AIDS Antibody Testing and Health Insurance Underwriting: A Paradigmatic Inquiry

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NOTE

AIDS Antibody Testing and Health Insurance Underwriting: A Paradigmatic Inquiry

I. The Relationship Between AIDS and the Insurance Industry

A. Introduction

The incidence of AIDS (Aquired Immune Deficiency Syndrome) in the United States has engendered a response not seen since the polio epidemic of the 1940s. The disease is poorly understood and the fear of contagion is pervasive. Although efforts to prevail over the disease are unified in purpose, there is sharp division over who should bear the costs associated with the disease.

By the end of 1991, the U.S. Public Health Service (USPHS) estimates that the cumulative number of AIDS cases in America will be more than 270,000.1 Twenty to thirty percent of these cases will come from the one to one and one half million Americans presently infected with the “AIDS virus.”2 The USPHS conservatively estimates that the direct health care costs associated with AIDS in 1991 will be approximately 8 billion dollars, representing 1.2 to 2.4 percent of the expected total health care expenditures in 1991.3 Private health insurers assert that their financial solvency is threatened by the economic impact of AIDS, and, thus, they must be permitted to use currently available screening tests to exclude from coverage those persons diagnosed or those who could be diagnosed as having AIDS.4

Much of the criticism against health insurer’s use of AIDS antibody testing centers on the test’s discriminatory effect.5 A less publicized, yet equally compelling, argument against testing also exists. AIDS antibody testing by health insurers highlights the increasing problem of uninsurability in America and calls into question the propriety of using blood testing to screen insurance applicants for diseases less notorious than AIDS.6

2. Id. at 342.
3. Id. at 348. The $8 billion figure is based on a projection of 71,000 present AIDS patients being alive in 1991 and 74,000 new cases by that date. An additional 29,000 cases were added to account for 20% underreporting of the cases. The cost per patient is calculated at $46,000. Id. This cost per patient has been disputed. One widely publicized article estimated hospitalization costs of approximately $147,000 per case. Hardy, Rauch, Echenberg, Morgan, Curran, The Economic Impact of the First 10,000 Cases of Acquired Immunodeficiency Syndrome in the United States, 255 J. A.M.A. 209, 210 (1986); see also Scitovsky & Rice, Estimates of the Direct and Indirect Costs of Acquired Immunodeficiency Syndrome in the United States, 1985, 1986 and 1991, 102 PUB. HEALTH REP. 5 (1987) [hereinafter Scitovsky] (predicting that, by 1991, only medical expenses of victims of automobile accidents will exceed the medical costs of AIDS patients). See also Fox & Thomas, AIDS Cost Analysis and Social Policy, 15 LAW, MED. & HEALTH CARE 186, 207 (1987/88).
5. Critics argue that testing gives insurers an inexpensive and easy means to practice sexual orientation discrimination while avoiding the administrative complexities of attempting to identify the relatively “invisible” homosexual person from the rest of the population. See Schatz, The AIDS Insurance Crisis: Underwriting or Overreaching?, 100 HARV. L. REV. 1782, 1791 (1987) [hereinafter Schatz]; Pear, Study Finds Most Health Insurers Screen Applicants for AIDS Virus, N.Y. Times, Feb. 18, 1988, at 1, col. 2.
6. See Schatz, supra note 5, at 1798; see also infra notes 70–71 and accompanying text.
This Comment will examine the latter issue from the perspective of the health insurance industry and from that of "AIDS testing" opponents. The purpose of this Comment is to evaluate the justifications for such testing in an objective manner which provides a methodology for the evaluation of future, non-AIDS related insurance screening. The twin goals of efficient risk classification and fair risk distribution traditionally have been used to assess the justification for other forms of insurance risk classifications. Therefore, AIDS antibody testing by health insurers will be measured against these goals. Before turning to this analysis, an overview of AIDS and AIDS antibody testing is necessary for a complete understanding of the issues.

B. AIDS and AIDS Antibody Testing

A wealth of information exists on the "AIDS virus" and its methods of transmission; this Comment will review, only briefly, the way the disease is spread and will focus on AIDS antibody testing.

AIDS is the clinical manifestation of a dysfunction of the human immune system caused by the Human Immunodeficiency Virus (HIV). The virus is blood-borne and is transmitted through an exchange of body fluids (typically during sexual intercourse) or through the use of contaminated blood or blood products. Once present in the body, the virus, by a process of genetic transcription, infects the body's T-4 lymphocytes, a group of white blood cells responsible for triggering an immune response to certain organisms commonly present in large portions of the population. Once established in the immune system, HIV may remain dormant for months or years before it begins to divide and overwhelm the T-4 lymphocytes. Once these lymphocytes are destroyed, the immune system fails and the body is defenseless against opportunistic infections; death is inevitable.

When a foreign substance or antigen, such as HIV, enters the body, the B-cells


8. See infra notes 73-77 and accompanying text.


10. Human Immunodeficiency Virus (HIV) is the internationally recognized name for the virus believed to cause AIDS. It is also known as HTLV-III (human T-lymphotropic virus type III) and LAV (lymphadenopathy associated virus). This Comment will employ the HIV convention. See Vogel, Discrimination on the Basis of HIV Infection: An Economic Analysis, 49 OHIO ST. L.J. 965, 967 n.18 (1989).

