility that the HIV virus will eventually mutate against the fighting drugs (as it did with AZT,) so the gains the protease inhibitors once rendered could easily be dissolved (Haney, p.A5). However, similar theories and inquiries were unraveled over a decade ago when AZT initially became approved by the FDA, and the gains prove to be more beneficial than the doubts. Not unlike that period of time when the most modern advances in drug therapy (AZT) actually became miracle treatments, the main question of today is who is going to pay for this drug therapy?

Given the past experiences involving the cost concerns with who is going to pay for AZT at its inception, it can therefore be presumed that the payment source for protease inhibitors will be a primary focus in the future.

Who is Paying for Protease Inhibitors?

Currently the reports on who is paying for protease inhibitors are quite conflicting. One study written in December of 1996 follows the life of a protease inhibitor recipient up to its "remission" stage. It is suggested here that the drugs, although expensive, are primarily paid for by Medicaid and private health insurance. Yet in a more scientifically based article written by Christine Gorman, protease inhibitors ". . .cost tens of thousands of dollars a year, putting them out of reach, for now, of all but the wealthiest of best-insured patients," (p.64.)

There is no published evidence to substantiate either statement, but I support the Gorman theory for several reasons. A study conducted by David Foster (of the Associated Press) concerned a patient who was included in an experimental project (or study group) involving the use of protease inhibitors. From the contents of the article, I deduced that the patient had contracted HIV some time ago, consequently becoming physically weak--almost bed-ridden--to a point where he was presently unable to work. It is questionable whether he had health insurance at that stage, and even if he did, it is doubtful if such treatment

would be covered (even though experimental,) since private health carrier denials, or the capping of benefits, are supported legally. I would also presume that since health carriers have not paid for past experimental treatment, (which may even have been less expensive,) they would follow precedent and deny present payment as well. Why risk financial security by beginning to cover these astronomical costs?!

With the recent development and subsequent success of protease inhibitors, these drugs will more than likely be the treatment trends of the future. This being the case, it becomes critical to examine the imminent patterns in infection status and patient composition because these people will compromise the multitudes who will be using the protease inhibitors. If it can be proven that a specific group of infected people will be more susceptible, that group becomes a controlling force in determining where and to what degree assistance or experimentation is needed.

Patient-Treatment Response Trends

Hellinger analyzed treatment needs based on the number of T-cells present in people with HIV/AIDS. (The lowest T-cell amounts indicated that the patients were the closest to being diagnosed with AIDS, middle T-cell amounts were symptomatic, and those with the greatest number of T-cells were classified mostly as asymptomatic.) Hellinger found that as the T-cells increased in the patient, indicating a healthier, more asymptomatic stage

of disease, inpatient hospital costs lessened as outpatient costs increased, and further, those actually diagnosed with AIDS exhibited an opposing pattern, with greater frequency of inpatient visits than outpatient visits, contributing to the corresponding higher inpatient costs over outpatient costs. Inpatient monthly costs (per patient with AIDS) were estimated at \$1890, while the outpatient costs were substantially lower, at \$874, (Hellinger, (B) p.475.) The next study group--those with T-cell counts lower than $.20 \times 10^9/L$ had inpatient costs of \$456 per month, and the outpatient costs were almost equal at approximately \$344, (IBID., p.476.) Patients with a T-cell count of $.20 \times 10^9/L$ or higher, but lower than $.50 \times 10^9/L$ (nearing the asymptomatic stage,) exhibited low inpatient costs (\$119 per month) compared with outpatient services of \$191 per month, (IBID., p .476.) Data for the asymptomatic HIV cases (T-cell counts of $.50 \times 10^9/L$ or higher,) showed that inpatient costs per month were merely \$54, while outpatient costs increased to a monthly charge of \$151, (IBID., pp.476-477.)

Because Hellinger's data reflect the pattern of a decrease in inpatient care with a corresponding increase in outpatient services, which coincides with the resulting data in the London studies, it can be deduced that this is the present trend for treatment rendered, and that future data will follow as well. Even though this is the case, what exactly is Hellinger's data for patients with AIDS (which indicates quite the opposite movement,) saying about the future?

The majority of the data Hellinger presented indicates that

the healthier the patient--the further from being medically diagnosed with AIDS--the more favorable their response is to the lesser amount of treatment received, equating with higher outpatient treatment numbers. Yet, the data for patients diagnosed with AIDS is consistent with a different sequence, as are patients in Beck's first London study who were diagnosed with AIDS before 1987. Each group of AIDS patients had higher inpatient rates (costs and hospital stays) than outpatient rates. There is a reason, I believe, that this occurred.

Hellinger estimated the incubation period for AIDS (from HIV infection to AIDS diagnosis) to be an average of 10.3 years (Hellinger, (C) p.477,) while Beck et al., compared the time of diagnosis of initial HIV infection, to diagnosis of AIDS for group 2 patients to be 8.8 months, compared with 0 days for group 1 patients (Beck et al., (A) p.380.) The difference between the two estimates has to do with the time when patients find out that they are HIV carriers. Either way, those patients with HIV infection--yet to be diagnosed with AIDS--(therefore yielding higher T-cell counts,) are able to benefit the most from outpatient/drug therapy programs and are the group which requires a lesser amount of inpatient care (such treatment is not necessary at their stage of illness,) but with a corresponding increase in outpatient treatment (which proves to be the most beneficial treatment for their condition.)

The incubation period is an important facet in many ways and will be an area to watch in the future. Those patients found within this 10 year period constitute the majority of the

patients using outpatient treatment and drug therapy (at the asymptomatic, or earliest stages of HIV.) As the drug therapy proves to be effective, this will increase the incubation period itself and also generate a subsequent escalation in the number of patients between HIV infection and AIDS diagnosis, in turn requiring more outpatient (drug) treatment in the future.

(It is also possible, incidentally, that with this increase in demand for outpatient/drug treatment, more patients will also be available for future drug experimentation, which may yield the possibility of producing new, more effective drugs.)

