THE REHABILITATION ACT'S OTHERWISE QUALIFIED REQUIREMENT AND THE AIDS VIRUS: PROTECTING THE PUBLIC FROM AIDS-RELATED HEALTH AND SAFETY HAZARDS

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In early 1982, soon after the discovery of Acquired Immune Deficiency Syndrome (AIDS),[1] the United States Public Health Service's Centers for

1. In Local 1812, American Federation of Government Employees v. Department of State, 662 F. Supp. 50 (D.D.C. 1987), the district court defined AIDS as:

> a clinical definition developed in 1982 by the Public Health Service's Centers for Disease Control to allow monitoring of conditions typically associated with severe breakdown of immunological defenses against viral, bacterial and parasitic infections, subsequently found to have been cause by [the Human Immunodeficiency Virus (HIV)].
>
> Clinically the term includes "opportunistic" infections that develop because of immunologic breakdown and seldom endanger a person with a healthy immune system, such as pneumocystis carinii pneumonia, tuberculosis, and infections of the central nervous system such as toxoplasmosis; as well as certain cancers, notably Kaposi's sarcoma and non-Hodgkin's lymphomas. A variety of other serious conditions related to AIDS but not meeting the clinical definition of the disease are described as involving AIDS-related complex [ARC].

Local 1812, 662 F. Supp. at 52 n.2.

Another district court has described the mechanism by which the AIDS virus attacks the immune system:

> When the virus enters the body it begins to attack certain white blood cells (T-lymphocytes), which are an integral part of the human immune system. Specifically, the disease destroys, and generates qualitative abnormalities in the victim's T-helper/inducer cells, which enable other components of the immune system to function. The virus thereby weakens the victim's immune system.

Martinez v. School Bd. of Hillsborough County, 675 F. Supp. 1574 (M.D. Fla. 1987).

An essential element to a clinical diagnosis of AIDS is the detection of the virus through a test that confirms the presence of antibodies to the HIV virus. Those individuals who test positive for the presence of antibodies are said to be seropositive. Those who test negative for the presence of antibodies are seronegative. Asymptomatic carriers of the virus are those individuals whose blood exhibits the presence of antibodies to HIV but who themselves exhibit none of the symptoms associated with a clinical diagnosis of AIDS or ARC.

It is generally accepted that there is an incubation period of six weeks to six months between the time that the virus enters the body and the individual develops detectable levels of antibodies to the virus. Francis & Chin, *The Prevention of Acquired Immunodeficiency Syndrome*, 257 J. AM. MED.

Disease Control (CDC) had reported 335 known cases of this new and inevitably fatal disease.[2] As of June, 1988, the CDC reported 63,726 cases of AIDS, an increase of almost 60,000 cases in just under six years.[3]

It has been estimated that there are approximately one and one-half to two million Americans currently infected with the AIDS virus,[4] about thirty-five to fifty percent of whom will eventually contract AIDS within five to ten years.[5] The vast majority of these infected individuals are asymptomatic carriers of the virus who are capable of transmitting the virus to others,

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ASSOC. 1357, 1359 (1987). This means that there is a window of vulnerability within which it is impossible to detect the presence of the AIDS virus after it has entered the body. *AIDS Immunodiagnosis: Questions and Answers About Screening Tests*, AIDS PATIENT CARE, June 1987, at 26. New tests that detect the presence of the virus' genetic material, or DNA, may soon negate any threat posed by this window of vulnerability. *Id.* at 27 ("such tests will likely be most useful in the detection of infection during the window' period in which HIV antibody is absent"). *See also infra* note 19.

The AIDS virus has also been found to cause impairment of brain and central nervous system function entirely independent of a clinical diagnosis of AIDS. *See infra* notes 218-228 and accompanying text. Researchers have also found the AIDS virus in the retinas of people with AIDS and have suggested that it may contribute to blindness in AIDS victims. Pomerantz & Kuritzkes, *Infection of the Retina by Human Immunodeficiency Virus Type 1*, 317 NEW ENG. J. MED. 1643 (1987).

Although the AIDS virus has been isolated from a number of body fluids—including blood, semen, vaginal secretions, tears, saliva, urine, and breast milk—it is generally accepted that casual household contact with carriers of the virus will not result in transmission of the virus. Friedland & Klein, *Transmission of the Human Immunodeficiency Virus*, 317 NEW ENG. J. MED. 1125, 1132-133 (1987). The three routes of transmission "demonstrated to be important" are inoculation of blood (transfusion of blood and blood products, needle sharing among intravenous drug users, injection with unsterilized needle, as well as needle stick, open wound, and mucous membrane exposure in health care workers), sexual contact, and the perinatal infection of infants before or during birth by their mothers. *Id.* at 1125-26. For additional information on AIDS and the HIV virus, see Gallo, *The AIDS Virus*, SCI. AM., January 1987, at 47.

2. N.Y. Times, June 12, 1987, at A18.

3. United States AIDS Program, Center for Disease Control, AIDS Weekly Surveilance Report (May 30, 1988) (on file with ARIZ. L. REV.). Intermediate figures reveal just how rapid the exponential growth of the epidemic has become, as the number of confirmed cases of AIDS has doubled for the past two years. By April 1985, the CDC had reported almost 10,000 confirmed cases of AIDS. Leonard, *Employment Discrimination Against Persons With AIDS*, 10 U. DAYTON L. REV. 681 (1985). As of December 1986, the CDC had reported 28,098 confirmed cases of AIDS. Ray v. School Dist. of Desoto County, 666 F. Supp. 1524, 1529 (M.D. Fla. 1987). These figures indicate that the number of confirmed AIDS cases in the United States increased by over 20,000 in 1987 alone.

4. The Coolfant Planning Conference, convened by the Public Health Service in 1986, estimated that there are approximately 1.5 million Americans infected with the AIDS virus. *Coolfant Report: A Public Health Service Plan For Prevention and Control of AIDS and the AIDS Virus*, 101 Pub. Health Rep. 341, 348 (1986) (hereinafter *Coolfant Report*). *See AIDS Carriers May be Increasingly Infectious*, Washington Post, June 4, 1987, at A26 ("The Public Health Service estimates that 1.5 million to 2 million Americans have been infected with the virus."). *See also* Declaration of Paul A. Goff, M.D. at 6, *Local 1812*, 662 F.2d 50 (hereinafter Goff Declaration) ("The CDC . . . estimates that 1.5-2 million people currently have the HIV infection.").

Some researchers believe that the Coolfant predictions, which were based on contemporary AIDS incidence data, overestimated the number of individuals currently infected with the virus. In a November 17, 1987 report to the White House, the Center for Disease Control refined the Coolfant Conference estimates predicting that from 945,000 to 1,400,000 Americans are currently infected with the AIDS virus. Projections by various mathematical models have ranged from a low of 276,000 Americans infected to a high of 1,750,000. *Spread of AIDS Abating, But Deaths Will Soar*, N. Y. Times, February 14, 1987, at 36. *See also AIDS Rate Overstated Report Says: Spread of Infection Apparently Slowed*, Arizona Republic, November 15, 1987, at A14. The general scientific consensus is that while new estimates are likely to vary widely, "they are consistent with the 1986 figures. The estimation of the total number of infected persons will remain complex and inexact." *Human Immunodeficiency Virus Infection in the United States*, 259 J. AM. MED. ASSOC. 478, 483 (1988).

5. *See infra* note 182 and accompanying text.

but who show no physical symptoms of the disease itself. Based on contemporary AIDS incidence data, a 1986 conference convened by the Public Health Service predicted that there will be at least 270,000 AIDS cases and 179,000 AIDS-related deaths in the United States by the end of 1991.[6] In the year 1991 alone, an estimated 54,000 people will die from AIDS[7] and an estimated 145,000 patients with AIDS will need health care and supportive services at a total cost of between $8 and $16 billion.[8]

The exponential growth of this epidemic has had a tremendous impact on American society.[9] One area in which this impact will be keenly felt is in the field of employment law, where a handful of discrimination suits have already been filed by workers infected with the AIDS virus.[10] As the

6. *Coolfant Report, supra* note 4, at 341-48. *See also Tenfold Increase in AIDS Death Toll is Expected by '91*, N.Y. Times, June 13, 1986, at A1; U.S. Dept. of Health and Human Services, *Surgeon General's Report on Acquired Immune Deficiency Syndrome* 5 (1986) (hereinafter *Surgeon General's Report*). Recently, there has been a great deal of controversy over the Coolfant Report's predictions. Some argue that since the predictions were based on the estimated size of the populations at risk of contracting full-blown AIDS in 1986, which have increased dramatically, *see infra* note 182 and accompanying text, they have underestimated the number of individuals likely to contract AIDS within the next five years. Schatz, *The AIDS Insurance Crisis: Underwriting or Overreaching?*, 100 HARV. L. REV. 1782 (1987) ("the actual numbers will likely be far higher: the PHS projections are based solely upon the number of people already infected with HIV and do not take into account the millions likely to be infected in the future").

The Coolfant Conference predictions of the number of cases of AIDS that can be expected by 1991 was based on contemporary estimates that 20% to 30% of those individuals infected with the virus will go on to develop AIDS within five years. The Surgeon General's Report still relies on the CDC's early estimate that 20% to 30% of those carrying the AIDS virus will eventually develop AIDS. *Surgeon General's Report, supra*, at 5. However, Surgeon General Koop has recently testified under oath that "there is a consensus that of those who are HIV infected, at least 35 to 50 percent will develop AIDS. There are higher projections that cannot be ruled out." Declaration of the Surgeon General of the United States Public Health Service at 3, *Local 1812*, 662 F.2d 50. *See infra* note 182 (for a discussion of these higher projections). If these higher projections prove to be true, than a much larger number of AIDS cases can be expected by 1991 than the 270,000 predicted by the CDC.

The argument that the Coolfant Conference's predictions were based on faulty data is also supported by a three-month study of death certificates, conducted in four major cities during 1985, which found that 11% of AIDS cases are not reported by health authorities. Hardy, *Review of Death Certificates To Assess Completeness of AIDS Case Reporting*, 102 Pub. Health Rep. 386 (1987). In New York City AIDS cases among intravenous drug users, the bridge for the transmission of the disease to the heterosexual community, are underreported by as much as 50%. *AIDS Carriers May be Increasingly Infectious: Time Found to Play Role in Transmission of Virus*, Washington Post, June 4, 1987, at A28.

Worldwide, AIDS case are predicted to increase at an even faster rate. A recent report by the World Health Organization (WHO) estimated that there will be an additional 150,000 cases in 1988, bringing the worldwide total to 300,000 cases by the end of 1989. The WHO report estimates that between five and ten million people are infected with the virus worldwide and that between 500,000 and three million new AIDS cases will occur among those already infected with the virus over the next five years. These figures do not take into account those individuals who will become infected with the AIDS virus within the next five years. *71,000 AIDS Case Reported: WHO Report Puts True Count Higher*, Washington Post, December 22, 1987, at A4.

7. *See supra* note 6.

8. Surgeon General's Report, *supra* note 6, at 3.

9. A recent issue of Science magazine features a number of articles on the epidemiological, legal, economic, and ethical issues of AIDS. 239 SCIENCE 533, 573-617 (1988). A publication of the Section of Individual Rights and Responsibilities of the American Bar Association has also devoted an issue to the impact of AIDS on American society. *Testing Democracy: AIDS in America*, Human Rights, Summer 1987, at 16-45. *See also Law, Social Policy, and Contagious Disease: A Symposium on Acquired Immune Deficiency Syndrome (AIDS)*, 14 HOFSTRA L. REV. 1 (1984).

10. For specific cases *see* Philipson & Wood, *AIDS, Testing, and Privacy: An Analysis of Case Histories*, Bay Area Lawyers for Individual Freedom (BALIF) AIDS Legal Referral Panel (1987); Note, *AIDS: Does it Qualify as a "Handicap" Under the Rehabilitation Act of 1973?*, 61 NOTRE

number of AIDS cases continues to increase, the widespread fear and confusion that usually follows in the wake of such an epidemic will undoubtedly aggravate the problems of discrimination faced by carriers of the AIDS virus in the workplace.[11]

Many of these suits will be brought under section 504 of the Rehabilitation Act of 1973, which prohibits a federally funded program from discriminating against an otherwise qualified handicapped person solely by reason of his or her handicap.[12] The Act also requires employers and program admin-

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DAME L. REV. 572, 573 n.7 (1986). *See generally,* Leonard, *Employment Discrimination Against Persons With AIDS,* 10 U. DAYTON L. REV. 681, 688 n.32 (1985) (hereinafter *Employment Discrimination*); Leonard, *AIDS and Employment Law Revisited,* 14 HOFSTRA L. REV. 11 (1985) (hereinafter *AIDS and Employment Law*).

11. "One attorney, who is representing a graphic artist discharged following an AIDS diagnosis, has predicted that '[t]here will be thousands of employees going to their employers with this problem . . .' *Draftsman Files First Washington-Area Case,* AIDS Policy & Law (BNA), at 7 (February 26, 1986)." Note, *supra* note 10, at 573 n.7. *See also The Times Poll: 42% Would Limit Civil Rights in AIDS Battle,* L.A. Times, July 31, 1987, at 1; *When Employers Fire Out of Fear: A Discrimination Lawyer Talks About The Growing AIDS Legal Crisis,* AIDS L. Rep., (NLRG), October 1987, at 1; *Top Executives Confused by AIDS Issue: Poll Shows Firms Rank Disease Among Nation's Top Problems,* Washington Post, January 21, 1988, at A1; *Medical Profession Confronts New Generation's AIDS Fear,* Washington Post, January 20, 1988, at A1.

12. Section 504 of the Rehabilitation Act reads in pertinent part: "No otherwise qualified handicapped individual in the United States, as defined in section 706 (7) of this title, shall, solely by reason of his handicap, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance . . . ." 29 U.S.C. § 794 (1985).

In order to establish a case based on a violation of section 504 a plaintiff must establish four prerequisite elements: (1) that she is a "handicapped person" under the Act, *see infra* notes 26-57 and accompanying text; (2) that she is "otherwise qualified" for the position sought, *see infra* notes 58-61 and accompanying text; (3) that she is being excluded from the position solely by reason of her handicap; and (4) that the position exists as part of a program or activity receiving federal financial assistance. Doe v. New York Univ., 661 F.2d 761, 774-75 (2d Cir. 1981).