11. Closen, Connor, Kaufman & Wojcik, AIDS: Testing Democracy—Irrational Responses to the Public Health Crisis and the Need for Privacy in Serologic Testing, 19 J. MARSHALL L. REV. 835, 864-71 (1986) [hereinafter Closen]; Leonard II, supra note 7, at 17. HIV has been detected in tears and saliva although no transmission from these fluids has been reported. The sharing of hypodermic needles by intravenous drug abusers accounts for 25% of the cases. Coolfont Report, supra note 1, at 343. The transmission of the virus by tainted blood products is anticipated to decrease because of screening procedures currently in place. See id. at 344. HIV may also be passed to infants prenatally or during the birth process. Estimates suggest that more than 3,000 cases will be diagnosed in infants and children by 1991. Id. at 343; Leonard II, supra note 7, at 17; EMPLOYMENT TESTING, supra note 7, at A:3.


14. Id. at 18-19; EMPLOYMENT TESTING, supra note 7, at A:2.
of the immune system respond defensively by producing a specific antibody to the antigen. The antibodies, in addition to attacking the antigen, "memorize" this response to the antigen. This memorization process, called seroconversion, is inferential evidence of exposure to the virus.  

In 1985, a blood test became available that can identify the antibody produced in response to the "AIDS virus." Enzyme-linked immunosorbent assay (ELISA) was originally licensed by the Food and Drug Administration to screen donated blood. Because of its ten to fifteen percent inaccuracy rate, it is recommended that a positive ELISA test be confirmed by the Western blot technique, currently the most accurate and most expensive test available.

A true positive (seropositive) test result can indicate one of two things. First, the individual may have been exposed to the "AIDS virus" and successfully repelled it, with the antibodies remaining "in memory." As is true with other viruses, the body may confine the virus to the lymphatic system, the primary site of the immune cells. This individual may experience transitory enlargement of the lymph nodes, but probably will not develop the full syndrome associated with AIDS. Alternatively, a seropositive test result can indicate that there has been exposure to the "AIDS virus" and both antibodies and antigens are circulating in the bloodstream. In this case, the individual carries the live virus (antigen) and can transmit it. It is probable that at some point, the individual may have or may develop AIDS or AIDS Related Complex.

Despite its high level of inaccurate results, the ELISA test has been adopted by private employers and the federal government in an attempt to exclude seropositive individuals from the workplace. In addition, insurance companies have seized upon AIDS antibody testing as a means to evaluate availability of health and life insurance coverage to seropositive individuals.

The use of the ELISA test by health insurers to deny coverage is problematic for several reasons. First, the high incidence of false positive results casts doubt upon the test's medical reliability, especially because not all insurance companies use the Western blot technique to confirm a positive result. Second, a negative antibody test result can indicate one of two things. First, the individual may have been exposed to the "AIDS virus" but failed to mount a response, with the antibodies remaining "in memory." As is true with other viruses, the body may confine the virus to the lymphatic system, the primary site of the immune cells. This individual may experience transitory enlargement of the lymph nodes, but probably will not develop the full syndrome associated with AIDS. Alternatively, a negative antibody test result can indicate that there has been exposure to the "AIDS virus" and both antibodies and antigens are circulating in the bloodstream. In this case, the individual carries the live virus (antigen) and can transmit it. It is probable that at some point, the individual may have or may develop AIDS or AIDS Related Complex.

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15. Closen, supra note 11, at 860, 861.
16. Leonard II, supra note 7, at 11.
17. ELISA was intended as a screening test; it has no prognostic or predictive value. Employment Testing, supra note 7, at A:5.
18. Id.
19. Closen, supra note 11, at 860. Although this scenario is theoretically possible, studies have shown that a copy of the viral genetic material becomes an integral and permanent component of the DNA of an infected individual. Thus, such an individual is likely to be a carrier for life and is assumed to be capable of transmitting the virus. Coolfont Report, supra note 1, at 342; Employment Testing, supra note 7, at A:5.
20. Employment Testing, supra note 7, at A:5; Closen, supra note 11, at 860. ARC is a diagnostic set of symptomatology that includes fever, night sweats, weight loss, diarrhea, and fatigue. Persons with ARC may progress to AIDS although this is not a certainty. Closen, supra note 11, at 860.
22. Employment Testing, supra note 7, at A:5. This Comment focuses on the use of AIDS antibody testing by health insurers to exclude individuals from health care coverage. The use of the test by life insurers raises some similar issues but is beyond the scope of this Comment; see, e.g., Life Insurers Terrified by AIDS: Schweiker, 91 Nat'l Underwriter, Apr. 13, 1987, at 5 (Life Health/Financial Services ed.).
23. See supra note 18 and accompanying text; see also Schutz, supra note 5, at 1782 n.25, 1784. False positives have been associated with hepatitis, alcoholic liver disease, kidney dialysis, syphilis, and with particular manufacturers.
test does not rule out exposure to the virus. The individual may have been exposed and not yet seroconverted, or the individual’s antibody levels may have dropped to undetectable levels.24

Even assuming a seropositive test result, the predictive value of the ELISA test for morbidity and mortality is not yet established. The risk of developing AIDS after exposure to HIV is a subject of debate. Some researchers estimate that the risk of developing AIDS after exposure to HIV is one to ten percent, and twenty to forty percent for developing ARC.25 The Center for Disease Control (CDC) estimates that twenty to thirty percent of individuals who test seropositive will develop AIDS over the next five years, and another twenty-five percent of those who test seropositive will develop ARC within two to five years.26 With such uncertainty attendant to the ELISA test, an exclusion of health care coverage on the basis of a seropositive test result is speculative and inequitable.