In comparison, those patients with a T-cell count lower than $.20 \times 10^9/L$ (Hellinger categorizes them as having AIDS,) together with the patients in the London study who were diagnosed with AIDS before 1987, appear to require more inpatient care at their stage of the illness. They have progressed to a more advanced state of the disease than those with higher T-cells (and those diagnosed at a later date) and for this reason, they require more extensive treatment and inpatient visits than their counterparts who are able to function favorably with the less substantial outpatient care.

In conjunction, Beck et al., introduced survival data from the two groups of patients studied, which also supports the theory that patients diagnosed with AIDS require more extensive treatment and inpatient visits. It is stated that by the end of the study period, "73% of group 1 [diagnosed before 1987,] and 36% of group 2 patients [diagnosed after 1987,] had died," (Beck, (A) p.380,) and the survival time for group 1 was "14.6 months

compared with 21.0 months for group 2 patients," (IBID., p.380.) This short survival time for those diagnosed with AIDS supports the suggestion that the group one patients, along with those with the lowest T-cell counts in Hellinger's study, have already progressed to the final stages of the disease and are unable to reap the benefits from any outpatient treatment provided.

There appears to be agreement in the several studies that the majority of treatment received has shifted from inpatient facilities to outpatient facilities, and that those who need care for HIV at the early stages (asymptomatic) require lesser amounts of treatment.

After examining the studies which confirm Hellinger's statement on the progression of HIV treatment from inpatient to outpatient care, I question, why are costs thus rising simultaneously? Shouldn't it follow that a decrease in the amount of hospitalization equals lower costs? Hellinger, in "Forecasts of the Costs of Medical Care for Persons with HIV: 1992-1995," suggested that "the widespread use of new and expensive drugs. . . contributed to the high costs of treating persons with HIV," (p.364.) This fact, combined with the findings that approximately 42% of outpatient expenditures were allocated for outpatient drug costs alone, (IBID., p.364,) helps explain why although treatment has shifted from the inpatient to outpatient setting, subsequent costs for outpatient treatment have also risen. Because this increase in outpatient treatment contributes to a rise in the HIV/AIDS survival rate, I believe that there will be greater concentrated effort put forth into

developing the "right" drug (or combination of drugs,) to combat HIV/AIDS. Although effective, this will be an expensive method and, I propose, will continue to increase the costs of treatment in the future.

Even though developing the "right" drug will make treatment costs rise and also indicate a supplemental increase in drug supply, the chances are favorable that one day these drugs will conquer the disease and emerge as victors. It is almost unanimously agreed that such drugs are the future trend for fighting (and possibly eliminating) HIV/AIDS, but before a policy can be considered regarding their funding, many general questions surrounding drug treatment combinations, in addition to the trends of who will be in need in the future, should be addressed.

WILL SPECIFIC GROUPS OF PEOPLE BECOME MORE SUSCEPTIBLE THAN OTHERS IN THE FUTURE?

Who is Receiving Treatment?

Robert Hiatt et al., of the Kaiser Permanente Medical Care Program (a pre-paid group practice health plan in northern California,) collected hospitalization data compatible with the studies cited above, which also showed that HIV/AIDS care exhibited a shift from inpatient toward the outpatient setting. The data documented an average length of hospitalization stay, before 1984, of 17.2 days, which decreased to 10.7 days in 1987

(Hiatt et al., p.835.) Yet this study probed further to see which patients were receiving the majority of the care, and which patients were absorbing the majority of the costs. Hiatt and his colleagues found that patients with pneumocystis carinii pneumonia (PCP) were hospitalized an average of 39.9 days, whereas patients with Kaposi's sarcoma were hospitalized an average of 32.3 days, (IBID., p.835.) This is confirmed by Benjamin (1988), who stated that "there is some evidence. . .that Kaposi's sarcoma, which is more common among male homosexual AIDS patients, requires less hospitalization than pneumocystis carinii pneumonia, which is more common among IV drug users with AIDS," (p.421.) Following this, patients with PCP had higher lifetime costs than those with Kaposi's sarcoma, in part reflecting higher (inpatient) hospitalization rates, whereas the corresponding outpatient costs for Kaposi's sarcoma patients were higher than those for patients with PCP--\$5051 versus \$4123 (Hiatt et al., p.836.)

It is suggested by both the Benjamin and Hiatt research, that one reason inpatient hospitalization rates for patients with Kaposi's sarcoma are lower is that homosexual men tend to have more personal support networks (in family and friends) than do IV drug users, contributing to their earlier discharge rates. The care givers for homosexuals are supposedly more abundant and willing to devote time to the care of their infected loved ones. This method of thinking may help to explain the potential increase in the amount of IVDU inpatient hospital usage in the future. The decrease in homosexual patients does not generate an

increase in hospitalization for IV drug users, but the theory regarding care givers (or lack thereof) for the drug users may have some validity in reasoning why "heterosexual IVDU's had 30% more hospital days than the average patient with AIDS," (Hiatt et al., p.837,) in the late 1980's.

Who is Currently Getting AIDS?

Recent research estimates there are about 700,000 HIV-infected U.S. residents (with about 41,000 new infections) per year, (Holmberg, p.650). It appears as though, among these new cases, there is a steady escalation of infected intravenous drug users (IVDU). "[A]n estimate of HIV-infected drug users [is] equal to 2.5 times the cumulative number of AIDS cases. . . reported to the CDC," (p.644.) Even though David Michaels' has projected that the 1990's will exhibit a leveling off of overall AIDS incidence rates, he is in agreement that there will be a rise in the number of cases transmitted through heterosexual sex and injection drug use (p.3457.) This impact of an increase in IVDU is of vital significance, for not only does it affect the drug users themselves, but it victimizes those who come in contact with IV drug users.