These four elements were cited with approval by the Court of Appeals for the Third Circuit in Strathie v. Department of Transportation, 716 F.2d 227, 230 (3d Cir. 1983). Although touching on the first element, this article will concentrate on the second element.

According to a Justice Department Memorandum prepared for the Department of Health and Human Services, the last of these elements would have to be satisfied by demonstrating federal funding of the program or activity in question in accordance with Grove City College v. Bell, 465 U.S. 555, 571-74 (1984) (laws protecting women, minorities, the aged, and the disabled applied only to specific programs or activities receiving federal aid and not to institutions as a whole), and North Haven Bd. of Educ. v. Bell, 456 U.S. 624, 635-36 (1984). *See* Assistant Attorney General Charles J. Cooper, U.S. Department of Justice, Office of Legal Counsel, *Memorandum For Ronald E. Robertson, General Counsel, Department of Health and Human Services* 15-16 (January 20, 1986) (regarding application of section 504 of the Rehabilitation Act to persons with AIDS, AIDS-Related Complex, or infection with the AIDS Virus) (hereinafter *Cooper Memorandum*) (on file with ARIZ. L. REV.). On March 2, 1988, Congress passed the Civil Rights Restoration Act of 1987 which effectively overrules *Grove City* by applying federal anti-discrimination laws to entire institutions that receive federal funds, even where the federal funds are only used for a specific program. S. 557, 100th Cong., 2d Sess., 134 CONG. REC. H598 (1988).

In general, courts have read the legislative history behind the Rehabilitation Act to suggest that Congress intentionally gave broad scope to the term "federal financial assistance" in section 504. *See* Arline v. School Bd. of Nassau County, 772 F.2d 759 (11th Cir. 1985). In particular the Eleventh Circuit has argued that "the legislative history of the 1974 amendments is replete with notations indicating that Section 504 was intended to encompass programs receiving federal financial assistance of any kind," Jones v. Metropolitan Atlanta Rapid Transit Auth., 681 F.2d 1376, 1379-80 n.8 (11th Cir. 1982). While payments for obligations incurred by the federal government as a market participant do not constitute "federal assistance." *See, e.g.,* Hingson v. Pacific Southwest Air., 743 F.2d 1408, 1414 (9th Cir. 1984); Jacobson v. Delta Air., 742 F.2d 1202, 1209 (9th Cir. 1984) (payments under contracts to carry mail), any payments made by the government without such a legal obligation would subject a program or employer to the requirements of section 504. *Arline,* 772 F.2d

istrators to make a reasonable accommodation for an employee or program applicant who is not "otherwise qualified" for employment as a result of his or her handicap.[13]

This Note attempts to determine whether asymptomatic carriers of the AIDS virus[14] are protected by the Rehabilitation Act, which only applies to "otherwise qualified" handicapped individuals.[15] It will focus on whether, and to what extent, asymptomatic carriers of the AIDS virus are "otherwise qualified" for employment or participation in a federally-funded program under the Rehabilitation Act,[16] and to what extent an employer or program administrator is required to provide a "reasonable accommodation" for those individuals not "otherwise qualified" as a result of their infection with the AIDS virus.[17]

This Note concludes that there are a small number of circumstances in which asymptomatic carriers of the AIDS virus would not be otherwise qualified for employment in professions involving substantial responsibility for the health and safety of others, or participation in a program where their handciap would present a health or safety risk to others.[18] In such situations, testing programs designed to detect the presence of the AIDS virus and subsequent discrimination against those who test positive would not be prohibited by the Rehabilitation Act.[19]

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at 762. In addition, once federal money is deposited into a general fund, all activities paid for out of that fund become subject to section 504. *Id.* at 763.

Nearly every state has provided more or less parallel remedies for those not otherwise covered by the Rehabilitation Act. *See A Discussion of Federal and State Handicapped Statutes*, AIDS L. Rep., (NLRG), October 1987, at 8. However, two such statutes specifically exclude communicable diseases from the definition of a disability under the protection of the state's anti-discrimination law. GEORGIA CODE ANN., § 66-503(b)(2) (Harrison 1981); KY. REV. STAT. ANN., § 207.140(2)(c) (Baldwin 1976). A majority of states, on the other hand, have reached the conclusion, either administratively or in the courts, that AIDS is a disability covered by their anti-discrimination laws. *See* Discussion of Federal and State Handicapped Statutes, *supra*, at 8. *See also* Leonard, *Employment Discrimination*, supra note 9, at 689-96.

13. *Analysis of Final Regulations*, 45 C.F.R. § 84 app. A, at 333 (1986) ("where reasonable accommodation does not overcome the effects of a person's handicap, or where reasonable accommodation causes undue hardship to the employer, failure to hire or promote the handicapped person will not be considered discrimination"); *see, e.g.*, 29 C.F.R. § 32.13(b) (1987) and 45 C.F.R. § 84.12(c) (1987) (listing factors to consider in determining whether accommodation would cause undue hardship). *See generally infra* notes 251-64 and accompanying text.

14. Asymptomatic carriers of the AIDS virus have been infected with the virus, and are therefore capable of infecting others, but display no physical symptoms resulting from an impaired immune system. *See supra* note 1 and accompanying text. Unlike individuals who have contracted AIDS and ARC, and are therefore frequently hospitalized with debilitating opportunistic infections and cancers, asymptomatic carriers of the AIDS virus are perfectly capable of working. More often than not, asymptomatic carriers of the AIDS virus are therefore going to be otherwise qualified for employment except for a limited number of exceptions. *See infra* notes 176-250 and accompanying text.

This Note focuses on the circumstances under which safety-related impairments caused by the AIDS virus would render an individual not otherwise qualified for employment under the Rehabilitation Act. It does not address the issue of when a carrier of the AIDS virus will not be otherwise qualified for employment as a result of a physical inability to perform continued work.

15. *See infra* notes 58-61 and accompanying text.

16. *See infra* notes 58-144 and accompanying text.

17. *See infra* notes 251-64 and accompanying text.

18. *See infra* notes 176-250 and accompanying text.

19. A test for the presence of the AIDS virus is considered positive when a sequence of tests—starting with a relatively inexpensive enzyme-linked immunosorbent assay (ELISA) test (also known as the enzyme immunoassay or EIA test) and including an additional, more expensive and specific,

This Note will first examine cases in which courts have held that carriers of the AIDS virus are handicapped individuals entitled to the protection of the Rehabilitation Act.[20] It will also examine those cases in which a court has recognized a health and safety defense to Rehabilitation Act challenges,[21] will determine the appropriate burden of proof applicable to such a defense,[22] and will apply this defense to three health or safety risks that

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Western Blot test—detects the presence of antibodies to the AIDS virus, which indicates current infection. *Public Health Service Guidelines for Counseling and Antibody Testing to Prevent HIV Infection and AIDS*, 36 Morbidity & Mortality Rep. 509, 510 (1987) ("The specificity of the currently licensed EIA test is 99% when repeatedly reactive tests are considered . . . . To further increase the specificity of the testing process, laboratories must use a supplemental test—most often the Western Blot test—to validate repeatedly reactive EIA results . . . . Under ideal circumstances, the probability that a testing sequence will be falsely positive . . . ranges from less than 1 in 100,000 . . . to an estimated 5 in 100,000.").

One commentator has argued that when a single EIA test is used in groups with a low prevalence of infection, the percentage of false positive results among those testing positive will be high. Although these false positives can be eliminated by a confirmatory Western Blot test, he argues that most employers will be unwilling to bear the additional expense of the Western Blot test. Rothstein, *Screening Workers for AIDS* in AIDS AND THE LAW 126, 134 (H. Dalton & S. Burris eds. 1987) (at current prices the costs of initial and confirmatory testing of a workforce of 10,000 would be almost $40,000). While such an unsupported assumption is certainly open to debate, the concerns it expresses are negated by one researcher's prediction of a "revolution in testing" that has already produced a new test for the presence of antibodies to the AIDS virus that is as cheap as the ELISA test but as accurate as the Western Blot. *Cheap HIV Tests Imminent, New York Researcher Says,* AIDS Policy & Law, (BNA), at 6-7 (April 8, 1987). *See also* National Institute of Allergy and Infectious Diseases Update, *New Tests for Screening Antibodies to the AIDS Virus Give Fast, Accurate Results* at 1 (June 4, 1987).

The accuracy of the EIA test has also been questioned due to the false negatives that result from the window of vulnerability within which antibodies cannot be detected after the virus enters the body. *See supra* note 2. This window of vulnerability is likely to be closed by a new test, recently developed by researchers at the Centers for Disease Control, which can directly detect the AIDS virus itself by identifying small pieces of the virus' genetic material, or DNA. *DNA Amplification for Direct Detection of HIV-1 in DNA of Peripheral Blood Mononuclear Cells*, 239 SCIENCE 295 (1988).

Rehabilitation Act regulations prohibit prehire medical testing which is not justified as job-related. 45 C.F.R. § 84.13(a) (1987) and 29 C.F.R. 32.15(a) (1987). One commentator has argued that employment-related testing programs for the AIDS virus are never job-related since infection with the AIDS virus alone does not impair a worker's ability to perform on the job. Rothstein, *Screening Workers for AIDS* in AIDS AND THE LAW 126, 134 (H. Dalton & S. Burris eds. 1987). This Note argues that, under certain circumstances, seropositivity alone presents a nonimminent risk of future injury and will justify a refusal to employ based on an inability to safely perform the essential functions of the job in question.

There are also important fourth amendment privacy issues surrounding employment-related AIDS testing programs which are not addressed by this Note. The majority of federal appellate circuits have upheld employment-related drug testing programs where the employees have significant responsibility for the health and safety of others are constitutional. *See* Note, *Mandatory Drug Testing: Balancing the Interests*, 30 ARIZ. L. REV. 297 (1988).

There are legitimate parallels that should lead courts to uphold employment-related AIDS testing programs on the same grounds. In *Local 1812*, the district court upheld the State Department's AIDS testing program against fifth amendment due process and fourth amendment unreasonable search challenges by rejecting the plaintiff's request for a preliminary injunction. Ruling that the State Department's AIDS testing program was "rational and closely related to fitness for duty," the court held that "the likelihood plaintiff will prevail on the merits of its constitutional claim is insufficient to justify a preliminary injunction against the testing program . . . the prospects of success on the merits are slight." *Local 1812*, 662 F. Supp. at 53-54. *See infra* note 235. For a general discussion of AIDS-related testing issues, see Leonard, *AIDS and Employment Law*, *supra* note 9, at 42-48; ACLU Briefing Paper, *Drug Testing in the Workplace* (1987) (on file with ARIZ. L. REV.); Kamisar, *Drugs, AIDS and the Threat to Privacy*, N.Y. Times Magazine, September 11, 1987, at 109; Hentoff, *The Assault on Routine AIDS Testing*, Washington Post, June 28, 1987, at C7.

20. *See infra* notes 26-57 and accompanying text.

21. *See infra* notes 58-159 and accompanying text.

22. *See infra* notes 160-75 and accompanying text.

would render an asymptomatic carrier of the AIDS virus not otherwise qualified for employment, or participation in a federally-funded program.[23] Finally, the Rehabilitation Act's reasonable accommodation requirement and its impact on those employment situations discussed in the previous section will be examined.[24]

INFECTION WITH THE AIDS VIRUS AS A HANDICAP UNDER SECTION 504 OF THE REHABILITATION ACT

The Rehabilitation Act of 1974 provides three ways in which someone can fall within the definition of a handicapped individual under section 504. In relevant part, the statute defines a handicapped individual as being:

> [A]ny person who (i) has a physical or mental impairment which substantially limits one or more of such person's major life activities,[25] (ii) has a record of such an impairment, or (iii) is regarded as having such an impairment.[26]

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23. *See infra* notes 176-250 and accompanying text.

24. *See infra* notes 251-64 and accompanying text.

25. 29 U.S.C. § 706(7)(B) (1985). The Rehabilitation Act's regulations promulgated by the Department of Labor and the Department of Health and Human Services (HHS), which were drafted with the oversight and approval of Congress, provide definitions for "physical or mental impairment" and "major life activities" that are crucial to any determination of whether a particular individual falls within the statutory definition of a handicapped person under section 504 of the Rehabilitation Act. "Physical impairment" is defined as:

> (A) any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive, digestive, genito-urinary; hemic and lymphatic; skin; and endocrine; or (B) any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities.

45 C.F.R. § 84.3(j)(2)(i) (1987) and 29 C.F.R. § 32.3 (1987).

"Major life activities" are defined as: "Functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working." 45 C.F.R. § 84.3(j)(2)(ii) (1987) and 29 C.F.R. 32.3 (1987) (The Department of Labor regulations include within the definition of major life activity " . . . and receiving education or vocational training."). *See* Note, *supra* note 10, at 583 ("The federal agencies do not believe the definition of physical impairment should be construed narrowly."). *See infra* note 62 and accompanying text.

26. The 1974 amendments to the Rehabilitation Act expanded the definition of handicapped person so as to preclude discrimination against "[a] person who has a record of, or is regarded as having, an impairment [but who] may at present have no actual incapacity at all." Southeastern Community College v. Davis, 442 U.S. 397, 405-06 n.6 (1979). A "handicapped individual" was originally defined as: any individual who (A) has a physical or mental disability which for such individual constitutes or results in a substantial handicap to employment and (B) can reasonably be expected to benefit in terms of employability from vocational rehabilitation services provided pursuant to [Titles I and III of] this Act. *Rehabilitation Act of 1973*, Pub. L. No. 93-112, 87 Stat. 355 (1974). Congress decided that such a narrow definition did not adequately reflect the original intent behind the Rehabilitation Act which sought to protect the handicapped against discrimination stemming not only from simple prejudice, but from "archaic attitudes and laws" and from "the fact that the American people are simply unfamiliar with and insensitive to the difficulties confront[ing] individuals with handicaps." S. REP. NO. 93-1297, 93rd Cong., 2d Sess., *reprinted in* 1974 U.S. CODE CONG. & ADMIN. NEWS 6400.

As part of the Civil Rights Restoration Act of 1987, Congress amended the Rehabilitation Act to exclude from the definition of a handicapped individual in the employment context: "an individual who has a currently contagious disease or infection and who, by reason of such disease of infection, would constitute a direct threat to the health or safety of other individuals or who, by reason of the currently contagious disease or infection, is unable to perform the duties of the job." 134 CONG. REC. S267 (daily ed. Jan. 28, 1988).