C. The Debate

That AIDS and ARC will result in significant health care expenditures in the future is beyond dispute; because of the United States’s reliance on privately funded health insurance, private insurers and insureds will bear these costs. The health insurance industry takes the position that these anticipated high losses justify the use of AIDS antibody testing in an effort to limit the costs and protect the economic stability of the health insurance industry.27

However, legislation recently enacted in several states forbids AIDS antibody testing by insurers.28 Such bans on testing evidence concern for the test’s inaccuracy, for its potentially discriminatory effect, and for its confidentiality problems. Insurers respond that any prohibition on testing would represent an “unprecedented departure from an insurer’s [sic] traditional ability to underwrite with access to all pertinent medical information.”29 Hinderin an insurer’s ability to assess risk is said to “[undercut] the industry’s financial stability and [compromise] its ability to pay

See Letter, False-positive HIV Antibody Tests in RPR-Reactive Patients, 260 J.A.M.A. 923 (1988); see also Fleming, Coch, Stocce & Hull, Acquired Immunodeficiency Syndrome in Low-Incidence Areas, 258 J.A.M.A. 785, 787 (1987). The insurance industry refutes the unreliability argument. The industry states that insurers commonly administer a follow-up ELISA, and if positive, a Western blot. This triple testing is said to produce a 99.9% reliability. Clifford, supra note 4, at 1812, 1812 n.36. A recent study using civilian applicants for U.S. Military service concluded that ELISA can have an acceptably low false positive rate. The statistical method used, however, does not withstand close scrutiny. Therefore, this finding is of doubtful significance. See Burke, et al., Measurement of the False Positive Rate in a Screening Program for Human Immunodeficiency Virus Infections, 319 New Eng. J. Med. 961 (1988).


25. Closen, supra note 11, at 860.

26. See Clifford, supra note 4, at 1813. In terms of medical costs, ARC is roughly equivalent to AIDS. Hough, supra note 24, at 3.


AIDS TESTING AND INSURANCE UNDERWRITING

future claims." The inability to classify individuals based on seropositivity causes adverse selection and undermines the financial well-being of the health insurance industry.

Adverse selection is the process by which high risk individuals tend to purchase more coverage than they would if the price accurately reflected the risk, resulting in an unfair subsidization in coverage of the high risk group by the low risk population. An information imbalance exists, with the insured in a position superior to the insurer. The fear is that "through inadequate rates, large insurance purchases by high-risk individuals, or perhaps the withdrawal of standard risks from the market," the insurer faces eventual financial ruin.

In the health insurance field, insurers normally protect themselves from the effects of adverse selection by the use of a "pre-existing condition" clause in the insurance policy. Pre-existing condition clauses limit or exclude benefits for an injury or illness that existed during a specified period of time prior to a person's becoming insured. A positive AIDS antibody test taken before the commencement of coverage would trigger a pre-existing condition exclusion. However, due to the lengthy AIDS latency period, the protection normally afforded an insurer through these clauses is diminished substantially. The deleterious effect of adverse selection, although more commonly encountered in the life insurance area, is a valid concern for health insurers.

Insurers also argue that restrictions on testing would constitute "unfair discrimination." Unfair discrimination is an insurance industry concept which can be understood best by examining its obverse, "fair discrimination." Fair discrimination in the insurance underwriting context requires insurers to segregate insureds into classes of "like risk and exposure," and to charge "a premium commensurate with the risk and exposure." The industry asserts that persons who have been infected by the "AIDS virus" are not of the same class and risk as those who have not been infected. To include them in the group of nonexposed would violate the underlying concept that

30. Clifford, supra note 4, at 1815.
32. Hammond, supra note 31, at 151. The problem of adverse selection is relevant to group insurance plans, but is treated differently. High risk individuals cannot purchase increased coverage and low risk individuals usually cannot leave the plan because group insurance, commonly provided through an employer, is usually involuntary. See J. Cummins, B. Smith, R. Vance & J. Vanderheil, Risk Classification in Life Insurance 89 (1983) [hereinafter Cummins].
33. See Clifford, supra note 4, at 1819-20.
34. See id. at 1820.
35. See id. Usually, these clauses limit or exclude benefits for an injury or sickness that existed three to six months before becoming insured. Id. at 1819.
38. See Clifford, supra note 4, at 1815. See also Hoffman, supra note 4, at 719.
each insured pay according to what he or she receives rather than being subsidized by others. Accordingly, state statutes codifying the unfair discrimination doctrine are said to impose an affirmative duty on health insurers to segregate insureds with identifiable, serious health risks.

This statutory interpretation has been challenged by at least one critic, who argues against any implied legislative encouragement of the use of classifiers. First, the wording and history of typical unfair discrimination statutes demonstrate an intent to treat insureds equally, rather than an intent to develop and use more refined classifications. Second, recent case law, although scant, suggests that statistical association with loss need not be the sole basis for assessing the validity of a particular classification. Other factors, such as "causality, reliability, social acceptability, [and] incentive value" are relevant. For example, in 1981, the Massachusetts Supreme Court affirmed the state insurance commissioner's decision to allocate the losses in the state motor vehicle reinsurance pool among all state insureds rather than fixing rates solely on the experience of the insureds within the pool. The court recognized that the policy of ensuring the availability of motor vehicle insurance to all, including high risk drivers, was an element to be considered in assessing the fairness of the underwriting scheme. Such public policy concerns are particularly relevant in the area of health insurance and must be factored into any analysis of the unfair discrimination argument posited by insurers. One of the primary arguments against the use of the ELISA test as a health insurance classifier is the concern that a large segment of the population will suffer the effects of uninsurability because of a positive AIDS

41. See Clifford, supra note 4, at 1811; Wortham I, supra note 39, at 381.
42. See Wortham I, supra note 39, at 381.
43. Id. at 381–83. Unfair discrimination statutes date back to the 1800s. The statutes initially were aimed at eroding the prevalence of rebating. Rebating was a practice whereby the person selling the insurance offered to rebate a portion of the sales commission to potential insureds as an inducement to the sale. Id. at 384–86.
44. There is little case law interpreting unfair discrimination statutes and the principles underlying them and few of these cases delve into statutory interpretation. The most helpful decisions in this area are from Massachusetts and Pennsylvania. See Wortham I, supra note 39, at 387; Hoffman, supra note 4, at 719.
45. See Wortham I, supra note 39, at 387–92.
46. Hartford Accident & Indem. Co. v. Insurance Comm'r, 505 Pa. 571, 585, 482 A.2d 542, 548 (1984) (quoting the National Association of Insurance Commissioners Task Force Report on automobile rating). In a 5-2 decision, the Hartford court held that the Pennsylvania Constitution's clear and unqualified prohibition of discrimination based on gender could not be a basis for insurance commissioner's disapproval of automobile insurer's sex based rates on the ground that they were unfair and contrary to public policy.
antibody test. Denying the large group of seropositive individuals access to health insurance on the basis that a small number of those individuals may suffer from AIDS or ARC is inequitable.