Because the majority of those infected through heterosexual contact are women, (up to 80%) (p.645,) and the majority of IV drug users are heterosexual, it appears reasonable to project a substantial growth in the numbers of women becoming infected. It also is reasonable to project an expansion in the number of

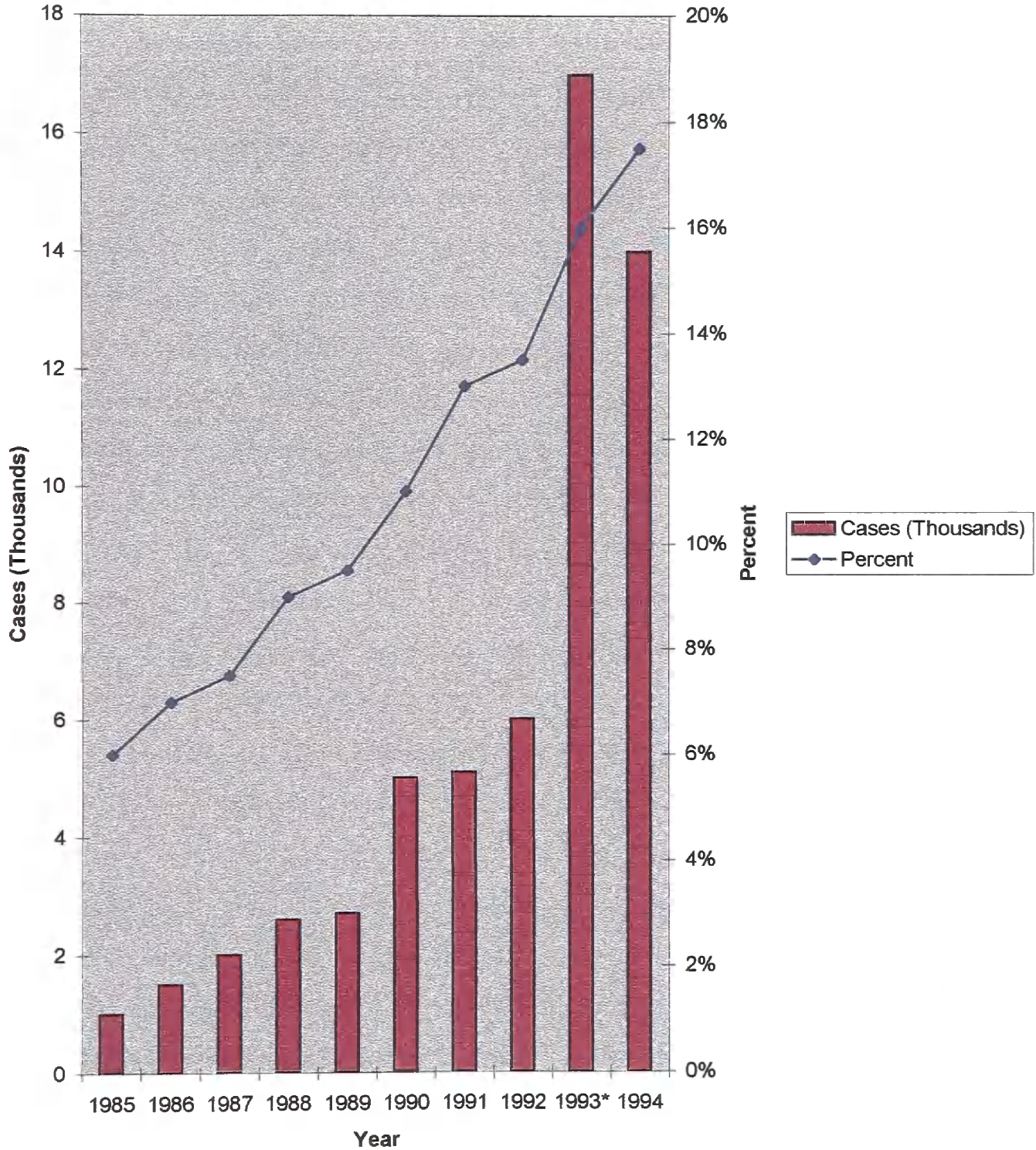
female carriers, to be the focus of treatment and funding in the next decade.

Women and AIDS

Federal infectious disease data suggest that AIDS is the third-leading killer of American women ages 25-44 and the primary cause of death among African-American women that age (The Flint Journal 5/6/97, p.C4.) This is also associated with data from the National Institute of Allergy and Infectious Diseases and an analysis from the Associated Press, which confirms that the proportion of female AIDS patients is continuously rising, (Parade, p.5,) and that "women constitute the fastest growing segment of the U.S. population to become HIV infected," (The Flint Journal 5/6/97, p.C4,) shown from 1991 through 1995, as the number of women diagnosed with AIDS increased by 63%, (Wortley, p.1). If the number of HIV-infected women continues to rise, the number, worldwide, will equal the number of infected men by the year 2000 ("Fact Sheet: Women With HIV," p.1.)

The following graph shows the increasing growth in number of female AIDS cases (and percentages) from 1985 to 1994. The main reason for the noted increase in the number of females with HIV/AIDS is because they become infected essentially through two major risk groups: female IV drug use and also by heterosexual contact with infected males. Data compiled by the CDC shows that from July 1996 through June 1997, 33% of women were exposed to AIDS via IV drug use, while 40% were exposed by heterosexual

Number and percentage of AIDS cases among women > 13 years -
United States, 1985-1994



*The AIDS surveillance case definition was expanded in 1993.

From "CDC Update:
AIDS Among Women - United
States, 1994"

contact, (other methods of infection were from hemophilia, blood transfusion recipient and unidentified risk,) ("CDC HIV/AIDS Surveillance Report," p.10.) These numbers are quite similar to the cumulative totals reported through 1997, although as a whole, the numbers are reversed in 1997, with 44% of women being infected by IV drug use and 39% by heterosexual contact.