One interpretation of this amendment, based on a strict reading of its language, may have disturbing implications for AIDS-related employment discrimination suits brought under section 504 of

In *School Board of Nassau County v. Arline*,[27] the Supreme Court rejected the government's argument that individuals who are handicapped as a result of a contagious disease are not protected by the Rehabilitation Act where the basis for the discrimination is the contagiousness of the disease, as opposed to the disabling effects of the disease that resulted in the individuals' handicap.[28] The government argued that in such a case, the employment discrimination was not "solely on the basis of handicap," and would therefore not be prohibited by the Rehabilitation Act.[29]

Although the contested disease in *Arline* was contagious tuberculosis which had produced a record of physical impairment,[30] the *Arline* decision sets the context for a discussion of whether infection with the AIDS virus is a handicap within the meaning of the Rehabilitation Act. In fact, the government used AIDS as an example in support of its contention that discrimination solely on the basis of contagiousness is never discrimination on the basis of a handicap.[31]

The government argued that in the case of AIDS it is possible for a person to be a carrier of the virus, and therefore capable of spreading the disease, without having a "physical impairment" or suffering from any other symptoms associated with a diagnosis of AIDS.[32]

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the Rehabilitation Act. Sponsored by Senator Harkin and Senator Humphrey, a literal interpretation of the amendment may eliminate an employer's obligation to reasonably accommodate an employee who is unable to perform the duties of her job as a result of her infection with the AIDS virus.

The Rehabilitation Act only requirees an employer to reasonably accommodate an employee who has met the statutory definition of a handicapped individual. The Harkin-Humphrey amendment clearly provides that an employee unable to perform the duties of her job as a result of her infection with the AIDS virus is not considered a handicapped individual and therefore is not entitled to the protection of the Rehabilitation Act. As a result, a strict reading of the amendment leads to the conclusion that an employer will not be required to reasonably accommodate the impact that an employee's infection with the AIDS virus has on her abilities to perform the duties of her job.

Prior to the passage of the Harkin-Humphrey amendment, an employee infected with the AIDS virus would have the initial burden of demonstrating a prima facie case of discrimination by establishing that she was a handicapped individual entitled to the protection of the Rehabilitation Act. The burden would then shift to the employer who would be required to show that the employee was not otherwise qualified for employment, since her handicap prevented her from performing the "essential duties" of her job, and that a reasonable accommodation of the employee's handicap would not render her otherwise qualified for employment.

Under the Harkin-Humphrey amendment, where an employer is merely trying to rebut the plaintiff's prima facie case by establishing that an employee infected with the AIDS virus is not a handicapped individual, and is therefore not entitled to the protection of the Rehabilitation Act, the employer may only be required to show that the employee is unable to perform the "duties" as opposed to the "essential functions" of the job in question. Furthermore, once it is determined that the employee infected with the AIDS virus is not a handicapped individual, there would be no reason for the court to determine whether a reasonable accommodation would render the employee otherwise qualified for employment.

See Hentoff, *A Legal Virus on Top of the AIDS Virus*, N.Y. Times, April 10, 1988, at A16.

27. *Arline*, 107 S. Ct. 1123 (1987).

28. *Id.* at 1128-29.

29. *Id.* at 1128 n.7.

30. The case involved a school teacher who was fired after she experienced a relapse of contagious tuberculosis. The Court remanded the case back to the trial court for a determination of whether Arline was otherwise qualified for her position. The district court was ordered to determine the duration and severity of Arline's condition, the probability that she would transmit the disease, whether Arline was contagious at the time she was discharged, and whether the school board could have reasonably accommodated her. *Id.* at 1131-32.

31. *Id.* at 1128 n.7.

32. *Id.*

The government used the distinction drawn between the contagiousness of the AIDS virus and the physical impairment resulting from the disease itself to argue that Arline's record of physical impairment was irrelevant since the school board dismissed her not because of her diminished physical capabilities, but only because of the health threat that her relapses of tuberculosis posed to others.[33] The Supreme Court responded that the government's argument was misplaced when applied to the handicap at issue since Arline's contagious tuberculosis gave rise to both a physical impairment and to contagiousness.[34]

The Court noted that the contagious effects of a disease cannot be meaningfully distinguished from the disease's physical effects when defining a handicapped individual under section 504.[35] As a result, the Court concluded that it would be 'unfair' to allow an employer to seize upon the distinction between the effects of a disease on others and the effects of a disease on a patient and use that distinction to justify discriminatory treatment.[36]

In a footnote to its opinion, the Court directly addressed the government's reference to AIDS by noting that "[t]his case does not present, and we therefore do not reach, the questions whether a carrier of a contagious disease such as AIDS would be considered to have a physical impairment, or

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33. *Id.* at 1128 nn.6-7 and accompanying text.

34. *Id.* at 1128 n.7.

35. *Id.* at 1128.

36. *Id.* The Court noted that "[n]othing in the legislative history of 504 suggests that Congress intended such a result . . . . Allowing discrimination based on the contagious effects of a physical impairment would be inconsistent with the basic purpose of section 504, which is to ensure that handicapped individuals are not denied jobs or other benefits because of the prejudiced attitudes or the ignorance of others." *Id.* at 1128-29.

The Court thus declared that discrimination based solely on the contagious effects of a physical impairment which constitute a handicap under section 504 is prohibited by the Rehabilitation Act regardless of whether the contagious condition, by itself, would constitute a handicap absent any physical impairment. Although the Court qualified its ruling by noting that its decision does not reach the question of whether a person discriminated against solely on the basis of contagiousness, absent any accompanying physical impairment, is handicapped under section 504, the ruling has the effect of declaring contagiousness a de facto handicap on no broader basis than an ad hoc determination of unfairness and a general interpretation of the Congressional intent behind section 504 of the Rehabilitation Act.

Instead of recognizing that section 504 only applies to discrimination "solely on the basis of handicap," and then trying to fit contagiousness into the regulatory definition of handicap, the Court declares that to distinguish the physical impairment from the contagious condition it causes would be unfair and contrary to the congressional intent behind the Rehabilitation Act. However, there are many types of discrimination that are "unfair" and yet are not covered under the Rehabilitation Act. Discrimination against people who have red hair, wear bow ties, and like to whistle is "unfair" and yet would not be prohibited under the terms of the Rehabilitation Act since they were not discriminated against solely on the basis of handicap.

Likewise, if the Court is unable to determine that contagiousness falls within the statutory and regulatory definition of handicap then there is no other grounds upon which discrimination on the basis of contagiousness would be prohibited by the Rehabilitation Act regardless of how "unfair" that discrimination may be. By allowing discrimination based solely on contagiousness to fall within the protection of the Rehabilitation Act, the Court has ignored accepted principles of statutory construction and has rendered the Act's requirement that discrimination be "based solely on handicap" meaningless.

Citing the long-standing principle that where Congress intends to impose a condition on the grant of federal funds, "it must do so unambiguously," Pennhurst State Sch. & Hosp. v. Halderman, 451 U.S. 1 (1981), Justices Rehnquist and Scalia dissented from the majority opinion on the grounds that there is no evidence that Congress intended discrimination on the basis of contagiousness to be prohibited by section 504 of the Rehabilitation Act.

whether such a person could be considered, solely on the basis of contagiousness, a handicapped person as defined by the Act."[37] In spite of this disclaimer, the result reached by the Supreme Court in *Arline* has been interpreted to apply both to AIDS patients as well as asymptomatic carriers of the AIDS virus.

In *Chalk v. District Court*,[38] the Court of Appeals for the Ninth Circuit held that persons diagnosed with AIDS are handicapped within the meaning of the Rehabilitation Act.[39] The Ninth Circuit ordered the trial court to issue a preliminary injunction requiring the Orange County Board of Education to reinstate the plaintiff who had been removed from his duties as a classroom teacher after he was diagnosed as suffering from AIDS.[40]

A question that remains to be answered by a federal appellate court is to what extent asymptomatic carriers of the AIDS virus are protected by the Rehabilitation Act. So far, two federal district courts have issued opinions which have held that asymptomatic carriers of the AIDS virus are handicapped within the meaning of section 504 of the Rehabilitation Act.[41] Each of the two cases found infection with the AIDS virus to be a handicap under section 504, but on separate prongs of the statute's three qualifying definitions.

In the first case, *Thomas v. Atascadero School District*,[42] the court granted a request for a permanent injunction prohibiting the school district from excluding a child infected with the AIDS virus from attending kindergarten classes. The court issued a detailed "findings of fact" upon which it based its ruling that the plaintiff's son was "handicapped" within the meaning of the Rehabilitation Act. The finding of facts described frequent pulmonary and middle ear problems as well as chronic lymphadenopathy suffered by the child which, the court concluded, are attributable to his infection with the AIDS virus.[43]

The *Thomas* court noted that under the Act a handicapped person is one who has a physical or mental impairment which substantially limits one or more of his major life activities, and that "physical impairment" is further defined in the regulations as including any physiological disorder or condition affecting the hemic or reproductive systems.[44] The court's findings of fact also noted that asymptomatic carriers of the AIDS virus have abnormalities in their hemic and reproductive systems making procreation and childbirth dangerous to themselves and others.[45]

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37. *Id.* at 1128 n.7.

38. 832 F.2d 1158 (9th Cir. 1987).

39. *Id.*

40. *Id.* at 1158-59.

41. *Local 1812*, 662 F. Supp. 50; Thomas v. Atascadero School Dist., 662 F. Supp. 376 (C.D. Cal. 1987). A third case, Ray v. School Dist. of Desoto County, 666 F. Supp. 1524 (M.D. Fla. 1987), found that three hemophiliac children infected with the AIDS virus were protected by the Rehabilitation Act but did not make an explicit finding that they were handicapped within the meaning of the Act.

42. 662 F. Supp. 376 (C.D. Cal. 1987).

43. *Id.* at 379.

44. *Id.* at 383.

45. *Id.* at 379. Individuals infected with the AIDS virus are capable of transmitting the virus to sexual partners through semen, precluding unprotected sex and the risk free conception of a child.

The court concluded that the child infected with the AIDS virus "suffers from significant impairment of his major life activities," that "[t]he minor child's impairments described in the factual findings were attributable to his infection with the AIDS virus," and that "[t]he inevitable conclusion was that the Rehabilitation Act conferred statutory protection on plaintiff's son."[46]

The second case in which a court has ruled on the question of whether asymptomatic carriers of the AIDS virus are "handicapped" within the meaning of the Rehabilitation Act reached the same conclusion as the *Thomas* court, but on different grounds. In *Local 1812, American Federation of Government Employees v. Department of State*,[47] the District Court for the District of Columbia refused to grant the plaintiff's request for a preliminary injunction to bar the State Department from testing employees for the AIDS virus.[48] The court held that the Rehabilitation Act did confer statutory protection on asymptomatic carriers of the AIDS virus since they are perceived to be handicapped,[49] but ruled that those infected with the virus are not "otherwise qualified" for worldwide Foreign Service duty[50] and that the State Department's testing program was rationally and closely related to fitness for duty.[51]

The plaintiffs in *Local 1812* alleged that asymptomatic carriers of the AIDS virus are covered by the Rehabilitation Act because they are regarded as having an impairment which substantially limits a major life activity, but denied that they are actually impaired,[52] thereby avoiding a determination that they were not otherwise qualified for employment in spite of their infection with the AIDS-virus. The State Department asserted that the immune system of an asymptomatic carrier of the AIDS virus is impaired, and that infection with the AIDS virus therefore constitutes an "impairment" within the meaning of the Rehabilitation Act, but declined to take a position on whether this impairment substantially limits a major life activity in order to avoid conceding that asymptomatic carriers of the AIDS virus could qualify as handicapped under the Rehabilitation Act.[53]

The *Local 1812* court concluded that the Department of State had actually conceded the applicability of the Rehabilitation Act on the basis of the presence of a physical impairment,[54] but also held that even if a carrier of the AIDS virus did not have a physical impairment they would still be pro-

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Surgeon General's Report, supra note 6, at 8. In addition, an unborn child can be infected with the AIDS virus through his mothers blood before or during childbirth. *Id.* at 10. In addition to abnormalities in their hemic and reproductive system, asymptomatic carriers of the AIDS virus can suffer measurable deficiencies in their immune and nervous systems, both of which fall within the regulatory definition of "physical impairment," even where disease symptoms that would warrant a clinical diagnosis of AIDS have not yet developed. *Local 1812*, 662 F.2d at 59.

46. *Thomas*, 662 F. Supp. at 379, 383.
47. 662 F. Supp. 50 (D.D.C. 1987).
48. *Id.* at 55.
49. *Id.* at 54.
50. *Id.*
51. *Id.* at 53.
52. *Id.* at 54.
53. Defendants' Opposition to Plaintiff's Motion for Preliminary Injunctive Relief at 38, *Local 1812*, 662 F. Supp. 50 (D.D.C. 1987).
54. *Local 1812*, 662 F. Supp. at 54.

tected from discrimination by the Rehabilitation Act since "[i]n the present period of speculation and concern over the incurable and fatal nature of AIDS there is no doubt that a known carrier of the virus which causes it is perceived to be handicapped."[55] The court went on to note that if the presence of the AIDS virus did not impact on job qualifications, "an injunction might be required" on the basis of the protection afforded asymptomatic carriers of the virus under the Rehabilitation Act.[56]

No federal circuit court has yet had the opportunity to rule on whether infection with the AIDS virus qualifies as a handicap under the Rehabilitation Act absent a diagnosis of full-blown AIDS. When such an opportunity does occur, the cases discussed above should serve as precedents for the proposition that asymptomatic carriers of the AIDS virus are handicapped within the meaning of the Rehabilitation Act both as a result of a physical impairment that substantially limits a major life activity as well as a result of their being regarded as having such an impairment in the absence of a diagnosis of any actual impairment.

Senator Harkin and Senator Humphrey clearly did not intend that courts should adopt this interpretation of their amendment.[57] It seems as if what the sponsors of the amendment intended was to clarify the definition of the statutory term "otherwise qualified handicapped individual" by codifying the applicable case law.[58] Yet the clear and plain effect of the amendment's language was to exclude from the definition of the term "handicapped individual" any employee whose infection with a contagious disease poses a direct threat to others or prevents her from performing the duties of her job.