Insurers agree that the use of AIDS antibody testing will operate to deny health insurance coverage to "some high-risk applicants," but they believe this effect will be mitigated by industry practice and federal law. Insurers would perform testing for the "AIDS virus" only for new applications of individual coverage or for small group insureds, typically less than twenty employees. Thus, the majority of Americans currently covered by health insurance, those covered by some form of group insurance, would not be subject to testing. In addition, federal law provides that employers with twenty or more employees must continue health care coverage for up to eighteen months for employees who are terminated or who have their working hours reduced. It is argued that because most AIDS patients die within two years of the onset of symptomatology, they will continue to be covered by their employer's group health insurance, even if they are terminated. Insurers also have encouraged an expanded use of state pools for uninsurables as a way to fill the gap left by their testing procedures. Finally, the federal "safety nets" of Medicare, Medicaid, and Social Security Disability Insurance will provide some degree of coverage to individuals eligible under these programs.

This reasoning by the insurers is flawed in several respects. First, there is no guarantee that seropositive individuals will be insulated by the pervasiveness of group health insurance. In fact, because the majority of group health insurance plans are provided through employment, pre-employment antibody testing could indirectly result in denial of health care coverage by obviating the necessary prerequisite of employment. Of even greater concern is the growing trend toward "self-insurance"
by American businesses. It is estimated that as many as fifty percent of the firms in
the United States are now self-insured either in part or in full. Self-insured firms are
free from state insurance regulations and maintain complete control over what
medical benefits and coverages are included in their insurance plans. Specifically,
there is nothing to prevent a self-insured employer from limiting its coverage of
certain high cost medical conditions, with AIDS being only one example.

Second, the high risk pools for uninsurables mentioned as an alternative to
individual health care coverage provide little protection. At the present time, only
eleven of the fifty states have high risk insurance pools. Moreover, often the
premiums for such pools are 150 percent above the normal rate, making coverage
by high risk pools prohibitively expensive. In addition, employers operating with
self-insured plans may elect not to participate in risk pools. This could hasten the
trend toward self-insurance, thereby exacerbating the effect of uninsurability.

Third, studies have estimated that Medicare currently covers the medical
expenses of only one to three percent of patients with AIDS. To be eligible for
Medicare, one must be over sixty-five or survive a two year waiting period. The
majority of persons with AIDS are between twenty and forty-nine years of age;
the median survival time is estimated to be twelve months. Medicaid pays for the care
of twelve to sixty-five percent of AIDS patients and requires the individual to "spend
down" his or her resources to qualify for coverage. These federal programs cover
only five to nineteen percent of the seropositive individuals who eventually develop
AIDS. Individuals with a diagnosis of ARC do not qualify for coverage, and these
programs do nothing to provide coverage for non-AIDS related health care costs.

1987 poll taken by The Wall Street Journal and NBC News indicates that 42% of the over 2,000 adults surveyed
nationwide support pre-employment AIDS testing. This same poll estimated the 63% of these individuals believed insurers
should be permitted to deny life or health insurance on the basis of a positive AIDS test. See Ricklefs, AIDS Cases Prompt
59. Oppenheimer, supra note 56, at 21.
60. See id.
61. Id. These states are: Connecticut, Florida, Illinois, Indiana, Iowa, Minnesota, Montana, Nebraska, North
Dakota, Tennessee, and Wisconsin. Four additional states—Maine, New Mexico, Oregon, and Washington—are establish-
ring high risk health insurance plans this year; and, at least three additional states—California, Kansas, and South
Carolina—will consider legislation this year on the same issue. Fletcher, More States Offer High-Risk Health Plans, Bus.
[hereinafter Perkins].
63. Oppenheimer, supra note 56, at 22.
(1987) [hereinafter Iglehart].
459, 463 (1986) [hereinafter Morgan].
66. Id. at 460.
67. Iglehart, supra note 64, at 181-82. In a 1986 survey by the National Association of Public Hospitals and the
Association of American Medical Colleges' Council on Teaching Hospitals, 62% of the AIDS patients relied on Medicaid
payments, while in private hospitals, this figure decreased to 35%. Hough, supra note 24, at 4, (citing Androlis, Beers,
Bentley & Gage, The Provision and Financing of Medical Care for AIDS Patients in U.S. Public and Private Teaching
Hospitals, 238 J. A.M.A. 1343 (1987)).
68. See supra note 26 and accompanying text.
69. See Congressional Hearings, supra note 29, at 354 (Statement of E. Smith, Director, Office of Eligibility
Policy, Bureau of Eligibility, Reimbursement and Coverage, Health Care Finance Administrators, Department of Health
and Human Services).
D. Analogizing the Debate

The insurance industry's arguments in support of AIDS antibody testing and the concerns relating to uninsurability are similarly applicable to other medical conditions for which predictive blood screening tests are currently available or will be available in the near future. For example, blood tests currently are available to detect changes in chromosomal structure, indicating an increased likelihood of developing cancer at some future date. It is anticipated that, as medical technology advances, similar genetic testing will be used to indicate predispositions to a variety of illnesses. A study by the Congressional Office of Technology Assessment examines the trend of predictive blood screening and provides support for concerns that the use of these tests by insurers to limit their financial risk may aggravate the well-recognized limitations in the health care system in the United States.