Some women are caught up by chance in an environment of risk, by associating and becoming physically involved with infected IV drug users, heightening the likelihood of acquiring HIV. Holmberg has stated that those heterosexuals who are HIV infected, but are not drug users, become infected via their partners, which he estimated for male IVDU to be an average of two to three female partners a year (Holmberg, p.645.) However, as the number of annual heterosexual partners increases for HIV positive men, it becomes more difficult to trace the pattern of infection. It is already proven by Holmberg that "at least 5% of regular female sex partners of male injection drug users are HIV infected," (IBID., p.645.)

Contrary to the pattern of infection through contact with drug users, females are not always without fault, or even "victims" in regards to their method of infection. Often they themselves are in a high risk category. Holmberg, through numerous sets of surveillance data, developed a profile of the emerging, infected female. He documents that she is a "generally young, minority, indigent woman who uses crack cocaine; has multiple sex partners; trades sex for crack, other drugs or money. . . and tests positively for sexually transmitted diseases

such as syphilis and herpes," (Holmberg, p.650.) Whichever mode of transmission, by injected drug or by way of a heterosexual partner, the data suggest that female incidence is, and will be on the rise.

Unfortunately, there is one emerging infected group of truly innocent victims, which furthermore is also on the rise--the children. There are 7,902 children (under the age of 13) with AIDS, as reported to the CDC through June 1997 ("Fact Sheet: Children..." p.1.) They appear to be part of a new "cycle", in which an increase in IVDU infection leads to an increase in female infection, which leads to an increase in HIV-positive children born to HIV-positive mothers. Of the number of children with AIDS reported to the CDC through 1997, 91% of the cases were infected perinatally, (p.1.)

Even though out-dated now, data from the mid-to-late-1980's forecasted the above trend exhibited today. Ann Scitovsky, disclosed that in 1985, there were 6.5% of reported cases of female HIV, which increased to 10.4% in 1988. For children, there was a slight growth from 1.2% cases in 1985, to 1.8% in 1988 (Scitovsky, from Table 7, p.333). Because these children were born with HIV, and it follows that they received treatment for longer periods of time due to their young age at infection, treatment costs tend to be higher than for their adult counterparts. Joel Hay and Kenneth Kizer are in agreement, and state that "each [additional] year of age [at which the HIV-patient is diagnosed] lowers the lifetime medical expenditures for that patient by about 1 percent," (Hay and Kizer, p.99.)

Scitovsky concurs that pediatric HIV/AIDS cases are emerging as more costly than adult cases. In 1988, the mean lifetime hospitalization cost per child was \$90,347, and the estimated annual Medicaid cost (per child) was between \$18,000 and \$42,000, (Scitovsky, from Table 4, p.323.) Although these data may be outdated, they illustrate the point that pediatric cases are quite expensive.

Of all the research gathered, it is interesting to note that there is not a study to estimate the survival time of pediatric cases. In fact, there is not much information whatsoever on infected children. One reason for the lack of knowledge on this particular aspect could be the newness of the subject matter. Researchers are probably still at the observation and gathering stages as the increasing numbers of pediatric cases are still relatively recent, and also because following the patterns of infected children takes some time (in excess of 10 years,) since many children are infected as infants. If there are still traces of HIV in these children when they become teenagers or eventually adults (provided drug treatment methods are not effective,) their trends may become more difficult to observe, as the former children are lost within the mass of adults.

The expanding numbers of pediatric AIDS cases also gives rise to a similar growth in infected teenagers. Some of the infected adolescents were carriers at birth, yet there are others who are products of their own recklessness and become infected as teenagers. It is interesting to note that the true number of infected teenagers becomes apparent when the number of AIDS cases

among people in their mid-20's is examined, because of the incubation period of HIV ("Youth & HIV/AIDS," p.1.) Walter et al., found that there are "substantial proportions of teenagers and young adults engag[ing] in behaviors that increase their risk for acquiring infection with HIV," (p.531.) The Centers for Disease Control and Prevention conducted a Youth Risk Behavior Survey in 1993 of 16,000 teenagers in high school (grades 9-12.) Fifty-three percent said that they have had sexual intercourse, while 38% were currently sexually active. Of these teenagers, 19% have had four or more sexual partners ("Fact Sheet: Children..." p.2.) Facts such as these may be reason alone to project a future increase in teenage and early adult incidence.

As mentioned previously, adult female cases of AIDS are gradually on the increase and corresponding rates of infected female adolescents are likewise growing. In 1987, 14% of adolescents with AIDS were female, which expanded to 44% from June 1995 to June 1997, (IBID., p.2.) The reasons for the increase are similar to those for female adults. Young women are at a higher risk because there is a greater proportion of females becoming infected through heterosexual contact, (Wortley, p.4.)

Although I am unable to find any documentation regarding adolescent insurance status, I believe that the rise in teenage infection poses a dilemma concerning insurance coverage and the aspect of funding. At the time of infection, most teenagers will still be recipients of their parents' health insurance whether private or public. However when it becomes necessary for treatment to begin, it is likely that these teenagers will not

have any health care coverage at all--in limbo between health carriers--off their parent's coverage and not having been established on a plan of their own (whether still in school, or being an early entrant of the job market.) This being the case, what private health carrier will insure them as a new applicant, whether subsidized by an employer or not? Furthermore, what employer will hire them with such a substantial insurable risk factor? These groups then become part of the vast multitudes receiving Medicaid funding for AIDS treatment, signifying that something needs to transpire to control the quickly expanding Medicaid dependents.

IS POLICY REFORM NECESSARY?

A projection and investigation of current and future trends has taken place which indicate: That Medicaid is absorbing the majority of the costs of treating AIDS; treatment areas are shifting more toward the outpatient setting, exhibiting heavier use of AZT and protease inhibitors; and that data for patients outline the incidence rates for IV drug use, females and children, as being on the rise. All of these findings are vital, crucial facets needing thorough consideration when formulating a policy for funding. These trends, along with the specific problems of the current public assistance program, are the basis for suggesting that a new policy for AIDS treatment funding would be beneficial.