Only employees who have demonstrated that they are handicapped are entitled to a determination of whether they are otherwise qualified, which included the right to a determination of whether a reasonable accommodation would render them otherwise qualified for employment. In judging whether a handicapped individual is otherwise qualified the courts have applied the regulatory determination that an otherwise handicapped individual is "a handicapped person, who, with reasonable accommodation, can perform the essential functions of the job in question."[59]

The Harkin-Humphrey Amendment, on the other hand, only adopts half of this regulatory definition. By their omission of the phrase "with reasonable accommodation" the drafters of the Amendment have implied that those who pose a direct threat to others or are unable to perform the essential functions of their jobs as a result of an infectious or contagious disease are not entitled to a reasonable accommodation since they are not handicapped.

There is reason to believe that courts may reject such a literal interpretation of the statute in favor of an interpretation that is more consistent with

55. *Id.*
56. *Id.*
57. *See* New AIDS Law Sends Right Signal to Employers, N.Y. Times, May 5, 1988, at A30 (letter from Senator Tom Harkin).
58. *See* 134 CONG. REC. S256-57 (daily ed. Jan. 28, 1988).
59. *See supra* note 57.

the legislative intent behind the statute.[60] The Supreme Court has held that where a literal interpretation of a statute would thwart the obvious purpose of that statute, a court may look beyond the plain meaning of the statutory language and adopt a less literal interpretation more consistent with the clearly expressed legislative intent behind the enactment.[61]

HEALTH AND SAFETY DEFENSES AS A BAR TO SECTION 504 ACTIONS: THE "OTHERWISE QUALIFIED" REQUIREMENT

Once the handicapped status of an asymptomatic carrier of the AIDS virus has been established, the question turns to whether his infection with the AIDS virus renders him not otherwise qualified for employment or participation in a federally-funded program. In the employment context, an otherwise qualified handicapped individual must be able to perform "the essential functions" of the job in question.[62] In the context of a federally-funded program, an otherwise qualified individual must be able to meet all of a program's requirements.

A handicapped individual must be able to perform the essential functions of her job, or meet all of a program's requirements, in spite of her handicap.[63] In addition, an employer or program administrator is not required to substantially modify reasonable standards in order to accommo-

60. *See* Congressional Research Service Report for Congress, *Legal Implications of the Contagious Disease or Infections Amendment to the Civil Rights Restoration Act*, S557 at 18-19 (March 14, 1988) (on file with ARIZ. L. REV.).

61. U.S. v. Locke, 471 U.S. 84 (1985).

62. 45 C.F.R. § 84.3(k) (1987) and 29 C.F.R. § 32.3 (1987). Both the Department of Labor and HHS use the term "qualified handicapped person," instead of the statutory term "otherwise qualified handicapped person." In its *Analysis of Final Regulations*, HHS explains:

> The Department believes that the omission of the word 'otherwise' is necessary in order to comport with the intent of the statute because, read literally, 'otherwise' qualified handicapped person includes persons who are qualified except for their handicap, rather than in spite of their handicap. Under such a literal reading, a blind person possessing all the qualifications for driving a bus except sight could be said to be 'otherwise qualified' for the job of driving. In all other respects, the terms qualified' and 'otherwise qualified' are intended to be interchangeable.

Appendix A - Analysis of Final Regulations, 45 C.F.R § 84 App. A 346 (1987).

Labor and HHS provide nearly identical definitions for "qualified handicapped individual" with respect to employment. HHS defines a "qualified handicapped person" with respect to employment as "a handicapped person who, with reasonable accomodation, can perform the essential functions of the job in question." 45 C.F.R. § 84.3(k)(1) (1987). *See* 29 C.F.R. § 32.3 for the nearly identical definition under the Labor's regulations.

With respect to "other services," HHS defines a qualified handicapped person as "a handicapped person who meets the essentital eligibility requirements for the receipt of such services." 45 C.F.R. § 84.3(k)(4) (1987). Labor defines a qualified handicapped individual with respect to "services" as "a handicapped individual who meets eligibility requirements relevant to the receipt of services provided by that program." 29 C.F.R. § 32.3 (1987).

With respect to employment and employment related training programs, Labor defines a qualified handicapped individual as "a handicapped individual who meets both the eligibility requirements for participation in the program and valid job or training qualifications with reasonable accomodation." With respect to postsecondary and vocational education services, HHS defines a "qualified handicapped individual" as "a handicapped individual who meets the academic and technical standards requisite to admission or participation in the recipient's education program or activity." 45 C.F.R. 84.3(k)(3) (1987). *See also* 45 C.F.R. 84.3(k)(2) (1987) (the HHS definition of "qualified handicapped individual" with respect to public preschool, elementary, secondary, or adult education).

63. *Appendix A - Analysis of Final Regulations*, 45 C.F.R § 84 App. A 346 (1987). *See also* Pushkin v. Regents of Univ. of Colo., 658 F.2d 1372, 1385 (10th Cir. 1981) ("If the plaintiff's

date handicapped individuals.[64] An employer or program administrator is therefore entitled to take the applicants' handicap into consideration when making employment or admissions decisions where the handicap prevents the performance of the essential functions of the job, or requirements of the program, and it has been shown that a reasonable accommodation would not have altered the handicapped individuals' inability to meet the reasonable employment or admission standards.[65]

Courts, interpreting administrative regulations,[66] have recognized that a handicapped individual will not be otherwise qualified where the employer or program administarator can show that the individual's handicap presents a health or safety risk to himself or others.[67] Where such a health or safety

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handicap would preclude him from doing the job in question, the plaintiff cannot be found to be otherwise qualified.").

The same principle applies in the non-employment context. *Davis*, 442 U.S. at 406 ("an otherwise qualified individual is one who is able to meet all of a program's requirements in spite of of his handicap"); *Arline*, 107 S. Ct. at 1131 n.17. *See also Doe v. New York Univ.*, 666 F.2d 761, 775 (1981); *Strathie*, 716 F.2d at 230.

64. Southeastern Comm. Coll. v. Davis, 442 U.S. 397, 405 (1979). *See also Strathie*, 716 F.2d at 230, 231; *Doe*, 666 F.2d at 775. The *Doe* court, for example, concluded that:

> [t]he institution need not dispense with reasonable precautions or requirements which it would normally impose for safe participation by students, doctors and patients in its activities. Section 504 merely insures the even-handed treatment of a handicapped applicant who meets reasonable standards so that he or she will not be discriminated against solely because of the handicap. But if the handicap could reasonably be viewed as posing a substantial risk that the applicant would be unable to meet its reasonable standards, the institution is not obligated by the Act to alter, dilute or bend them to admit the handicapped applicant.

Doe, 666 F.2d at 775. *See infra* note 144 and accompanying text.

65. *Davis*, 442 U.S. at 405 ("Section 504 by its terms does not compel educational insitutions to disregard the disabilies of handicapped individuals . . . . "); *Doe*, 666 F.2d at 775-76 ("[a]n institution is not required to to disregard the diabilities of a handicapped applicant").

An important characteristic of section 504 is that it differs from the general corpus of anti-discrimination laws, such as Titles VI and VII of the Civil Rights Act of 1964 and even sections 501 and 503 of the Rehabilitation Act, which place an explicit affirmative action requirement on the employer by prohibiting the consideration of factors that might render an individual less qualified than another applicant. *Davis*, 442 U.S. at 411 ("A comparison of these provisions demonstrates that Congress understood that accommodation of the needs of handicapped individuals may require affirmative action and knew how to provide for it in those instances where it wished to do so . . . . [N]either the language, purpose, nor history of section 504 reveals an intent to impose an affirmative-action obligation on all recipients of Federal funds.").

Both Mantolete v. Bolger, 767 F.2d 1416, 1425 (9th Cir. 1985) (Rafeedie, J., concurring) and *Doe*, 666 F.2d at 776, contrast the affirmative action requirements of Title VI and VII with section 504's otherwise qualified requirement. In *Mantolete*, Judge Rafeedie noted that "[a]llowing consideration of risk to self is to be contrasted with cases under Title VII in which risk to the plaintiff is not sufficient to establish either a bona fide occupational qualification of the business necessity defense." *Mantolete*, 767 F.2d at 1425 n.1. *See infra* note 78 and accompanying text.

66. *See supra* notes 25 and 57.

67. *See, e.g., Davis*, 442 U.S. at 409 (handicapped nursing student was not otherwise qualified where her handicap endangered patients); *Arline*, 107 S. Ct. at 1131 n.16 (classroom teacher with contagious tuberculosis would not be otherwise qualified if she presented a risk of contagion to her students); *Doe*, 666 F.2d at 777 (mentally disturbed medical student not otherwise qualified where her handicap endangers patients, doctors, and other students participating in the program); New York Ass'n For Retarded Children v. Carey, 612 F.2d 644, 650 (2d Cir. 1979) and *Strathie*, 716 F.2d at 231-32 (only where the program participant's or employee's handicap presents an *appreciable* or *significant* safety risk will the handicapped individual not be otherwise qualified for employment); *Local 1812*, 662 F. Supp. at 54 (a handicapped person will not be otherwise qualified where the individual's handicap places that person at "significant medical risk" in a given employment situation).

In Bentivegna v. Department of Labor, 694 F.2d 619, 621 (9th Cir. 1982), the Court of Appeals for the Ninth Circuit noted that "[t]he proper standard for this inquiry is set forth in the Secretary's

risk can not be eliminated by reasonable accommodation, the employee or program participant will have failed to demonstrate an ability to meet the reasonable standards that are required of an otherwise qualified handicapped individual.[68]

A number of courts have addressed this issue by holding that only a "significant" health and safety risk will trigger the otherwise qualified requirement as a bar to discrimination suits brought under section 504 of the Rehabilitation Act. However, there is often more that goes into a court's decision on this issue than a simple determination of whether the risk posed by the individual's handicap is "significant," even if that is the only factor that the court seems to be taking into consideration.[69]

Where the individual's handicap presents a health or safety risk to himself or others the determination of whether he is otherwise qualified will necessarily focus both on the reasonableness of the employment or admission standards as well as the nature of the health and safety risks posed by his handicap. A determination of the reasonableness of the employment or admission standards will often involve an implicit calculus which weighs the nature of the employment or program, the likelihood that the individual's handicap will result in an injury causing event, and the nature of the harm that will result should the injury causing event occur.[70]

The nature of the employment or program will often determine the nature of the harm that will occur as a result of the individual's handicap should the injury causing event occur, and will therefore dictate the significance of the health and safety risk that courts are willing to tolerate. Thus, a court's interpretation of what constitutes a significant health or safety risk may differ depending on the individual circumstances involved in each case.

THE DEVELOPMENT OF A "SIGNIFICANT" HEALTH AND SAFETY RISK STANDARD

"Significant" risk is a relative term that is difficult to quantify when determining whether a handicapped person is otherwise qualified under the Rehabilitation Act. Support for such a requirement cannot be found in the language of section 504 or its enabling regulations, but seems to have been slowly constructed by the courts as they struggled to develop a standard for determining when a handicapped individual is not otherwise qualified for

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regulation on 'Job Qualifications' interpreting section 504. 29 C.F.R. § 32.14 (1987). It provides that job qualifications 'which would tend to exclude handicapped individuals because of their handicap . . . shall be related to the specific job or jobs for which the individual is being considered and shall be consistent with business necessity and safe performance." *Id.*

68. *See supra* note 13. *See also Arline*, 107 S. Ct. at 1131 n.17.

69. *See*, for example, the method of analysis used by the Supreme Court in *Davis*, by the Third Circuit in *Strathie*, and by the Second Circuit in *Doe*. In *Davis*, the Supreme Court examined the legitimacy of the goals of the nursing program and the nature of the risk to others posed by the hearing impaired student. *See infra* notes 77-83 and accompanying text.

Likewise, in *Strathie*, the Third Circuit examined the legitimacy of the stated goals of the school bus driver licensing program and the nature of the risk posed by the hearing impaired school bus driver. *See infra* notes 84-95 and accompanying text. In *Doe*, the Second Circuit examined the standards for completion of a medical school program with the nature of the risk to others posed by the student's mental illness. *See infra* notes 124-43.

70. For a more detailed discussion and application of this calculus see *infra* notes 260-73 and accompanying text.

employment or participation in a federally-funded program. The requirement that an individual's handicap must pose a significant health or safety risk in order to render him not otherwise qualified seems to stem from an implicit assumption on the part of most courts interpreting section 504 that the government agency or other federal funding recipient must establish a justification for its discriminatory action in court.[71]

In *Kampmeier v. Nyquist*,[72] the Second Circuit became the first federal appeals court to address this issue in a suit brought under section 504. The court required the defendant, a local school board, to show a "substantial justification" for its policy of excluding one-eyed children from contact sports on the grounds that children with sight in one eye are not qualified to play contact sports because of the high risk of eye injury. The court upheld the school's policy after determining that the plaintiffs were unable to "cast doubt on this rationale."[73]

In *New York State Association of Retarded Children v. Carey*,[74] the Second Circuit again addressed the issue of whether a handicapped person is otherwise qualified to participate in a program covered by section 504 when that person's handicap poses a health or safety risk to others. Relying in large part on *Nyquist*, the court concluded that the defendant in a section 504 suit is required "to make at least some substantial showing in court" that its discriminatory action is justified.[75] In the case of an attempt by a school board to segregate mentally retarded children infected with hepatitis, the court ruled that a substantial showing of justification would involve the presentation of evidence that there was a "significant risk that the disease would be transmitted from one child to another."[76]

The *Carey* court intimated that, at the very least, a significant risk would have to constitute "more than a remote possibility" and that the plaintiff would have to present "definite proof" that the disease can be transmitted by routes that would exist in a classroom setting.[77] The court refused, however, to establish a general calculus for determining the precise level of scrutiny that may be appropriate for the variety of contexts in which claims under section 504 will arise.[78]

In interpreting the burden of proof required under section 504, the *Carey* court notes that the defendant is merely required to come forward in the district court with sufficient evidence to rebut the plaintiff's prima facie case.[79] It is a leap in logic to assume that a rebuttal of a prima facie case mandates the "definite proof" of a "substantial risk" of contagiousness.[80]

71. *See Carey*, 612 F.2d at 649. In *Carey*, the court noted that "[w]hile section 504 has been the subject of infrequent litigation thus far, this Court and others confronting adverse action based on a physical handicap have implicitly assumed that the government agency or other federal funds recipient must establish in court a justification for its action." *Id.* at 649.

