Adoption of Zidovudine in Clinical Practice: Differences Between Specialists and Generalists

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In 1987, zidovudine (also referred to as AZT) was the first antiretroviral therapy approved by the Food and Drug Administration (FDA) for persons with the human immunodeficiency virus, type 1 (HIV). Zidovudine therapy has been shown to improve survival for persons with symptomatic HIV infection and to delay progression of HIV disease, although the benefits of using the drug prior to the onset of symptomatic disease are currently in question. Approval of this exciting new drug by the FDA did not guarantee the rapid adoption of the drug in clinical practice.

To evaluate the diffusion into practice of AZT, we analyzed receipt of zidovudine therapy from April 1987 through March 1990 for 3,643 patients diagnosed with the acquired immunodeficiency syndrome (AIDS), using New York State (NYS) Medicaid data. All patients in the sample were continuously enrolled on Medicaid during the first six months after AIDS diagnosis, and we examined receipt of zidovudine therapy during this time period. Zidovudine is provided free of charge to all NYS Medicaid enrollees with a valid prescription for the drug. Differential rates of receiving the drug were examined by type of dominant provider who delivered most of the patient's ambulatory care.

In 1987, 55% of patients with an AIDS specialist dominant provider received zidovudine therapy, in contrast to only 36% of patients followed in primary care clinics. AIDS specialist providers were defined as clinics and physicians specializing in infectious disease, hematology, or oncology as well as medical clinics in designated AIDS centers. However, when patients followed in primary care clinics had at least one consult with an AIDS specialist, the odds of receiving the drug did not differ significantly from the receipt of zidovudine observed among patients followed by AIDS specialists. Three years after FDA approval, in 1990, that the percentage of patients receiving zidovudine (77% to 78%) was comparable for patients of primary care clinics and AIDS specialists.

During the time frame of our study, providers had a choice of either offering AIDS patients a new drug, zidovudine, or no antiretroviral therapy at all. We did not have data on why specialists were associated with an earlier adoption of zidovudine therapy in our NYS Medicaid population. However, this study raises serious concerns about differential patterns of drug adoption that may occur between generalists and specialists. Under many managed care arrangements, generalists are placed in a "gatekeeper" role and have disincentives to refer patients for specialist consultation. This model of care may limit access to useful therapies for persons with AIDS and perhaps other patients with conditions that have rapidly changing treatment approaches. Collaboration among generalists and specialists may be necessary for generalists to keep abreast of the appropriate use of new therapies.

This study reports on the adoption of zidovudine in one state Medicaid program. Additional studies should focus on whether differential patterns of drug adoption among specialists and generalists are occurring in other locations and for other therapies. The patient and provider factors that influence drug adoption also need to be better understood.
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References


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