E. Summarizing the Debate

The tension within the debate can be summarized as economics at odds with equity. Insurers have a responsibility to protect the financial viability of their industry and they assert their well-recognized right to classify risks as a means to meet this responsibility. On the other hand, if an implicit right to adequate health care coverage is recognized, then the use of an unreliable screening test abrogates that right without providing acceptable alternatives. Resolution of this tension must begin with an inquiry into the validity of both arguments. Part II of this Comment is an attempt to initiate this analysis.

II. The Relationship Between AIDS Antibody Testing and the Goals of Insurance

A. Introduction

As suggested above, health insurers justify the use of the ELISA test as a risk classifier on two grounds: 1) given the potentially ruinous effect of adverse selection, risk classification is economically necessary; and, 2) risk classification is fair and equitable. The principal purposes served by insurance law include economic efficiency and fair risk distribution. Economic efficiency is "a measure of the degree to which particular allocations or uses of resources maximize their value."
Structuring insurance to reduce the cost of insurance and the costs of loss prevention promotes economic efficiency. Risk distribution is the spreading of costs among the policy holders as a group. The fairness of risk distribution depends upon the manner in which this distribution is accomplished and is based on societal values and norms.

The primary issue, then, is whether the economic justifications for such testing outweigh, or should be permitted to outweigh, the principle of fair risk distribution which underlies both public and private insurance in the United States. The remainder of this Comment will examine the insurance goals of economically efficient risk classification and fair risk distribution in the context of AIDS antibody testing as a risk classification scheme, assessing whether “AIDS testing” and, similar predictive screening tests by analogy, provide a proper balance between these two goals.

B. Risk Classification

The goal of risk classification is to determine the expected losses of each insured and to place insureds with similar expected losses into the same class so that each may be charged the same rate. Risk classification allows insurers to compete effectively for protection dollars by charging different rates based upon expected losses, offering lower prices to lower risk individuals. This concept assumes that purchasing insurance is only one way to protect against risk and that if insurance becomes too costly, alternative measures of self-protection will be taken, such as maintaining large emergency cash reserves. This basic assumption is flawed in the context of individual health insurance. The spiraling costs of medical care in the United States in recent years have made self-insurance a myth more than a reality. Nevertheless, classification of insureds into risk categories is said to be worthwhile when the gains from additional sales and lower payouts outweigh the costs of classification plus the costs of any lost sales.

C. Evaluating the Economic Rationale of Risk Classification

Efficient risk classification depends on two factors. First, it should accurately reflect differences among classes in expected losses. Second, it should create loss prevention incentives on the part of insureds. Accuracy can be evaluated by examining the separation variable and the reliability variable of the risk classifier. The incentive value of a risk classification can be measured by the degree to which the classification is based on variables within the insured’s control.

76. See id. at 11.
77. See id.
78. Id. at 68.
79. Id. at 67.
80. See id.
81. Wortham I, supra note 39, at 352, 353.
82. Abraham, supra note 31, at 67.
83. Id. at 79.
84. See id. at 69-71.
85. See id. at 71.
1. The Separation Variable

The separation variable measures the degree to which insureds in different classes will experience different expected losses. The difference between the expected losses should be significant enough to warrant charging different premiums. As the overlap in expected losses increases between the various groups, the economic justification for the classification decreases.86

Clearly, seropositive individuals have a greater chance of experiencing AIDS related losses than do seronegative individuals. The separation variable attempts to measure the extent to which AIDS related losses differ from non-AIDS related losses.

Approaching the comparison from different perspectives yields different results. For example, it may be appropriate to compare AIDS related losses with testicular cancer losses. The basis for this comparison is that ninety-three percent of the persons reported with AIDS are male; the average age is thirty-seven.87 Testicular cancer is the most common form of cancer among men age twenty to thirty-four and the second most common cancer among men age thirty-five to thirty-nine.88

One study estimates that 9,368 persons with AIDS were alive at any time during 1984. The number of days spent by those persons in U.S. hospitals during that year was estimated to be 328,000 at a cost of 271 million dollars.89 In 1977, the number of hospital days and associated costs for all testicular cancer patients under sixty-five years of age was 375,000 and 82 million dollars, respectively.90 Even if one were to correct the 1977 figures to reflect the general increase in hospital costs between 1977 and 1984,91 the hospital expenses relating to testicular cancer would be 215 million dollars, roughly seventy-nine percent of the hospital costs associated with AIDS.

However, because the estimated median survival time for persons with AIDS is estimated at twelve months,92 it may be more appropriate to compare AIDS related costs with costs incurred by cancer patients during the last year of life. One study examined the personal medical expenditures93 of 1,054 persons under sixty-five years of age having breast, colon-rectal, or lung cancer.94 The study revealed that expenditures averaged 21,219 dollars per person in 1980, 30,300 dollars per person when adjusted for 1984 dollars, for the last year of life.95 No significant differences

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86. See id. at 69, 70. A similar feature implicit in any risk classification is homogeneity. Homogeneity reflects social concerns more than economic efficiency and is discussed in the context of fair risk distribution, see infra notes 133-37 and accompanying text.
87. Morgan, supra note 65, at 463.
88. H. Page, Cancer Rates and Risks 116 (3d ed. 1985). American males have a 0.3% chance of developing testicular cancer in their lifetime.
89. See Scitovsky, supra note 3, at 7, 10. The figures were obtained by multiplying the average length of hospital stay times the average number of hospital admissions per year, and multiplying that figure (319,000) by the average charge per hospital days ($850).
90. W. Smith, A Profile of Health and Disease in America: Cancer 56, 57 (1987). All figures have been rounded up.
92. Morgan, supra note 65, at 460.
93. Personal medical expenditures includes hospital services, physician services, and outpatient services costs.
94. Long, Medical Expenditures of Terminal Cancer Patients During the Last Year of Life, 21 Inquiry 315, 317 (1984) [hereinafter Long]. These cancers account for 47% to 48% of all cancer deaths.
95. Id. at 318.
were found in expenditures by age group. In comparison, a 1986 survey by the Health Insurance Association of America and the American Council of Life Insurance estimated that direct medical costs were 36,159 dollars per case for AIDS and 33,332 dollars per case for ARC.