72. 553 F.2d 296 (2nd Cir. 1977).

73. *Id.* at 299.

74. 612 F.2d 644, 649 (2nd Cir. 1979).

75. *Id.* at 650.

76. *Id.*

77. *Id.*

78. *Id.*

79. *Id.* at 649.

80. The *Cooper Memorandum*, *supra* note 12, also criticized the overbreadth of the *Carey*

In reaching such a conclusion, the *Carey* court groped beyond the holding in *Nyquist* to expand section 504 beyond its intended meaning.[81] While the requirement of "a substantial showing of justification" in the context of discrimination on the basis of a health or safety risk will necessarily involve a substantial showing that such a risk exists, there was no support for the proposition that such a risk had to be significant.

Southeastern Community College v. Davis: *Determining the Reasonableness of the Employment Standards by Examining the Nature of the Program in Question*

Carey was decided on December 10, 1979. Five months earlier the Supreme Court had interpreted the meaning of section 504's otherwise qualified requirement in *Southeastern Community College v. Davis*,[82] a case of first impression that was not cited or discussed in the *Carey* opinion. In *Davis*, the Supreme Court ruled that an applicant to a nurse's training program was not qualified to participate in the program after it was demonstrated that her handicap would interfere with her ability to safely care for patients. The Court found that the applicant, who was hearing impaired, was not "otherwise qualified" because her handicap made it impossible to "ensure patient safety" if she were allowed to participate in the program.[83]

The Supreme Court did not engage in an analysis of the likelihood that patient safety would be compromised by the applicants handicap, give spe-

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court's interpretation of the proper burden of proof in section 504 cases. The memorandum, prepared by the Department's Office of Legal Council for the Director of the Public Health Service, concluded that

> we disagree with [the *Carey* court's] reasoning to the extent that it required the Board to produce 'definite proof' regarding the means by which the virus could be transmitted. In our view, this requirement improperly shifted the risk of uncertainty regarding communicability to the Board and to healthy students; in a section 504 case, the plaintiff has the burden of demonstrating that he is otherwise qualified for the benefits sought, and uncertainty counsels in favor, rather than against, deference to the decisions of program administrators.

Cooper Memorandum, supra note 12, at 39 n.90.

In fact, language in the *Carey* court's opinion, which was not cited in the Justice Department's memorandum, supports this conclusion. The *Carey* court conceded that

> [r]equiring governmental agencies to rebut a prima facie case of discrimination against the handicapped does not mean that the expertise of responsible administration is to be disregarded. When the validity of challenged governmental action turns on an assessment of technical matters foreign to the expertise of most courts, it may be entirely appropriate to resolve closely contested disputes in favor of the responsible administrators.

Cf. Trachtman v. Anker, 563 F.2d 512 (2d Cir. 1977), *cert. denied*, 435 U.S. 925 (1978)." *Carey*, 612 F.2d at 650.

81. *See supra* note 75.

82. 442 U.S. 397 (1978).

83. *Id.* at 409. The *Davis* Court distinguished section 504 of the Rehabilitation Act from the affirmative action obligations characteristic of other anti-discrimination statutes:

> Section 504 by its terms does not compel educational institutions to disregard the disabilities of handicapped individuals or to make substantial modifications in their programs to allow disabled persons to participate. Instead, it requires only that an 'otherwise qualified handicapped individual' not be excluded from participation in a federally funded program 'solely by reason of his handicap,' indicating only that mere possession of a handicap is not a permissible ground for assuming an inability to function in a particular context . . . . [N]either the language, purpose, nor history of section 504 reveals an intent to impose an affirmative-action obligation on all recipients of federal funds.

Id. at 405, 411.

cific examples of how patient safety might be compromised, or discuss the substantiality of the health or safety risk that would be tolerated before an applicant's handicap would render her not otherwise qualified for participation in the program. Instead, the Court ruled that ensuring patient safety was an essential function of the covered program, that the applicant could not fulfill this function without subjecting the program to an unreasonable administrative burden, and that she was therefore not otherwise qualified for employment under the Rehabilitation Act.[84]

In the course of its opinion the Court examined the nature of Southeastern's nurses training program and found that the program's admission standards were designed "to ensure that no graduate will pose a danger to the public."[85] While such a high standard may eliminate some handicapped individuals from the nurse's training program, the court found that it was a legitimate academic policy and that nothing in the Rehabilitation Act requires an educational institution to lower its reasonable standards.[86]

The Court's deference to Southeastern's stated goals, when combined with the lack of a detailed examination of the safety risk posed by the applicants handicap, creates an implication that under some circumstances the nature of a program would require that safety risks be eliminated without a detailed examination of the nature of the risk or the likelihood that the injury causing event will occur. In this case, the nature of the nurse's training program required that patient safety be ensured. All that was required to

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84. The Court noted that "nothing less than close, individual attention by a nursing instructor would be sufficient to ensure patient safety if respondent took part in the clinical phase of the nursing program." Noting that section 504's implementing regulations explicitly excludes "devices or services of a personal nature" from the kinds of auxiliary aids a school must provide in an attempt to reasonably accommodate a handicapped student, and that it is "undisputed that respondent could not participate in Southeastern's nursing program unless the standards were substantially lowered," the *Davis* Court concluded that "[s]ection 504 imposes no requirement upon an educational institution to lower or effect substantial modifications of standards to accommodate a handicapped person." *Id.* at 409, 413.

85. Davis suggested that the real measure of reasonability was not her successful completion of all aspects of Southeastern's nurses training program but her ability, given the limitations imposed by her handicap, to qualify for a license to practice as a registered nurse. She suggested that even if she was incapable of meeting North Carolina's present licensing requirements, she might still be able to qualify for a license in another jurisdiction.

The Court rejected her argument noting that

> Southeastern's program, structured to train persons who will be able to perform all normal roles of a registered nurse, represents a legitimate academic policy, and is accepted by the State. In effect, it seeks to ensure that no graduate will pose a danger to the public in any professional role in which he or she might be cast. Even if the licensing requirements of North Carolina or some other jurisdiction are less demanding, nothing in the Act requires an educational institution to lower its standards.

Id. at 413 n.12.

The Court of Appeals for the Fifth Circuit has adopted an unnecessarily narrow interpretation of *Davis*, arguing that the decision "says only that Section 504 does not require a school to provide services to a handicapped individual for a program for which the individual's handicap precludes him from ever realizing the principal benefits of the program." Camenish v. University of Texas, 616 F.2d 127, 133 (5th Cir. 1980). *See also* Tatro v. Texas, 625 F.2d 557, 564 (5th Cir. 1980).

Under this rationale Davis might have prevailed since she argued that she would be able to realize the principal benefits of the program in another jurisdiction. The Fifth Circuit's narrow reading of *Davis* ignores the Court's emphasis on the deference paid to program administrators in determining reasonable admission standards when the nature of the program in question involves responsibility for the health and safety of others.

86. *Davis*, 442 U.S. 397.

trigger section 504's otherwise qualified requirement as a justification for discrimination was a showing that patient safety could not be ensured if the handicapped applicant were allowed to participate in the program. Such an analysis leads to the conclusion that *Davis* requires the reasonableness of the program's standards, when considered in light of the nature of the program, to determine the degree of scrutiny health and safety risks will receive in actions brought under section 504 of the Rehabilitation Act.

*Post-*Davis *Determinations of When Health and Safety Risks are Significant Enough to Trigger the Rehabilitation Act's Otherwise Qualified Requirement*

Subsequent courts have uniformly recognized that health and safety concerns are a legitimate defense to a suit under section 504, but have developed varying standards for determining the precise degree of risk that will trigger the otherwise qualified requirement as a bar to discrimination actions brought under section 504 of the Rehabilitation Act.

a. Strathie v. Department of Transportation: *Requiring an Appreciable Risk Standard Where Public Health and Safety Is Threatened*

In *Strathie v. Department of Transportation*,[87] the Third Circuit appraised the risk of harm posed by a hearing impaired school bus driver in order to determine whether he was otherwise qualified for employment. The court held that the safety risk of hearing aid failure or dislodgement was too remote, with reasonable accommodation, to justify the denial of a school bus driver's license on the grounds that there was an appreciable risk that he would be unable to provide for the control over and safety of his passengers.[88]

The court's decision turned on the ability of the employer to reasonably accommodate the employee's handicap with a minimum of inconvenience, as well as an implicit calculus of the significance of the risk based on both the likelihood that the injury causing event will occur combined with a consideration of the severity of potential injury should it occur; that is, the likelihood that the hearing aid would fail and, once this happened, the severity of the harm that was likely to occur as a result of this failure.[89]

The Department of Transportation argued that the essential nature of its licensing program required the elimination of as many potential safety risks as possible.[90] The court held that the Department's characterization of the essential nature of its licensing program was overbroad.[91] The court

87. 716 F.2d 227 (3d Cir. 1983).

88. *Id.* at 232-33.

89. *Id.* at 232.

90. The Department of Transportation contended that the essential nature of its school bus driver licensing program required it to "eliminate as many potential safety risks as it can." *Id.* at 232.

91. The court responded that "[a]lthough we fully appreciate the Department's concern for the safety and discipline of school bus passengers, we believe the Department's characterization of the essential nature of its licensing program is overbroad. In our view, the essential nature of the program is to prevent any and all *appreciable* risks that a school bus driver will be unable to provide for

cited *Carey* in support of its conclusion that the essential nature or purpose of programs responsible for the health and safety of their participants is the prevention of any and all appreciable risks.[92] The court concluded that the likelihood of the bus driver's hearing aid being dislodged would not present "an appreciable risk" to the safety of his passengers after his handicap had been reasonably accommodated.[93]

It is interesting to contrast the Third Circuit's scrutiny of the relationship between the severity of the risk of harm posed by the applicant's handicap and the nature of the bus driver licensing program in *Strathie* with the *Davis* Court's consideration of the same factors as they applied to Southeastern's nurses training program. In *Davis*, the Supreme Court accorded great deference to the program administrators and refused to find that the essential nature of a program, whose stated goals were to "ensure patient safety," was overbroad where the discrimination was justified by an inability to ensure patient safety.[94] In *Strathie*, on the other hand, the Third Circuit gave little deference to the program administrators and ruled that the stated goals of the program—to eliminate all possible safety risks—was overbroad and not a legitimate employment standard to justify discriminating on the basis of a handicap that did not pose an appreciable risk of harm after a reasonable accommodation.[95]

Although *Strathie* can be distinguished from *Davis* on the basis of the nature of the accommodation required to eliminate the risk posed by the respective handicaps,[96] the two cases might also be distinguished on the basis of the nature of the programs in question. While the asserted nature of the program was found to be overbroad in *Strathie*, such a finding would probably not apply to the nature of a program such as the one found in *Davis*.

In *Davis*, the appreciability of the risk of harm did not seem to be a factor where the hospital could not "ensure" the safety of its patients. The nature of the doctor-patient relationship, as well as the high duty of care that a hospital owes to sick and vulnerable patients, all contribute to the essential nature of a program whose standards require that the health care provider be able to "ensure" the health and safety of its patients. Arguments can be

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the control and safety of his passengers." The court also cited the fact that the Department grants licenses to school bus drivers who must wear eyeglasses as evidence "that the Department views some safety risks as too remote to justify the denial of a school bus driver's license." *Id.* at 232.

92. *Id.*

93. The Court cited with approval Strathie's argument that the Department could reasonably accommodate a hearing impaired school bus driver by requiring "hearing aid wearers to carry a spare aid and extra batteries." *Id.* at 233. The court noted that "neither the process of replacing the hearing aid or its batteries, nor the time spent in so doing would jeopardize the driver's ability to provide for the control over and safety of his passengers to an appreciable extent." *Id.* Such an accommodation would therefore eliminate any appreciable risk of harm resulting from the drivers handicap. This is in contrast to the level of accommodation required to eliminate the risk posed by the applicant's handicap in *Davis*, which the Supreme Court found to be unreasonable. *See supra* note 79.

94. *See supra* notes 79-81 and accompanying text.

95. *See supra* notes 85-88 and accompanying text.

96. While the accommodation of Davis' handicap would have required constant individual supervision of a nursing instructor, *see supra* note 79, Strathie's accommodation only required that he carry a spare hearing aid and extra batteries. *See supra* note 88.

made to justify the application of similar standards to other programs and professions with similar responsibilities.

b. Mantolete v. Bolger: *The Reasonable Probability of Substantial Harm Standard*

In *Mantolete v. Bolger*,[97] the Ninth Circuit interpreted the standard to be applied under section 501[98] of the Rehabilitation Act in determining when a handicapped person is not "otherwise qualified" for employment because her handicap could pose some risk to her own safety and the safety of her co-workers. The *Mantolete* court's standard for determining when a handicap renders an applicant not otherwise qualified for employment under the Rehabilitation Act remains the strictest standard handed down by a United States circuit court to date.

In *Mantolete*, the court reversed the trial court's determination that an employer is justified in not employing a handicapped person if he or she presents an "elevated risk of injury."[99] Instead, the court concluded that an employee's handicap must pose "a reasonable probability of substantial harm."[100] In applying this standard, the court ruled that an employer has an affirmative obligation to gather all relevant information regarding the applicant's work history and medical history, and independently assess the probability and severity of the injury.[101]

Since *Mantolete* is likely to play an important role in future cases addressing this issue, it is important to examine its potential impact on those courts that will be examining the same issue under section 504 of the Rehabilitation Act. There are considerations that subsequent courts should take into account when deciding whether to adopt *Mantolete*'s reasonable probability of substantial harm standard. The first hinges on the stricter affirmative action requirements of section 501, which do not apply to section 504. The second centers on the court's flawed analysis of past section 504 precedent which it applied to section 501.

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97. 767 F.2d 1416 (9th Cir. 1985). Mantolete was rejected for a job as a machine distribution clerk with the United States Postal Service. During a pre-employment physical Mantolette revealed that she suffered from epilepsy, averaged one grand mal seizure per year, was taking medication, and that her epilepsy was adequately controlled. The examining doctor recommended to the Post Office that she not be placed in a position which would involve driving a vehicle or using dangerous tools or machinery with moving parts. *Id.* at 1418.