Medicaid appears to be the primary funding source for people

with AIDS, as Kass, (1991) found that people with AIDS are "33 times as likely to have Medicaid as persons without AIDS," (p.249.) Of these patients, 90% of those receiving Medicaid reported gaining the coverage only after their diagnosis, (p.252,) while similarly, Medicaid participation before diagnosis was 14%, which escalated to 60% after initial diagnosis, (Crystal, p.134.) These facts suggest that there may be some kind of outside force acting on patients with AIDS which would cause so many patients to depend on Medicaid. The change in their insurance status, as set forth by Crystal, indicates that as patients progress to final stages of the disease, they have a tendency to lose their private health insurance (possibly in part, to loss of employment,) in turn forcing them to rely on governmentally assisted programs. From this information I can make a broad assumption that whether or not a person is covered by health insurance can usually be determined to some degree, by his employment situation. Because AIDS is a debilitating disease, it forces its victims to discontinue working in most cases, causing them to lose their health insurance coverage and consequently placing the responsibility of paying for their care again on the public. Loss of employment was the basis for the first cases of AIDS being funded by Medicaid, and unfortunately, no significant changes have been made since, because this is how the majority of AIDS cases become dependent on Medicaid today.

It is also noted that there is a considerable shift in the type of care--from inpatient to outpatient--that the AIDS patient is requiring. There is the assumption that following an increase in outpatient treatment for AIDS patients, is a similar rise in the number of visits to the private care physician. A decrease in the use of the inpatient care setting may "indicate that it is

the skill and experience of the specialist rather than sophisticated diagnostic or therapeutic facilities which are needed. . ." (Metrikin et al., p.622.) This proves to be true for patients who are still covered by private health insurance, as 57% reported that private care physicians are their source of outpatient care, (Crystal, p.133.) Yet, as private insurance coverage decreases, a shift away from treatment by private care physicians is exhibited, (IBID., p.132,) leaving Medicaid recipients receiving care from clinics 69% of the time, (IBID., p.133.) It matters where a patient receives treatment because of a difference in the accessibility and availability of certain drugs and other procedures used by the private facility versus the public clinics. The care rendered by private physicians proves to be superior over that offered in a clinic. For example, more than two-thirds of the patients receiving medical care from their private care physicians were taking AZT, compared with only 42% of those treating in a clinical setting, (IBID., p.134.) This finding is for AZT usage in 1994, but because of the current increasing availability of the drug, present data should show more widespread use of AZT because of its enhanced availability with a corresponding decrease in cost. Since protease inhibitors are the drug of the future, and because of their present limited availability, will their subsequent use follow the pattern AZT did in 1994, with only some choice private physicians (who are treating patients with health insurance) having restricted access?

Because there is a tendency in the direction of an increase

in the future incidence of IVDU's, females and children becoming infected with HIV/AIDS, there will also be a proportional spread in Medicaid recipients. This high risk group of women, children and IVDU's will grow quickly, and more than likely will depend on public dollars partly due to their HIV status, but also on account of the fact that they are socially found to be in need, and are already receiving governmental assistance (independent of their HIV infection.) The majority of those infected through IV drug use and heterosexual transmission are on governmental aid (AFDC, for women and children,) and that, coupled with the rising cost of treating their illness, indicates that Medicaid will be experiencing greater expenses in the long run, as those becoming infected will swiftly multiply.

Problems With the Current System

When determining the strategy for new policy formulation, not only is it imperative to examine the future predictions of the paths of changing variables, but additionally, it is crucial to evaluate, scrutinize and correct the immediate inconsistencies into positive, working results. Some of the current significant shortcomings with Medicaid's reimbursement for HIV/AIDS treatment, is how it hinders the ability to provide adequate and proper treatment for the patients who are receiving care.

Patients receiving Medicaid funding use clinics more frequently than those patients with private health insurance. The primary reason why some private care physicians refuse to

treat Medicaid recipients is a result of the inadequate amounts Medicaid reimburses. "Many physicians decline to participate in state Medicaid programs. . .thus contributing to AIDS patients' reliance on hospital clinics," (Crystal, p.130.) This is true across the board, not just for AIDS patients, but for the majority of patients on public assistance. This in turn, creates an unnecessary stigma, specifically for HIV/AIDS patients in search of treatment. I do believe that any physician is entitled to refuse treatment to whomever he pleases, because for some, "institutions that provide care for large numbers of HIV patients often experience severe financial losses which sometimes threatens their survival," (Crystal, p.135.) Yet when the quality of care is sacrificed (including lessening the accessibility and availability of certain medications that cease the spread of the disease,) I think that public assisted programs may need to be revamped to include higher reimbursement rates, and to even consider for what specific treatment (and at what occasion,) they will provide funding.

There is another similar obstacle created with Medicaid's low reimbursement rates--the fact that some medication used for HIV/AIDS treatment is not being compensated by Medicaid funds. There appears to be a limited number of drugs able to obtain Medicaid reimbursement in some states. "Low Medicaid payment levels for HIV-related drugs coupled with the high inventory costs of these expensive drugs often times discourages pharmacies from stocking and dispensing the medication," (Michigan Medicine, p.24.)

It has been shown that Medicaid is the primary source of funding for HIV/AIDS treatment, and it likewise follows that outpatient treatment (with AZT and protease inhibitors,) is gradually increasing, which raises a concern for the patients in need, and makes me wonder if there isn't a way in which a policy can correspondingly expand the accessibility for such medications.