The latter comparison suggests that the direct medical costs of AIDS, although daunting in the aggregate, are not dissimilar to costs of other terminal illnesses. In addition, studies have suggested that terminal illness care costs can be minimized significantly by substituting costly inpatient hospital care with less costly care settings, such as hospice care, home care programs and extended care facilities. Increased use of these less costly alternatives could significantly lower the per patient costs of AIDS.

2. The Reliability Variable

Reliability is the degree to which the method of classification is verifiable and immune to error or fraud. As noted earlier, a single ELISA test has a ten to fifteen percent inaccuracy rate, which can be minimized if insurers follow the suggested protocol of follow-up ELISA and Western blot technique tests. While the insurance industry may endorse such a testing protocol, no rule or regulation compelling insurers to follow this verification procedure currently exists. In addition, the increase in the cost of classification may discourage insurers from implementing such a testing procedure.

Notwithstanding the possibility of false positives, the inherent unreliability of the AIDS antibody test to predict AIDS related losses remains. Viewing the predictive ability of the ELISA test from a position most favorable to the insurance industry, the ELISA test can predict the onset of AIDS or ARC in the two to five year period following the test only fifty percent of the time. This weakness in predictability and the chance for error in test results seriously undermine the reliability of the ELISA test as an efficient risk classifier.

3. The Incentive Value

The worth of any classification scheme is measured by its ability to create loss prevention incentives on the part of the insureds. Theoretically, the variable on
which the classification is based should be one over which the insured can exercise control. For example, smoking is a controllable risk which may be used by insurers in its classification scheme. Charging a lower health care insurance premium for nonsmokers is an incentive for individuals to stop smoking, thereby lowering or preventing the expected loss to the insurance companies.\(^{104}\) Thus, the ability of the classifier to influence insured behavior in a positive way is an indicator of the classifier's efficiency.

With AIDS antibody testing, the threshold question is whether exposure to the "AIDS virus" is within the control of the individual. With respect to blood transfusion recipients, infants, and children, the obvious answer is no.\(^{105}\) The intravenous drug abuser situation is somewhat analogous to the smoker.\(^{106}\) Both smoking and drug abuse are addictive behavior. The initial exposure is voluntary and, at least for the smoker, is entered into with knowledge of its hazardous health effects.\(^{107}\) The extent to which intravenous drug abusers are aware of the risk of HIV exposure is unclear. The estimated 750,000 Americans who inject drugs intravenously on a routine basis\(^ {108}\) are generally unorganized, poorly educated, and have less interaction with the health care delivery system than other groups who participate in high risk behavior.\(^{109}\)

These characteristics of the group have implications not only to the extent that the intravenous drug abuser may avoid exposure to HIV, but also to the extent that the individual may terminate the high risk behavior. The USPHS has recognized that "addictive behavior is not often changed without specific drug treatment,"\(^ {110}\) and that the current capacity for drug treatment is inadequate.\(^ {111}\)

Even if it is agreed that intravenous drug abuse is within the control of the individual and that the threat of AIDS is an incentive to end the high risk behavior, the reality is that this group is of relatively minor interest to the private health insurers. Probably the vast majority of intravenous drug abusers are, or will be, included in the twelve to sixty-five percent of patients whose medical costs are covered by federal programs.

For the majority of those at risk, homosexual males, bisexual individuals, and those who have sexual contact with high risk individuals, the ability to avoid exposure is not guaranteed. The "AIDS virus" leaves no scarlet letter on its carriers.

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\(^{104}\) The classification based on a positive ELISA test is in stark contrast to the discount for the nonsmoker situation. With AIDS, insurers are not providing the incentive of lower premium costs for the nonexposed. Rather, insurers are denying coverage to seropositives. This position does nothing to minimize expected losses, but merely redistributes the expected losses to others. This effect, known as externalities, is discussed infra notes 115-17 and accompanying text.

\(^{105}\) It is estimated that, in 1986, 1.4% of all AIDS cases occurred in children under 13 years of age; 2.0% occurred in transfusion recipients; and, 1.0% occurred in hemophilia patients (although the route of transmission for hemophiliacs is blood transfusion, they are segregated for reporting purposes). Morgan, supra note 65, at 461.

\(^{106}\) In 1986, it is estimated that 25% of all AIDS cases occurred in intravenous drug abusers. Morgan, supra note 65, at 461-62.

\(^{107}\) Knowledge of the risks of smoking is so pervasive that citation to this fact is omitted.

\(^{108}\) Coolfont Report, supra note 1, at 343.

\(^{109}\) Id. at 346.

\(^{110}\) Id.

\(^{111}\) Id.
to warn off sexual partners and, as the incidence of AIDS in the heterosexual population increases,\textsuperscript{112} the ability to avoid exposure by avoiding sexual contact decreases. To require sexual abstinence in exchange for health insurance would be impractical and unfair. The argument in response to this assertion is that an individual can avoid exposure to the "AIDS virus."\textsuperscript{113} Implicit in this argument is the assumption that homosexual activity is a preference rather than an orientation. However, the bulk of the research on this point is contrary.\textsuperscript{114} Further, once a positive status is obtained, it cannot be reversed as can one’s status as a smoker.