98. 29 U.S.C. § 791 (1985). Section 501(b) of the Rehabilitation Act of 1973, provides that: "Each department, agency, and instrumentality in the executive branch shall . . . submit . . . an affirmative action program plan for the hiring, placement, and the advancement of handicapped individuals . . . ."

The Department of Labor's regulations implementing section 501 mandates that agencies shall give full consideration to the hiring, placement, and advancement of qualified mentally and physically handicapped persons. The federal government shall become a model employer of handicapped individuals. An agency shall not discriminate against a qualified physically or mentally handicapped person. 29 C.F.R. § 1613.703 (1987).

99. *Mantolette*, 767 F.2d at 1421.

100. *Id.* at 1422.

101. *Id.* at 1423.

i) *Distinguishing Section 501 From Section 504 of the Rehabilitation Act*

An important question remains regarding whether the strict standard applied by the *Mantolete* court to the definition of an otherwise qualified handicapped person under section 501 also applies to the similar requirement under section 504. The demanding information gathering requirements imposed by the majority opinion in *Mantolete* resulted in disagreement among the members of the Ninth Circuit panel that decided the case. Judge Tang noted in his opinion that there is no reason that definition of an otherwise qualified handicapped individual under section 501 should differ from the definition of an otherwise qualified handicapped individual under section 504.[102] District Judge Rafeedie, sitting by designation, filed a concurring opinion in which he argued that the standard used to determine whether a handicapped individual was otherwise qualified under sections 501 and 504 are not interchangeable. Judge Rafeedie said he wrote his opinion "to stress that this case decides issues solely under section 501 and not section 504."[103]

The legislative history and language of section 501 and its enabling regulations impose an explicit requirement that accommodation of the handicapped be considered in determining a handicapped person's qualifications for federal employment.[104] Judge Rafeedie argued that while the demanding information gathering requirements the court imposed on federal employees are justified in light of the express language and affirmative action requirement of section 501, "whether these requirements are applicable to private employers under section 504 is a question left open by this case."[105]

This argument may have some merit in light of the Supreme Court's conclusion in *Davis* that neither the language, purpose, nor history of section 504 reveals an intent to impose an affirmative action obligation on all recipients of federal funds.[106] The *Davis* Court specifically contrasted the different requirements of section 501 and section 504 in an effort to support its conclusion that "[t]he language and structure of the Rehabilitation Act of 1973 reflect a recognition by Congress of the distinction between the evenhanded treatment of qualified handicapped persons and affirmative efforts to overcome the disabilities caused by handicaps."[107]

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102. *Id.* at 1421. Judge Tang observed that "[n]o court has yet defined 'qualified handicapped person' under Section 501. Although this case does not arise under 504, there is no reason that the 501 definition should differ from that of 504, *except that 501 and its regulations impose an explicit requirement that accommodation of the handicap be considered in determining a handicapped person's qualifications for federal employment.*" (Emphasis added).

103. *Id.* at 1425. Judge Rafeedie argued that the reason that the definition of a "qualified handicapped individual" should be treated differently under section 501 than it would be under section 504 is precisely because of the affirmative action obligations of section 501 which do not apply to section 504.

104. *See supra* note 95. *See also Mantolete*, 767 F.2d at 1425; *Davis*, 442 U.S. at 410-11.

105. *Mantolete*, 767 F.2d at 1425.

106. *Davis*, 442 U.S. at 411. *See supra* note 60 and accompanying text.

107. The Court noted that "[a] comparison of these provisions demonstrates that Congress understood accommodation of the needs of handicapped individuals may require affirmative action and knew how to provide for it in those instances where it wished to do so . . . [s]ection 504 does not refer at all to affirmative action . . . . " *Id.* at 410.

ii. *Mantolete's Application of Past Section 504 Precedent*

Even if the *Mantolete* majority was correct, and the standard applied to the definition of an otherwise qualified handicapped person under section 501 also applies to the similar requirement under section 504, there is reason to believe that the *Mantolete* court's analysis of past precedent on this issue was flawed.

The *Mantolete* court discussed *Bentivegna v. Department of Labor*,[108] a prior section 504 case relied on by the district court in establishing its elevated level of risk standard under section 501. The *Bentivegna* court left open the possibility that a non-imminent risk of injury could, in some circumstances, justify rejecting a handicapped individual as not otherwise qualified if the discriminatory employment standard is directly connected with, and substantially promotes, "business necessity and safe performance."[109]

In *Bentivegna*, the Ninth Circuit ruled that a diabetic "building repairer" was otherwise qualified for employment. The court held that his termination on the grounds that he was unable to keep his blood sugar under control, as required by a city employment ordinance, was a violation of section 504's prohibition of discrimination against otherwise qualified handicapped individuals.[110] The decision was based on the court's conclusion that the risk posed by Bentivegna's handicap, when considered in light of the nature of his employment as a carpenter, did not establish the direct connection between the ordinance and considerations of business necessity and safe performance mandated by the Secretary of Labor's regulations interpreting section 504's otherwise qualified requirement.[111]

Citing New York University v. Doe[112] and *Kampmeier*, the *Bentivegna* court specifically refused to hold that a non-imminent risk of future harm can never be used by an employer to justify rejecting a handicapped individual.[113] The court concluded that

> [a] requirement more directly tied to increased risk of injury, such as the exclusion of diabetics with demonstrated nervous or circulatory problems—something all physicians testifying in this case agreed would markedly increase the risks from injury—might present a different case if applied to applicants for a job that carries an elevated risk of injury.[114]

While the level of safety risk required was not specified in *Bentivegna*, the court cautioned against confusing business necessity with "mere expediency."[115]

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108. 694 F.2d 619 (9th Cir. 1982).

109. *Id.* at 623 n.3 and accompanying text. *See supra* note 62.

110. *Bentivegna*, 694 F.2d at 620.

111. For the text of the relevant regulation, *see supra* note 62 and accompanying text. The court noted that "[n]either the City's allegation of increased risk of injury nor the possibility of long-term health problems is supported by evidence adequate to establish the direct connection between the particular job qualifications applied and the considerations of business necessity and safe performance that the Act requires." *Bentivegna*, 694 F.2d at 623.

112. 666 F.2d 761 (2d Cir. 1981).

113. *Id.* at 623 n.3.

114. *Id.*

115. *Id.* at 621-22. The Court did provide some guidance for the development of a standard when it noted that

The *Mantolete* court rejected the trial court's interpretation of these precedents arguing that *Bentivegna* cannot fairly be interpreted as holding that an elevated risk of injury, without more, is sufficient to justify the refusal to hire an otherwise qualified handicapped person.[116] While the *Mantolete* court conceded that reasonable employment standards which screen out handicapped applicants on the basis of the possibility of future injury may be necessary in certain situations, it held "that in order to exclude such individuals, there must be a substantial showing of reasonable probability of substantial harm."[117]

The *Mantolete* court's analysis of the *Bentivegna* holding is flawed, however, and does not accurately represent the past Ninth Circuit precedent on this issue. The *Mantolete* court noted that the trial court's elevated risk standard was based on footnote three of the *Bentivegna* opinion and proceeded to misrepresent the meaning of that footnote by adding language that did not appear in the original text.[118] In quoting from *Bentivegna*'s footnote three, the *Mantolete* court substituted "a requirement more directly tied to [a marked increase in the risk of injury]"[119] for "[a] requirement more directly tied to increased risk of injury."[120]

By interpreting *Bentivegna* as requiring a marked increase in the risk of injury, the *Mantolete* court is implying that *Bentivegna* requires that the degree of risk posed by the employment must establish a reasonable probability of substantial harm. However, it does not immediately follow from the precise language of the *Bentivegna* footnote that section 504 requires a showing

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[t]he importance of preserving job opportunities for the handicapped sets a high standard for the effectiveness of job qualifications that adversely affect the handicapped:

> The regulation makes consistency with business necessity an independent requirement, and the courts must be wary that business necessity is not confused with mere expediency. If a job qualification is to be permitted to exclude handicapped individuals it must be directly connected with, and must substantially promote 'business necessity and safe performance.' The City has the burden of demonstrating that its job qualifications meet this standard.

Id. (citations omitted).

The *Bentivegna* court concluded that "allowing remote concerns to legitimize discrimination against the handicapped would vitiate the effectiveness of section 504 of the Act . . . . Any qualification based on the risk of future injury must be examined with special care if the Rehabilitation Act is not to be circumvented easily . . . . " *Id.* at 622.

116. *Mantolete*, 767 F.2d at 1422.

117. *Id.* The *Mantolete* court cited Black v. Marshall, 497 F.2d 1088 (D. Haw. 1980), with approval on this point. The *Mantolete* court quoted from the portion of the *Black* opinion where the district court noted that it had

> no doubt that in some cases a job requirement that screens out qualified handicapped individuals on the basis of possible future injury, could be both consistent with business necessity and the safe performance of the job: If, for example, it was determined that if a particular person were given a particular job, he would have a 90% chance of suffering a heart attack within one month, that clearly would be a valid reason for denying that individual the job . . . . It might be that such a condition would prevent the individual from being capable of performing the job and thus would remove him from the category of qualified handicapped individual . . . . A job requirement that screened out such an individual would be consistent both with the business necessity and the safe performance of the job.

Black, 497 F. Supp. at 1104, *quoted in Mantolete*, 767 F.2d at 1422.

118. *Mantolete*, 767 F.2d at 1422.

119. *Id.*

120. *Bentivegna*, 694 F.2d at 623 n.3. *See supra* note 110 and accompanying text for the text of the relevant portion of the footnote.

of "a reasonable probability of substantial harm" before a handicap that poses a non-imminent risk of injury will render an applicant not otherwise qualified for employment.

The *Mantolete* court fails to make the appropriate connection between the two separate elements of risk that the *Bentivegna* court requires be present before a non-imminent risk of injury will justify rejecting a handicapped individual as not otherwise qualified: a requirement that is directly tied to an increased risk of injury must be applied to applicants for a job that carries an elevated risk of injury.[121]

First, an employer must show that his employment requirement is directly tied to a handicap that poses an "increased risk of injury."[122] The term "increased risk of injury" refers only to an increase from the risk of injury presented by the type of handicap and the nature of the employment at issue in *Bentivegna*: the risk that a diabetic carpenter's inability to control his blood sugar will result in his injuring himself on the job.[123] Second, an employer must show that the nature of the employment sought by the handicapped applicant presents an "elevated risk of injury" in light of the employee's handicap.[124]

These are two separate elements of risk—one dealing with the nature of the handicap while the other deals with the nature of the employment—which combine to render an employee not otherwise qualified. Neither of these elements, either separately or in combination, necessarily requires "a reasonable probability of substantial harm" to render an applicant not otherwise qualified.

If the applicant's handicap presents merely an increased risk of injury, when compared with the risk of injury specific to the fact situation in *Bentivegna*, then section 504 should not bar the employer from discriminating against the applicant when the nature of the employment that the handicapped individual is seeking presents an "elevated risk of injury." Such a determination will necessarily depend on the specific fact situation in each case.

Where the nature of the employment situation does not present an elevated risk of injury, a substantial increase in the risk of injury associated with the nature of the handicap will be required to trigger the Rehabilitation Act's otherwise qualified requirement. On the other hand, where the nature

121. The crucial portion of footnote three reads: "A requirement more directly tied to increased risk of injury . . . might present a different case *if* applied to applicants for a job that carries elevated risks of injury." *Bentivegna*, 694 F.2d at 623 n.3 (emphasis added).

122. *Id.* The *Bentivegna* court cites the exclusion of diabetics with demonstrated nervous or circulatory problems, as opposed to low blood sugar levels, as examples of "a requirement more directly tied to increased risk of injury" which "all physicians testifying in this case agreed would markedly increase the risks from injury . . . . " It is important to note that the physicians were only testifying that such handicaps would present a marked increase in the risk of injury from the risk of injury at issue in *Mantolete*. To imply that the physicians comparisons form the basis for a legal standard requiring a marked increase in the risk of injury is to misrepresent the meaning of *Bentivegna*'s footnote three.

123. *Bentivegna* presented a medical opinion letter from an expert who concluded: "The long term dangers to Mr. Bentivegna with sugars at that level, as with all diabetics, are unclear, the short term dangers at those levels are minimal." *Bentivegna*, 694 F.2d at 620.

124. *See supra* note 117.

of the employment does present an elevated risk of injury, less of an increase in the risk of injury associated with the handicap will be required.

Another way to describe this calculus is to equate the increase in risk posed by the handicap, and the elevated risk of injury posed by the employment, with the likelihood that an injury causing event will occur as a result of the employees' handicap, and the severity of the harm that will result if it does occur while on the job. This calculus will involve a balancing of these two factors which bear an inverse relationship with one another: the likelihood that the injury causing event will occur should decrease in importance as a factor used in the calculus as the extent or severity of the harm that will result if it does occur increases.

It therefore does not follow that an employer must show, in every case, a reasonable probability of substantial harm in order to meet the two elements of the *Bentivegna* court's calculus. The *Mantolete* court neglected to recognize the flexible nature of the implicit calculus used by the *Bentivegna* court. Instead, the court adopted an inflexible standard that does not lend itself to application in a wide variety of situations.

c. New York University v. Doe: *Defining the Parameters of a "Significant Risk"*

In *New York University v. Doe*,[125] the Second Circuit held that a medical student was not "otherwise qualified" for participation in a medical school program due to a mental impairment which, in the past, had resulted in bouts of violent behavior requiring periodic psychiatric hospitalization[126] and her withdrawal from medical school. The Second Circuit's opinion in *Doe*, decided after *Carey*, provides the most detailed analysis to date of what constitutes an "appreciable" or "significant" risk, and how a court should determine the severity of health and safety risks used as a defense to discrimination actions brought under section 504. The court's opinion focused on what it viewed as the crucial question to be resolved in determining whether Doe was otherwise qualified under the Rehabilitation Act: the substantiality of the risk that her mental disturbances would recur, resulting in behavior harmful to herself and others.[127]

The evidence presented to the court indicated that Doe's mental illness would be with her for the rest of her life but that it was controllable if Doe continued with therapy and avoided stressful situations—such as those she was likely to encounter in medical school—which could cause a recur-

125. 666 F.2d 761 (2d Cir. 1981).

126. *Id.* at 777. For a discussion of the range of violent behavior exhibited by Doe, see the discussion at *id.* at 766-67.