There is a further problem with the present Medicaid system-- that of eligibility. This is not currently an imminent obstacle, but it has the potential of proving otherwise in the near future. HIV patients who qualify for Medicaid do so based on their physical disability status instead of financial need, and actually become eligible at diagnosis, when the beginning symptoms of AIDS emerge. The drugs they receive (usually AZT, if fortunate enough to acquire it,) stave off the symptoms of AIDS-- those which make the patient eligible initially--leaving them indeed without symptoms for some time, but furthermore, without insurance, as they quickly become ineligible due to their present "healthy" status. This is not creating much difficulty today because the majority of patients who qualify on disability status alone (usually male homosexuals,) have already lost any accumulated life savings, and subsequently become eligible for Medicaid based on financial status. However, with new drugs available to suffocate the symptoms of HIV/AIDS, it may be possible that patients who are recently diagnosed will be able to receive treatment immediately, without suffering the depletion of their lifetime savings as they did before, while paying for

palliative treatment instead of effective drug combination therapy.

There is another hindrance created by the current Medicaid eligibility system. AZT and the newly invented protease inhibitors improve the quality, in addition to expanding life, giving rise to the reasoning that the patients taking such drugs can feasibly be able to return to work once they regain their strength. Placing such people back into the work force is quite beneficial to society, not to mention the benefits of improving the spirits and mentality of the patient, yet what becomes of their insurance status? Even if patients are physically able to return to work, will they, at risk of losing their Medicaid insurance?! If one does go back to work, it is doubtful that health insurance will be a covered benefit to an AIDS patient in "remission." With the future being especially uncertain (not knowing if the drugs will have a lasting effect, or even if there are other undiscovered treatments found in the near future to cure AIDS,) it may be more important to have the limited medical coverage provided by Medicaid (while not working,) than it would be to have none at all, or even risk coverage by going back to work. These practical questions and ideas are imperative for HIV/AIDS patients to address before deciding whether or not to return to work.

Because all these problems have the potential to increase in intensity and frequency in the near future, some changes need to occur with the current insurance system to accommodate impending trends. If survival rates continue to increase for patients with

HIV/AIDS, the lifetime cost of treating these patients will likewise rise, (Hellinger, (B) p.216.) As the trends suggest, with the growing number of IVDU's, women, and children becoming infected, a proportional increase in those receiving aid from public assisted health insurance programs, will also occur (Solomon, p.462.)

With the treatment trend being to delay the onset of AIDS (with protease inhibitors,) the drug availability may increase in the near future, causing a decrease in price, in turn making them affordable to more patients. This will then have the affect of expanding what is covered by Medicaid.

In order to stay ahead of the disease (or to merely keep up, as is the case for Medicaid,) it is vital to follow the trends and adapt to what they propose. To correct all of the problems and inconsistencies generated by the current plan, as well as accommodate the trends exhibited, the existing Medicaid reimbursement system needs to be revamped. Because the most critical issue when dealing with HIV/AIDS cases is the amount of Medicaid reimbursement, coupled with the fact that future cases are going to require more outpatient treatment with AZT and protease inhibitors, these areas prove to be the most vital on which to focus attention.

PROPOSED POLICY

I propose that as a policy, the state and federal governments eliminate their direct role in funding, and allow

certain private health carriers to cover the expenses of HIV/AIDS treatment while the government merely subsidizes their premiums. With the new development in drug treatment, which indeed could be quite expensive, paying premiums may potentially be the less costly route for the government in the long run, in light of the fact that patients treating with protease inhibitors would be receiving treatment anywhere from 6 months to a year (at the beginning,) and then be reaping the benefits (of no treatment) which conceivably, could be a lifelong event! Knowing these drugs are extremely high-priced today, it is questionable whether such cost is more than the endless months of inpatient treatment experienced by patients years ago? Probably not immediately, especially because these protease inhibitors are yet to be approved and marketed. However in the future, the costs may be lower than in the past, making it more difficult for the private health carriers to refuse such a merger.

Having the government pay the premiums for those eligible for public assistance is the trend of the future. Recently, the government has adopted this approach for private health carriers enabling them to resume reimbursement for Medicare and Medicaid patients. Even though this is a recent practice, it could be studied for success rates and methods of execution to decide if this procedure proves to be a beneficial consolidation. There will still have to be a process to determine if a patient would be eligible for funding, (specific to AIDS patients,) along with what should be reimbursed, and at what amounts, subject to provisions of the health carrier's plan. The premium paid by the

government would be an agreed upon amount, which even if at a lesser rate than the usual health care charge, could still be subject to a deductible or co-pays, if necessary, to reduce the charge further.

This is advantageous in many ways to the providers and the patients alike. The providers presumably will be receiving higher amounts of money for the treatment rendered, making them more willing to administer care. For the HIV/AIDS patient, this would broaden the number of physicians accepting the treating of their cases, in turn expanding the accessibility of the most current drugs available for treatment, increasing the likelihood of the actual receipt of the drugs with adequate, improved prescription coverage.

By having the government pay private health care premiums for AIDS patients, the majority of the current problems with the system will eventually be taken into account, while the indicators of future trends are simultaneously acknowledged and followed. Knowing that Medicaid is paying for the greater amount of the costs of HIV/AIDS treatment, which will more than likely follow in the future, (especially with the numbers of infected IVDU's, women and children on the rise,) I am not certain that paying the proposed premiums will initially be less expensive for the state governments, but the coverage afforded through the private health carriers will certainly be an improvement for those patients in need of assistance. A change in policy of this magnitude will ensure that the patients, at least, will benefit immensely, as previously stated. The availability of drugs used

for treatment will be more readily accessible for the patients. Their new physicians (rather than clinics) will be informed of modern, approved remedies sooner and will be able to provide or know where to refer the patients for such treatment, which is an improvement from the current system.

There are many questions regarding the implementation of this policy which I am unable to answer. It is also possible that my recommendation is vague and inconceivable. Yet I am confident that the trends I uncovered are imminent and will be rapidly expanding before long, leaving those infected in need of assistance to seek and obtain proper medical help. Even though Medicaid will not run out of funds to pay for treatment, they represent the inadequacy in health care today. Because of the problems AIDS reveals, there are new ideas for solutions which are continuously emerging. It is hoped that when a nation-wide health care policy is finally completed, medical funding for AIDS patients will be one of the essential elements, coupled with a policy which considers funding for their imperative treatment.