The reality is that a classification based on a positive AIDS antibody test will not reduce losses but instead may increase the costs of externalities.\textsuperscript{115} Externalities are transaction costs which are created when the costs of one’s activities accrue to someone else and are not compensated.\textsuperscript{116} Because insurers are proposing denial of health care coverage to AIDS antibody positive individuals, this group may be deterred from seeking early or preventive health care. In addition, the health care costs resulting from accidental injury or unrelated illness are not covered for these individuals. When individuals who are denied insurance become seriously ill, whether from AIDS, a fall from a tree, or from some other catastrophic illness, they will seek and receive some form of publicly or privately funded health care. These costs will be absorbed by taxes or redistributed to other patients who are insured and otherwise able to pay.\textsuperscript{117}

D. Summarizing the Economic Rationale for Risk Classification

The above analysis evaluates the economic efficiency of a positive AIDS antibody test as a risk classifier by examining the degree to which it can accurately predict expected losses and the degree to which it provides incentives for the insured to alter his behavior. The analysis shows that the test is valuable from a predictive standpoint only fifty percent of the time, at best. The test may identify AIDS related losses, but from an expected loss perspective, losses from AIDS are not significantly different than those from other catastrophic illnesses and may, in fact, be lower. From a loss prevention incentive perspective, the test does not promote efficiency but merely redistributes the costs of illness and may increase the costs borne by others because of the decrease in preventive or early health care for affected persons.

\begin{thebibliography}{99}
\bibitem{112} Id. at 343; Morgan, \textit{supra} note 65, at 462.
\bibitem{113} Some insurers view AIDS as a "self-inflicted" injury. Perkins, \textit{supra} note 62, at 1289, 1290; see also Hammond, \textit{supra} note 31, at 146.
\bibitem{114} \textit{See A. Bell \& M. Weinberg, Homosexualities, A Study of Diversity Among Men and Women} 121–28 (1978); I. Bieber, \textit{Homosexuality, A Psychoanalytic Study} 3–18, 303–19 (1962). \textit{See F. Whitem, Male Homosexuality in Four Societies} 32–67 (1986); Sexual promiscuity has been implicated in the spread of AIDS within the homosexual community. However, such assumptions should not be exaggerated. A recent study has found that the median number of lifetime sexual partners among sexually active homosexual individuals to be 50. Ross, \textit{Social and Behavioral Aspects of Male Homosexuality}, 70 \textit{Med. Clinics N. Am.} 527, 543 (1986).
\bibitem{115} Wortham II, \textit{supra} note 103, at 878.
\bibitem{116} Id. at 874; Abraham, \textit{supra} note 31, at 17.
\bibitem{117} Wortham II, \textit{supra} note 103, at 875.
\end{thebibliography}
Evaluating AIDS Antibody Testing in the Context of Risk Distributional Fairness

Risk distributional fairness contemplates the goal that efficiency should not be attained at the expense of fairness and justice and recognizes that a certain amount of risk distribution in insurance is morally correct. Risk distributional fairness embraces not only principles of distributive justice, but also civil rights law concepts.\footnote{18}

In the field of insurance law, risk distributional fairness traditionally has been recognized in statutes and judicial decisions involving fair and unfair discrimination.\footnote{19} While on the one hand, it is fair for each insured to pay according to his expected losses, the insurance industry’s discretion in classifying individuals has been limited by regulations and rulings based on societal values and public policy concerns. For example, federal law forbids classification by race, color, religion, sex, or national origin in employer sponsored insurance plans.\footnote{20} Many state statutes go beyond the federal law and proscribe classification based on physical or mental impairments or on a specific genetic trait.\footnote{21} Such regulations and statutes recognize that “actuarial justification does not operate without limit”\footnote{22} and that societal values may outweigh statistical validity.\footnote{23}

With this limitation in mind, it is necessary to examine whether an insurance classification based on a positive AIDS antibody test is fair in its distribution of the risks. An otherwise statistically valid risk classifier may offend distributional fairness in two ways. First, it may be considered inadmissible based on egalitarian principles. Second, even though admissible, it may be objectionable based on public policy grounds.\footnote{24} The egalitarian aspect is composed of two features—differential inaccuracy and control-causality. Differential inaccuracy measures the extent to which the classifier unevenly distributes its burden of inaccuracy.\footnote{25} Control-causality measures the extent to which the classification is based on a variable within the insured’s control.\footnote{26} The public policy aspect involves societal values and norms which may override the justification for the use of a particular classifier.\footnote{27}

1. Differential Inaccuracy

Given the ELISA test’s inability to accurately predict actual losses, allocating resources based upon this test alone may not only be inefficient\footnote{28} but also inequitable.