127. *Id.* at 777. The Second Circuit reversed the district court's grant of a preliminary injunction ordering New York University to admit Doe to the medical school. The district had held that Doe must be deemed qualified for admittance to medical school if it appeared "more likely than not" that she could complete her medical training and serve as a physician without a recurrence of her self-destructive and anti-social behavior. *Id.* The Second Circuit specifically rejected the district court's adoption of a "more likely than not" standard, arguing that Doe would not be qualified for admission if there is a "significant risk of such recurrence . . . even if the chances of harm were less than 50%." *Id.*

rence.[128] New York University had refused to readmit Doe to medical school on the grounds that both the goals and stressful nature of the medical school program were such that the chance that Doe could suffer a relapse posed "an unacceptable risk to faculty, students, and patients."[129]

The court held that her mental impairment was directly relevant to the qualifications imposed by NYU's medical school program since it bears upon her ability to function as a student and doctor, to get along with other persons, and to withstand stress of the type encountered in medical training and practice.[130] A paramount requirement of the program was a participant's ability to safely care for patients and to safely interact with doctors and other students she would come into contact with during the course of her medical education and subsequent practice.[131]

After Doe's psychiatrists were unable to "rule out the risk that she may suffer a recurrence" of the psychiatric problems that resulted in her withdrawal from the program,[132] the court held that she was not otherwise qualified for participation in the program.[133] Noting that Doe "would not be qualified for readmission if there is a significant risk of recurrence,"[134] the court ruled that the evidence in the record indicates that there was a significant risk that Doe will have a recurrence of her mental disorder,[135] and that this recurrence would present "a danger to herself and to others with whom she would be associated as a medical student."[136] Since the possibility of a

128. The medical evidence presented to the court indicated that Doe had been diagnosed "as suffering from a serious condition known as a 'Borderline Personality' disorder which is likely to continue through most of her adult life." *Id.* at 778. The court concluded that:

> The seriousness of its manifestations can only be minimized by treatment by well-trained therapists over a long period of time and by the adoption of a lifestyle that avoids stress of the unusual types faced in medical training and practice .... The nonrecurrence of Doe's self-destructive and anti-social activity for the past four years, during which she has peacefully co-existed with others, is attributed to the fact that the types of stress to which she has been subjected ... do not approximate the seriousness of those which she would experience as a medical student and doctor. Moreover, her history indicates ... that despite a period of dormancy [the manifestations of her disorder] may recur again.

Id.

> The court cautioned that
> [c]are must be exercised by schools and employers (and court's assessing their decisions under 504) not to permit prior mental illness to be routinely regarded as a disqualification. This case, however, involves not simply a prior mental illness: Doe has been diagnosed as having a recognized disorder for which long-term treatment has been prescribed by competent psychiatrists and Doe has declined to accept such recommended treatment.

Id. at 779 n.10.

129. *Id.* at 775. *See supra* note 124. The court noted that the nature of the school's medical school program was such that

> NYU is of necessity concerned with the safety of other students, faculty and patients to whom Doe would be exposed, since this would adversely affect them as well as the success and reputation of its medical school activities. Any harm done by her as a medical student to others, moreover, might expose it to legal liability for knowingly permitting such exposure.

Id. at 777. Employers and program administrators who knowingly submit others to the danger posed by an asymptomatic carrier of the AID virus could also be subject to liability.

130. *Id.*

131. *Id. See supra* note 125.

132. *Doe*, 666 F.2d at 778.

133. *Id.* at 777.

134. *Id.*

135. *See supra* notes 124 & 128.

136. *Doe*, 666 F.2d at 777. Although the Second Circuit made a substantial effort to determine

recurrence of her mental disorder could not be ruled out,[137] thereby making it impossible to ensure patient safety and the successful completion of Doe's course of study, the court concluded that NYU "was entitled, in determining whether she was qualified, to be advised of and take into account her medical impairment."[138]

The Second Circuit's finding in *Doe* is similar to the Supreme Court's ruling in *Davis* that the hearing impaired applicant was not otherwise qualified after it was shown that it was not possible to "ensure patient safety" if she participated in a nurses training program.[139] In both cases, for instance, the nature of the program was an important factor in determining the degree of risk that will be tolerated.[140] The importance of the nature of the program is reflected in the deference both courts paid to the health care program administrators when determining the reasonableness of their admission standards.

The *Doe* court was particularly explicit in expressing the degree of deference it expected courts to accord the decisions of program administrators. The court concluded that "considerable judicial deference must be paid to the evaluation made by the institution itself, absent proof that its standards and its application of them serve no purpose other than to deny an education to handicapped persons."[141] The degree of the deference the *Doe* court was willing to give to the decisions of program administrators is reflected in its discussion of the degree of tolerable risk that administrators can use in establishing admission standards which handicapped individuals must meet in spite of their handicap.

The court determined that Doe would not be otherwise qualified for readmission into the program if there was a significant risk of such recurrence.[142] However, unlike many of the other courts that have addressed this issue, the *Doe* court went into considerable detail in developing a standard to be applied in determining what constitutes a significant health and safety risk that will trigger a bar to a section 504 discrimination suit.

The Second Circuit specifically rejected the standard established by the district court under which Doe would be qualified for readmission if it ap-

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the liklihood that Doe's mental disorder would recur, they did not engage in a detailed analysis of the likelihood or expected severity of the potential harm to patients if she did suffer a relapse. Not unlike the examination of Southeastern's program in *Davis*, the nature of NYU's medical school program seemed to require less of a showing of potential harm to patients which the court assumed would result from the ocurrence of the injury causing event: a relapse of her mental disorder.

In *Strathie*, on the other hand, the Third Circuit used a calculus which examined not only the likelihood that the injury causing event would occur, but also the risk of harm that could result from the injury causing event's occurrence. One explanation for such a distinction, besides the difference in the two program's ability to accomodate the respective handicaps, is the difference between the fundamental nature of a school bus driver's licensing program and a medical school training program. There is an implicit assumption that the severity of the harm will be severe in a program involving substantial responsibility for the care and safety of hospital patients. Since such an assumption is not present in a bus driver's licensing program, the severity of the harm that is likely to occur will be examined more closely.

137. *See supra* note 128.

138. *Doe*, 666 F.2d at 777.

139. *See supra* note 79 and accompanying text.

140. *See supra* notes 79 & 132 and accompanying text.

141. *Doe*, 666 F.2d at 776.

142. *See supra* note 130 and accompanying text.

peared "more likely than not" that she could complete her medical training and serve as a physician without a recurrence of her self-destructive and anti-social behavior.[143] The rejected standard is virtually identical to *Mantolete*'s "reasonable probability"[144] standard. Instead, the Second Circuit argued that "it would be unreasonable to infer that Congress intended to force institutions to accept or readmit persons who pose a significant risk of harm to themselves or others, even if the chances of harm are less than 50 percent."[145]

The court thus established that a significant risk of harm can be less than a fifty percent chance of harm. The court also noted that under certain situations an even more remote likelihood of harm can render an applicant to a competitive program not otherwise qualified for participation in that program, and therefore act as a bar to discrimination actions brought under section 504 of the Rehabilitation Act. The court held that "even if the risk of recurrence were shown to be only minimal,"[146] so that "she presents any appreciable risk of harm,"[147] New York University would not be precluded from taking her handicap into account in deciding whether it rendered her less qualified than others for the limited number of places available.[148]

In *Doe*, the Second Circuit seems to have tempered the impact of its holding in *Carey* by urging a deference to program administrators in determining what constitutes a significant risk of harm. While upholding the *Carey* court's requirement that the government must show a significant risk of injury, the likelihood of injury required to establish a significant risk was left largely to the discretion of a program's administrators where such a standard is consistent with the nature and essential functions of the program in question.

In the case of a medical school program, reasonable employment standards are those which it would normally impose for safe participation by students, doctors, and patients in its activities. The *Doe* court interpreted safe participation to mean, in the case of an applicant who has past history of a mental disorder, that the psychiatrists would have to rule out the risk that the applicant would suffer a recurrence of the abnormal behavior resulting from the condition.

For the first time, however, the competitiveness of the federally-covered program was taken into account in determining the degree of risk the program will be required to tolerate when establishing its admission or employment standards. The ruling clearly stands for the proposition that under certain circumstances even a "minimal risk" of harm will constitute an appreciable safety risk capable of triggering the otherwise qualified requirement as a bar to discrimination suits brought under section 504 of the

143. *Doe*, 666 F.2d at 777. *See supra* note 123.

144. *See supra* note 97 and accompanying text.

145. *Doe*, 666 F.2d at 777.

146. *Id.* at 780.

147. *Id.* at 777.

148. *See supra* note 59 and accompanying text. The court held that "[i]n view of the seriousness of the harm inflicted in prior episodes, NYU is not required to give preference to her over other qualified applicants who do not pose any such appreciable risk at all." *Doe*, 666 F.2d at 777.

Rehabilitation Act.[149]

THE SUPREME COURT AND THE DETERMINATION OF THE SIGNIFICANCE OF THE RISK OF POSSIBLE FUTURE INJURY: A WEDDING OF SCIENTIFIC EVIDENCE AND PUBLIC POLICY

The Supreme Court has yet to develop a general calculus for determining the degree of potential risk to the health and safety of others that will trigger a finding that a handicapped individual is not otherwise qualified for employment. In *Arline*, the Supreme Court made the general observation that "avoiding exposing others to significant health and safety risks" is a "legitimate concern" of employers and grantees that should be taken into account by the courts when deciding whether an employee is "otherwise qualified."[150] However, the *Arline* court did establish a detailed standard for determining when a significant risk of contagion exists, although the standard is narrowly applied to the transmission of a contagious disease and relies heavily on American Medical Association guidelines designed specifically for this purpose.[151]

The Supreme Court has addressed the general issue of how to measure the existence of a significant risk within the context of the burden of proof under the Occupational Safety and Health Act. In *Industrial Union v. American Petroleum Institute*,[152] the Court ruled that a "requirement that a 'significant' risk exists is not a mathematical straightjacket," and that the government "is not required to support its findings with anything approaching scientific certainty."[153]

In *Industrial Union*, the court held that while the Occupational Safety and Health Administration (OSHA) has no duty to calculate the exact probability of harm, it does have an obligation to find that a significant risk is present before it can characterize a place of employment as unsafe.[154] Although the definition of "significant risk" in *Industrial Union* involved a determination of the likelihood of future harm from a carcinogenic substance, the scientific uncertainty surrounding the health risks associated with toxic waste makes the case particularly appropriate to a discussion of the health and safety risks associated with AIDS.[155]

Not unlike the section 504 decisions in *Davis*, *Carey* and *Doe*,[156] *Indus-*

149. At one point the court states that "even if she presents any appreciable risk of such harm, this factor could properly be taken into account in deciding whether, among qualified applicants, it rendered her less qualified than others for the limited number of places available." *Doe*, 666 F.2d at 780. At another point in the opinion the court states that "even if the risk of recurrence were shown to be only minimal, NYU would not be precluded from adducing evidence that it was sufficient to render her less qualified than another applicant who would be accepted in her place." *Id.* at 777.

150. *Arline*, 107 S. Ct. at 1131.

151. *See infra* notes 178-80 and accompanying text.

152. 448 U.S. 607 (1980).

153. *Id.* at 655, 657.

154. *Id.* at 655.

155. Like the health and safety risks posed by toxic waste, there is a great deal of scientific uncertainty about the health and safety risks associated with the epidemiology of the AIDS virus. In addition, the harm caused by both toxic waste and infection with the AIDS virus manifests itself long after the initial injury occurs.

156. *See infra* notes 163-67 and accompanying text.

trial Union gives deference to the informed decisions of program administrators in the face of scientific uncertainty. The court noted that "so long as they are supported by a body of reputable scientific thought, the agency is free to use conservative assumptions in interpreting the data with respect to carcinogens, risking error on the side of overprotection rather than underprotection."[157]

In comparing a significant with an insignificant risk, the court distinguished between a situation where the odds are one in a billion that a person will die from cancer and a situation where the odds are one in a thousand that a risk will prove to be fatal.[158] While the former case "clearly could not be considered significant . . . a reasonable person might well consider the risk significant" in the case where the odds are one in one thousand.[159] The court recognized that while the agency must support its finding that a certain level of risk exists by substantial evidence, "its determination that a particular level of risk is 'significant' will be based largely on policy considerations rather than a presentation of evidence approaching scientific certainty."[160]

It is undisputed that the preceding cases stand for the proposition that a person is not otherwise qualified to participate in a covered program, activity, or employment situation if his participation will put the health or safety of others or himself at risk. The only question that remains open is the degree of risk that will be tolerated under the Rehabilitation Act and the proper standard for determining when the risk will trigger the otherwise qualified requirement as a bar to discrimination actions under the Rehabilitation Act.

The calculus used to determine whether an individual's handicap poses a safety risk serious enough to render him not otherwise qualified will in general focus on the nature of the program or job in question, the likelihood that an injury causing event will occur, and the extent or severity of the harm if it does. This calculus will involve a balancing of these two factors which bear an inverse relationship with one another: the likelihood that the injury causing event will occur should decrease in importance as a factor used in the calculus as the extent or severity of harm that will result if it does occur increases.

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157. *Industrial Union*, 448 U.S. at 656. The court also noted that "it is the agency's responsibility to determine, in the first instance, what it considers to be a significant risk." *Id.* at 655.

158. *Id.* at 655.

159. *Id.* It is worth noting that a recent article in the New England Journal of Medicine surveyed all of the studies on the risk of becoming infected with the AIDS virus through accidental needle sticks and determined that the rate for acquisition of HIV infection is 1.3 to 3.9 per 1,000 health care workers with parenteral exposure to the virus. Friedland & Klein, *supra* note 1, at 1126-27. The same article found that a survey of studies examining non-parenteral or non-mucous-membrane exposure to body fluids infected with the AIDS virus found a rate of one infection per 837 health care workers studied. *Id.*

It should also be noted that there may be a legitimate distinction between the risk of being stuck with a needle infected with the AIDS virus and the risk of becoming infected with the AIDS virus once you have been stuck. However, in certain situations the severity of the potential harm and the nature of employment situations involving responsibility for the safety of others will tend to outweigh the decrease in the degree of risk resulting from such a distinction. *See infra* notes 240-43 and accompanying text.

160. *Industrial Union*, 448 U.S. at 655 n.62.