REFERENCES

- "AIDS virus hits more lives around world." The Flint Journal 29 November 1996, pg. A5.
- Andrews, Roxanne, et al. "Longitudinal patterns of California Medicaid recipients with acquired immunodeficiency syndrome." Health Care Financing Review Winter 1991: 1-12.
- Andrulis, Dennis P., PhD., et al. "The Provision and Financing of Medical Care for AIDS Patients in US Public and Private Teaching Hospitals." JAMA Sept. 11, 1987: 1343-1347.
- Ball, Judy K., et al. "Third-Party Financing for AIDS Hospitalizations in New York." AIDS Public Policy Journal Summer 1990, Vol. 5, No. 2: 51-58.
- Begley, Charles E. and Elizabeth A. Hintz. "Cost and Financing of Hospital Care for Persons with AIDS in Texas." AIDS Public Policy Journal Summer 1990, Vol. 5, No. 2: 59-63.
- Beck, Eduard J., et al. (A) "Changing presentation and survival, service utilization and costs for AIDS patients: insights from a London referral centre." AIDS 1994, Vol. 8: 379-384.
- Beck, Eduard J., et al. (B) "Changing use of hospital services and costs at a London AIDS referral centre, 1983-1989." AIDS 1994, Vol. 8: 367-377.
- Benjamin, A.E. "Long-term Care and AIDS: Perspectives from Experience with the Elderly." The Milbank Quarterly 1988, Vol. 66, No. 3: 415-443.
- Buchanan, Robert J. PhD., and Fred G. Kircher, M.B.A., M.A.S. "Medicaid Policies for AIDS-Related Hospital Care." Health Care Financing Review Summer 1994: 33-41.
- Buchanan, Robert J., PhD., and Scott R. Smith, R.Ph., M.S.P.H. "Medicaid Policies for HIV-Related Prescription Drugs."

Health Care Financing Review Spring 1994: 43-61.

- Campbell, L. Scott, M.H.A., and W. Paul Kory, M.D., M.P.H.
"Follow-up Survey of Inpatients With AIDS and HIV Infection:
Economic Impact on Hospitals in North Carolina." Southern
Medical Journal April 1994: 446-453.
- "CDC HIV/AIDS Surveillance Report." U.S. Centers for Disease
Control and Prevention December 1997, Section 101: 1-37.
- "CDC Update: AIDS Among Women--United States, 1994." Morbidity
and Mortality Weekly Report February 10, 1995: 81-84.
- Conviser, Richard, PhD., et al. "Predicting the Effect of the
Oregon Health Plan on Medicaid Coverage for Outpatients
with HIV." American Journal of Public Health December
1994: 1994-1997.
- Conviser, Richard, PhD., et al. "Universal Health Coverage,
Rationing and HIV Care: Lessons from the Oregon Health Plan
Medicaid Reform." AIDS & Public Policy Journal Summer 1995,
Vol. 10, No. 2: 75-83.
- Crystal, Stephen. "Sources of Outpatient Care and Insurance
Status over the Course of AIDS: Implications for Health
Policy." AIDS & Public Policy Journal Fall 1994, Vol. 9,
No. 3: 129-137.
- Diaz, Theresa, M.D., M.P.H., et al. "Health Insurance Coverage
among Persons with AIDS: Results from a Multistate
Surveillance Project." American Journal of Public Health
June 1994: 1015-1018.
- "Drugs have cut Magic's virus to undetectable." The Flint
Journal 5 April 1997: D5.
- Evans, Hugh E., M.D. "Public Policy and AIDS." Clinics in
Perinatology March 1994: 29-38.
- "Fact Sheet: Children, Adolescents and Young Adults with HIV."
U.S. Centers for Disease Control and Prevention February
1998, Section 128: 1-2.

"Fact Sheet: Women with HIV." U.S. Centers for Disease Control and Prevention February 1998, Section 127: 1-2.

Fleishman, John A., and Vincent Mor. "Insurance Status Among People with AIDS: Relationships with Sociodemographic Characteristics and Service Use." Inquiry Summer 1993: 180-188.

Foster, David. "New Drugs, New Hope: Instead of waiting to die, AIDS victims are learning to live." The Flint Journal 1 December 1995: A5.

Gavzer, Bernard. "I Saw I Had A Future." Parade April 6, 1997: 4-7.

Green, Jesse, PhD., and Peter S. Arno, PhD. "The 'Medicaidization' of AIDS." JAMA Sept. 12, 1990: 1261-1266.

Green, Jesse, PhD., et al. "The \$147,000 Misunderstanding: Repercussions of Overestimating the Cost of AIDS." Journal of Health Politics, Policy and Law Spring 1994: 68-90.

Goldsmith, Marsha F. "Costs of HIV/AIDS Rise, Care Disparities Increase." JAMA Sept. 9, 1992: 1246.

Gorman, Christine. "The Exorcists." Time--Special Issue: The Frontiers of Medicine. Fall 1996: 64-66.

Haney, Daniel Q. "AIDS fighters take some cheer from results of new drug 'cocktail'." The Flint Journal 1 December 1996: A5.

Hay, Joel W. and Kenneth W. Kizer. "Medi-Cal Expenditures for Persons with AIDS." AIDS & Public Policy Journal Summer 1993, Vol. 8, No.2: 91-102.

Hellinger, Fred J. (A) "Forecasting the Medical Care Costs of the HIV Epidemic: 1991-1994." Inquiry 1991, Vol. 28: 213-225.

Hellinger, Fred J. (B) "Forecasts of the Costs of Medical Care for Persons with HIV: 1992-1995." Inquiry 1992, Vol. 29: 356-365.

Hellinger, Fred J. (C) "The Lifetime Cost of Treating a Person With HIV." JAMA July 28, 1993: 474-478.