\footnote{18. See ABRAHAM, supra note 31, at 18–31; Wortham I, supra note 39, at 361.}
\footnote{19. See supra notes 40–48 and accompanying text; Wortham I, supra note 39, at 384–93.}
\footnote{21. Id. at 367; Schatz, supra note 5, at 1797–98.}
\footnote{23. Wortham I, supra note 39, at 389.}
\footnote{24. ABRAHAM, supra note 31, at 92; Wortham II, supra note 103, at 885.}
\footnote{25. ABRAHAM, supra note 31, at 85–89.}
\footnote{26. Id. at 89–92.}
\footnote{27. Id. at 92–95.}
\footnote{28. See supra notes 99–102 and accompanying text; ABRAHAM, supra note 31, at 85.
If seropositive individuals are provided insurance at a rate based on their seropositivity, the inaccuracy of the test will result in this class bearing the entire economic burden of AIDS related health care costs because a small percentage of positive individuals will experience the associated high losses.129 The burden of inaccuracy is distributed unevenly with the majority of insureds in the class being used as a means to ensure that the true high risk minority are charged higher premiums.130 This differential inaccuracy is objectionable on egalitarian grounds. Absent a more accurate classification methodology, a broader and more even distribution of the risk would treat all insureds with more equal concern and respect.131

Balancing efficiency with equity may require a certain amount of inequality in the distribution of the economic burden.132 In evaluating the degree of inequality to be tolerated, class characteristics are relevant and provide some guidance. In general, differential inaccuracy is more tolerable if the class is homogeneous. Homogeneity measures the extent to which all of the risks in a class have similar expected losses. Only if all risks in a class are similar can it be argued that it is fair to charge each class member the same rate.133

In the class of AIDS seropositive individuals, homogeneity is minimal. With ELISA as the classifier, the class is composed of both the true seropositive individuals who will incur AIDS or ARC related losses and those who will incur no AIDS or ARC related losses, either because the individual is falsely positive or because the individual does not develop AIDS symptomatology.134 Thus, the ELISA test does not produce a homogeneous class, and, to the degree that it fails to do so, the associated differential inaccuracy is intolerable.

Another class characteristic relevant to risk distribution is heterogeneity, the extent to which the subsidization of high risk insureds by low risk insureds is shared evenly among different classes.135 Even if the heterogeneity of the AIDS seropositive class is accepted, it may be objectionable nonetheless if other classes, although heterogeneous, are relatively more homogeneous than the AIDS seropositive class.136 This difference in homogeneity places a greater burden on the less homogeneous (more heterogeneous) class than on the other classes and provides additional support for objecting to the ELISA classifier on egalitarian grounds.137

2. Control-Causality

The risk distributional fairness of a risk classifier also can be assessed from a control-causality perspective. Even if a risk variable is statistically associated with loss, its use as a classifier may be criticized for its failure to allow a responsible

129. See ABRAM, supra note 31, at 85, 87.
130. See id.
131. Id. at 87, 88.
132. Id. at 88.
133. Id. at 74; CUMMINS, supra note 32, at 63–65.
134. See supra notes 16–24 and accompanying text.
135. ABRAM, supra note 31, at 88.
136. Id. at 75.
137. Id. at 88.
AIDS TESTING AND INSURANCE UNDERWRITING

individual the opportunity to alter the effect of being grouped. From the egalitarian perspective, a just distribution of risks would ignore characteristics outside the control of the individual. The prohibition of sex-based life insurance classification exemplifies the control-causality objection. Because gender is immutable and has no causal connection to longevity, gender cannot provide the basis for insurance responsibility.

Although seropositivity may be used to establish a causal link between exposure to the "AIDS virus," it has been argued here that, for all practical purposes, exposure to the virus is not within the control of an individual. Thus, from a distributional fairness perspective, it is unjust to impose such an economic burden on this class, and the goal of risk distributional fairness is not satisfied by the use of a risk classification scheme based on a positive ELISA test.

3. Public Policy Consideration

The public interest in insurance classification merits particularly close scrutiny in the area of health care coverage. The need for adequate health care insurance has grown as health care costs have increased, and the public has chosen private insurers as the primary vehicle for providing this coverage. The crucial role of private insurers in our national scheme of protection is evidenced by the tax advantages provided to employment related health insurance. In addition, the taxpayer funded insurance plans of Medicare, Medicaid, and Social Security Disability Insurance demonstrate a national intent to assure adequate insurance protection to all citizens.

The need for insurance and the public choice of private insurance to meet this need have created "an obligation on behalf of society to be concerned about the legitimacy of the classification schemes used by insurers to decide who can buy insurance, how much it will cost, and who will be covered." A direct effect of AIDS antibody and similar predictive testing will be the unavailability of insurance for a growing number of people. Any decision on the acceptability of these tests as insurance risk classifiers must address whether uninsurability comports with a public policy favoring insurance availability.

138. Id. at 89.
139. See Wortham II, supra note 103, at 884; ABRAHAM, supra note 31, at 27.
140. See supra note 114.
142. See supra notes 105-14 and accompanying text.
143. In 1983, health care expenditures constituted $355.4 billion, 10.8% of the gross national product. Wortham I, supra note 39, at 397.
144. See id. at 397-402.
145. Wortham I, supra note 39, at 398.
146. Id.
147. Id. at 400.
This Comment has examined the justification for AIDS antibody testing from the perspective of the traditional insurance goals of economic efficiency and fair risk distribution. It has demonstrated weaknesses in the economic validity of such testing and has raised serious moral and legal questions regarding the distributional fairness of such testing. If AIDS antibody testing cannot be adequately justified from these perspectives, the true motivation of health insurers in demanding their continued "unfettered discretion" to test bears close scrutiny. Critics argue that insurers are not attempting to preserve fair discrimination but are attempting to test "without regard to social costs" and to skirt the issue of the growing problem of uninsurability in the United States.

In evaluating the arguments for and against the continued use of testing, insurance regulators, judges, and the public must consider the advances in medical technology that will make similar testing available to detect cancer, diabetes, Parkinson's disease, and other catastrophic illnesses. The ability to perform such tests is a reality today, and as costs decrease, their use will be demanded by insurers on grounds similar to those of AIDS antibody testing. The question of who should bear the risk of the AIDS epidemic should not be viewed in the narrow context of AIDS itself, but rather in the broader context of the objectives of insurance and the basic values of society.

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148. Wortham II, supra note 103, at 885.
149. Schatz, supra note 5, at 1798.
150. See id.