Henry, Vickie L. "Self-insured employers may cap health coverage for specific diseases." Law, Medicine & Health Care Winter 1992: 410-412.

Hiatt, Robert A. MD, PhD., et al. "The Cost of Acquired Immunodeficiency Syndrome in Northern California." Archives of Internal Medicine April 1990: 833-838.

"HIV-Infected Patients May Not Get Needed Medicines." Michigan Medicine February 1995: 24.

"HIV-Related deaths up for women; drug found to block AIDS infection." The Flint Journal 6 May 1997: C4.

Holmberg, Scott D., MD, MPH. "The Estimated Prevalence and Incidence of HIV in 96 Large US Metropolitan Areas." American Journal of Public Health May 1996: 642-654.

Japsen, Bruce. "AIDS-care plan to reduce costs." Modern Healthcare August 1, 1994: 13.

Kass, Nancy E., et al. "Loss of Private Health Insurance Among Homosexual Men with AIDS." Inquiry 1991, Vol. 28: 249-254.

Keyes, Margaret A., et al. "Ambulatory Care Trends for Medicaid Beneficiaries with AIDS in New York State, 1983-1990." AIDS & Public Policy Journal Fall 1993, Vol. 8, No. 3: 142-150.

Lynch, Catherine A. "Medicaid-Funded Primary Prophylaxis for Pneumocystis Carinii Pneumonia: Cost-Benefit and Break-Even Analysis." AIDS & Public Policy Journal Winter 1992, Vol. 7, No. 4: 209-215.

Markson, Leona E., ScD., et al. "Patterns of Medicaid Expenditures After AIDS Diagnosis." Health Care Financing Review Summer 1994: 43-59.

Mattson, Marcia and Catherine Kaza. "Area AIDS cases remain

below predicted levels." The Flint Journal 22 September 1996: A1.

Mauskopf, Josephine, et al. "Patterns of Ambulatory Care for AIDS Patients, and Association with Emergency Room Use." Health Services Research 1994, Vol. 29, No. 4: 489-510.

Merzel, Cheryl, et al. "New Jersey's Medicaid waiver for acquired immunodeficiency syndrome." Health Care Financing Review 1992, Vol. 13, No. 3: 27-42.

Metrikin, Aaron S., et al. "Is HIV/AIDS a primary-care disease? Appropriate levels of outpatient care for patients with HIV/AIDS." AIDS 1995 Vol. 9: 619-623.

Meyer, S. L., et al. "Economics and the treatment of AIDS: a preliminary assessment." Applied Economics 1994 Vol. 26: 1093-1098.

Michaels, David, PhD., MPH and Carol Levine, MA. "Estimates of the Number of Motherless Youth Orphaned by AIDS in the United States." JAMA December 23-30, 1992: 3456-3461.

Neal, Joyce J. et, al. "Trends in Heterosexually Acquired AIDS in the U.S., 1988 through 1995." Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology May 1 1997: 465-474.

Penslar, Robin Levine. "Who Pays for AZT?" Hastings Center Report Sept/Oct 1989: 30-31.

Roper, William L. MD, and William Winkenwerder, MD. "Making Fair Decisions About Financing Care for Persons with AIDS." Public Health Reports May-June 1988: 305-308.

Scherzer, Mark. "After McGann: Policy Implications of the Decision Authorizing Discriminatory Benefit Caps for Treatment of AIDS." AIDS & Public Policy Journal Summer 1992, Vol. 7, No. 2: 96-98.

Scitovsky, Anne A. "Studying the Cost of HIV-Related Illnesses: Reflections on the Moving Target." The Milbank Quarterly 1990, Vol. 67, No. 2: 318-343.

- Shay, Edward F. "Discrimination in Health Benefits: ERISA and Beyond." AIDS & Public Policy Journal Vol. 7, No. 2: 92-95.
- Shilts, Randy. And the Band Played On New York: St. Martin's Press, 1987.
- Simon, Paul A., et al. "Income and AIDS rates in Los Angeles County." AIDS 1995 Vol. 9: 281-284.
- Solomon, David J., PhD., and Andrew J. Hogan, PhD. "HIV Infection Treatment Costs Under Medicaid in Michigan." Public Health Reports July-August 1992: 461-468.
- Solomon, Liza, DrPH., et al. "Utilization of Health Services in a Cohort of Intravenous Drug Users with Known HIV-1 Serostatus." American Journal of Public Health October 1991: 1285-1289.
- Turner, Ronald. "AIDS, the Americans with Disabilities Act, and Disability-Based Insurance Distinctions." AIDS & Public Policy Journal Winter 1993, Vol. 8, No. 4: 177-180.
- Turner, Ronald. "ERISA and Employer Capping of Medical Benefits for Treatment of AIDS and Related Illnesses." AIDS & Public Policy Journal Summer 1992, Vol. 7, No. 2: 89-91.
- Valdiserri, Ronald O., M.D., M.P.H., et al. "Clients Without Health Insurance at Publicly Funded HIV Counseling and Testing Sites: Implications for Early Intervention." Public Health Reports January-February 1995: 47-52.
- Wade, Martcia, PhD., and Stacy Berg, A.B. "Causes of Medicaid Expenditure Growth." Health Care Financing Review Spring 1995: 11-25.
- Walter, Heather J., et al. "Factors Associated with AIDS Risk Behaviors among High School Students in an AIDS Epicenter." American Journal of Public Health April 1992: 528-531.
- Weissmann, Joel S., PhD., et al. "Changes in Insurance Status and Access to Care for Persons with AIDS in the Boston Health Study." American Journal of Public Health December

1994: 1997-2000.

Wortley, Pascale M., M.D., PhD. and Patricia L. Fleming,
PhD. "AIDS in Women in the United States." JAMA September
17, 1997: 911-916.

"Youth and HIV/AIDS: An American Agenda." U.S. Centers for
Disease Control and Prevention April 1996, Section 105: 1-
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