The degree or severity of harm that is likely to occur as a result of an individual's handicap is directly related to the nature of his employment or program participation and will also often have a direct relationship with the reasonableness of the standards he must meet in order to qualify as an otherwise qualified handicapped individual under the Rehabilitation Act. Jobs or programs that involve responsibility for the health and safety of others will require a higher standard of competence and a reduced risk that the handicapped individual's competency might be compromised in the future.

In many jobs the effect of having an employee's abilities impaired will be disastrous, and the degree of the risk that will be tolerated cannot be judged by the same standard as a hearing impaired bus driver, the operator of a mail sorting machine, or the cashier at the local K-Mart. In other employment situations, such as the health care setting found in *Davis* and *Doe*, the nature of the duty and the relationship involved will also dictate a higher standard of risk that will be tolerated. The degree of responsibility for the health and safety of others an employee or program administrator is entrusted with is directly related to the degree of harm that will result from their failure to meet these responsibilities. The more immense the responsibility, the lower the risk of harm that will be acceptable when setting employment standards for the consideration of candidates for employment, or in setting admission requirements for applicants to a federally-funded program.

BURDEN OF PROOF IN SECTION 504 CASES

Allocating the burden of proof in section 504 cases is resolved somewhat differently than in traditional suits alleging discrimination on the basis of impermissible factors—such as race, religion, or sex—since the defendant usually acknowledges his reliance on the plaintiff's handicap as a defense to an anti-discrimination suit brought under the Rehabilitation Act.[161]

Typically, after a plaintiff has established a prima facie case of discrimination,[162] the defendant will have the burden of establishing that the admissions or employment standards used to exclude the handicapped individual are related to the specific job or program for which the plaintiff is being considered, and are consistent with business necessity and safe performance.[163] The burden will then shift to the plaintiff who must show by a preponderance of the evidence that he is qualified for the position sought in spite of his handicap.[164] If the defendant presents evidence that the plaintiff's handicap renders him less qualified than other successful applicants, the plaintiff must show that he is at least as well qualified as the other applicants who were accepted in his place.[165]

161. *Doe*, 666 F.2d at 776.

162. In order to establish a prima facie case a plaintiff must show that: " . . . 1) he is handicapped, 2) he is qualified for the position sought, 3) he is being rejected solely on the basis of his handicap, and 4) the position exists as a part of a program receiving federal financial assistance." *Bentivegna*, 694 F.2d at 694. *See also Doe*, 666 F.2d at 776.

163. *Doe*, 666 F.2d at 776-77; *Bentivegna*, 694 F.2d at 621, 624.

164. *Bentivegna*, 694 F.2d at 621, 624. *See also Strathie*, 716 F.2d at 230.

165. *Doe*, 666 F.2d at 777.

The nature of the proof involved in establishing qualification for a given program or job, in spite of being an asymptomatic carrier of the AIDS virus, will often hinge on scientific uncertainty and closely contested medical assessments of the impact of infection on the individual's performance. The following cases indicate that in such situations courts should tend, all things being equal, to defer to the decisions of program administrators.[166]

The Second Circuit's decision in *Carey*, which involved the health and safety risk posed by the potential transmission of a contagious disease, noted that "[r]equiring government agencies to rebut a prima facie case of discrimination against the handicapped does not mean that the expertise of responsible administrators is to be disregarded."[167] Although the health and safety risks at issue in *Carey* were too remote to trigger the Rehabilitation Act's otherwise qualified requirement,[168] the court suggested that "[w]hen the validity of challenged governmental action turns on an assessment of technical matters foreign to the expertise of most courts, it may be entirely appropriate to resolve closely contested disputes in favor of the responsible administrators."[169]

Although the Third Circuit recognized in *Strathie* that program administrators are entitled to some measure of judicial deference, they rejected a broad deference resembling that associated with the rational basis test as contrary to the intent of Congress in enacting section 504.[170] The Second Circuit re-emphasized a broader standard for judicial deference in *Doe* when they urged that "considerable judicial deference must be paid to the evaluation made by the institution itself, absent proof that its standards and its application of them serve no purpose other than to deny an education to handicapped persons."[171]

The Supreme Court has not specifically addressed the question of who should bear the burden of medical uncertainty in a section 504 suit. However, the Supreme Court has addressed this question with reference to other statutes. In *Industrial Union Dept., AFL-CIO v. American Petroleum Institute*,[172] the Court applied rules of construction that have general applicability[173] to determine the proper allocation of the burden of proof under the Occupational Safety and Health Act. The question addressed by the court involved the validity of OSHA's requirement that the textile industry prove beyond a shadow of a doubt that there is a safe level for occupational benzene exposure.[174]

The three justice plurality opinion disagreed with the agency's alloca-

166. *See, e.g.*, Martinez v. School Bd. of Hillsborough County, 675 F. Supp. 1574, 1582 (M.D. Fla. 1987). In refusing to issue a preliminary injunction ordering the school district to allow a mentally retarded child with the AIDS virus to attend school, the court observed that "[w]here, as here, there is any question as to whether the public safety and welfare is threatened, the Court must rule on the side of that public interest." *See infra* note 208 and accompanying text.

167. *Carey*, 612 F.2d at 650.

168. *See supra* notes 71 & 72 and accompanying text.

169. *Carey*, 612 F.2d at 650.

170. *Strathie*, 716 F.2d at 231.

171. *Doe*, 666 F.2d at 776.

172. 448 U.S. 607 (1980).

173. *Cooper Memorandum, supra* note 1, at 38 n.88.

174. *Industrial Union*, 448 U.S. at 652.

tion of the burden of proof to the manufacturer on the grounds that the burden of proof ordinarily lies with the party seeking to challenge the judgement of the party subject to regulation.[175] Under this reasoning the burden of medical uncertainty would be on the plaintiff in an action brought under section 504 of the Rehabilitation Act. A Justice Department memorandum has argued that even the four justice dissenting opinion in *Industrial Union* supports the view that the risk of medical uncertainty must be borne by the plaintiff in section 504 suits.[176]

DETERMINING THE RISK OF HARM ASSOCIATED WITH CARRIERS OF THE AIDS VIRUS: THREE HEALTH OR SAFETY RISKS THAT WOULD RENDER AN ASYMPTOMATIC CARRIER OF THE AIDS VIRUS NOT OTHERWISE QUALIFIED FOR EMPLOYMENT

The case history establishing health and safety risks as a legitimate defense to discrimination suits brought under the Rehabilitation Act, when combined with an analysis of the current state of medical knowledge on the nature of Acquired Immune Deficiency Syndrome, suggests at least three types of health or safety risks associated with a variety of employment situations which would lead a court to conclude that an asymptomatic carrier of the AIDS virus would not be "otherwise qualified" for employment: (1) the health risk that a contagious employee poses to others, (2) the safety risk posed by employees responsible for the safety of others who may be subject to future mental impairment as a result of their infection with the AIDS virus, and (3) the health risk posed to an infected employee by work-related conditions.

Contagiousness

In *School Board of Nassau County v. Arline*,[177] the Supreme Court held that a person who poses a significant risk of communicating an infectious disease to others in the workplace will not be otherwise qualified for his or her job if reasonable accommodation will not eliminate that risk.[178] It is clear from this ruling, and the available medical evidence on the nature of AIDS, that asymptomatic carriers of the AIDS virus will not be "otherwise qualified" to perform those jobs which involve a significant risk of transmitting the virus to others.

In *Arline*, the Court cited with approval the criteria suggested by the American Medical Association (AMA) for determining whether such a significant risk exists.[179] The AMA's criteria included as important factors for courts to consider when deciding whether someone with a communicable disease is "otherwise qualified" for employment: (a) the nature of the risk, (b) the duration of the risk, (c) the severity of the risk, and (d) the likelihood

175. *Id.* at 651.
176. *Cooper Memorandum, supra* note 1, at 38 n.88.
177. 107 S. Ct. 1123 (1987).
178. *Id.* at 1131 n.16.
179. *Id.* at 1131.

that the disease will be transmitted and cause harm. The AMA's amicus brief noted that these findings of fact should be "based on reasonable medical judgments given the state of medical knowledge" about the relevant factors mentioned above.[180] The Court stressed that in making such judgments, the lower courts "normally should defer to the reasonable medical judgments of public health officials."[181]

a. *The Duration and Severity of the Risk*

Current medical knowledge indicates that the duration of the risk of infection lasts for the lifetime of the carrier of the AIDS virus.[182] The severity of the risk—the potential harm to third parties—is extreme since the current medical knowledge indicates that a significant majority of those infected with the virus will eventually develop AIDS and die from the disease.[183] In addition, at least a significant minority of those infected with the virus will also suffer debilitating damage to their central nervous systems and retinas in conjunction with or entirely unrelated to the damage the virus causes to their immune systems.[184] Unlike other safety risks where the injury causing event will have a one time impact on the injured individual alone, the severity of the risk of injury posed by carriers of the AIDS virus is

180. Brief for American Medical Association as Amicus Curiae at 19, *Arline*, 107 S. Ct. 1123 (1987).

181. *Arline*, 107 S. Ct. at 1131. The Court leaves the question open as to "whether courts should also defer to the reasonable medical judgements of private physicians on which an employer has relied." *Id.* at 1131 n.18.

182. Unlike tuberculosis, or other infectious diseases where the infected person is not always contagious, a carrier of the AIDS virus is always capable of transmitting the disease under certain conditions. For instance, there is a risk of a carrier transmitting the AIDS virus whenever there is an exchange of body fluids—such as blood or semen—between the infected person and an uninfected person. *See generally Surgeon General's Report, supra* note 6, at 7.

183. The Surgeon General's Report relies on the CDC's estimate that 20-30% of those carrying the AIDS virus will eventually develop full-blown AIDS. *Id.* at 12. However, Surgeon General Koop recently testified under oath that "there is a consensus that of those who are HIV infected, at least 35-50% will develop AIDS. There are higher projections that cannot be ruled out." *Id.* at 3.

The Institute of Medicine of the National Academy of Sciences has predicted that 25-50% of those infected with the AIDS virus will develop full-blown AIDS over five to ten years. Institute of Medicine, National Academy of Sciences, *Confronting AIDS: Directions for Public Health, Health Care, and Research*, at 4 (1986). Another study, conducted by a research team in Frankfurt, West Germany, has reported that 75% of those infected with the AIDS virus will enter the final and inevitably fatal stages of the disease within seven years. Brodt, Helm, Werner, Joetten, Bergman, Kluver & Stille, *Spontanverlauf der LAV/HTLV-III-Infektion*, 111 DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT 1175 (1986); *see also AIDS: German Survey's Gloomy Outlook*, 324 NATURE 199 (1986). A model developed by epidemiologists at the San Fransisco Health Department predicts that 100% of those infected with the AIDS virus will develop full-blown AIDS within 16 years. *Model Suggests 100% of HIV Infected May Progress to AIDS*, Medical World News, February 8, 1988, at 56.

The Chief of the Department of Virus Diseases of the Walter Reed Army Institute of Research, has testified that "[o]ur own studies suggest that over 75% of asymptomatic HIV-infected persons show evidence of progressive immunological impairment over three years." Declaration of Donald Burke at 1, *Local 1812*, 662 F. Supp. 50 (D.D.C. 1987). The studies referred to by Burke developed a six-stage system of classification beginning with a positive blood test and ending with full-blown AIDS. The system was used to follow a group of patients for as long as 36 months and found that about 90% of them progressed from the stage in which they began the study to a subsequent stage. One researcher has noted that "[s]uch results suggest that, contrary to what has been suggested, there may not be a large group of infected people who remain without symptoms." Gallo, *The AIDS Virus*, Scientific American, January, 1987, at 56.

184. *See infra* notes 218-32 and accompanying text.

compounded when one considers that those infected with the virus are capable of transmitting the virus to others in a never-ending chain of infection.

b. *The Nature of the Risk and the Likelihood That the Virus Will Be Transmitted and Cause Harm*

It is generally accepted that there are only three routes of transmission through which someone can become infected with the AIDS virus that have been demonstrated to be important: (1) transmission through an inoculation of infected blood,[185] (2) transmission through sexual relations with an infected partner,[186] and (3) the perinatal transmission of the virus from the

185. The known avenues of this route of transmission are through the transfusion of blood and blood products, needle sharing among intravenous drug users, injection with unsterilized needles, *see Surgeon General's Report*, *supra* note 6, at 8-10, and needle stick, open wound, and mucous membrane exposure in health care workers. *See supra* notes 145-46 and 150-52 and accompanying text. *See also* Friedland & Klein, *supra* note 1, at 1126.

Transfusion Associated Infection: 7,200 people are estimated to have become infected with the AIDS virus through transfusions in 1984, before routine testing of the blood supply began in March, 1985. There are still an estimated 460 people who become infected through transfusions each year. The risk of becoming infected through a transfusion is estimated at approximately one in 40,000. *AIDS Risk in Transfusions Seen Low*, Washington Post, February 25, 1988, at A1.

Hemophiliacs: 70-80% of persons with hemophilia have become infected with the AIDS virus after receiving infected blood clotting products while 12,000 persons in the United States were infected with HIV through transfusions before screening of donated blood began. *See* Friedland & Klein, *supra* note 1, at 1126.

Intravenous Drug Users: 25% of all cases of AIDS in the U.S. have occurred in persons who use intravenous drugs, and 17% have occurred among those in whom intravenous drug use is the only risk factor. *Id.* at 1127. Eighty two percent of cases of AIDS among intravenous drugs users have occurred in the New York City metropolitan area, *id.*, where intravenous drug users account for 36% of AIDS cases. Editorial, *Fight AIDS Now With Methadone*, N.Y. Times, June 10, 1987, at A30.

At least one study has identified intravenous drug users as the bridge to the further spread of the AIDS virus among the heterosexual community. Chiasson, Stoneburner, Lekatsas & Walker, *Heterosexual Transmission of AIDS in New York City*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume, at 75. This conclusion is disturbing in light of studies which have shown that up to 60% of female drug users in New York City are infected with the AIDS virus. *Prenatal Screening Misses 85%*, Washington Times, January 21, 1988, at 1.

186. *Prenatal Screening Misses 85%*, *supra* note 181, at 10. The Surgeon General's Report reports that while 70% of AIDS victims throughout the country are male homosexuals and bisexuals . . . This percentage probably will decline as heterosexual transmission increases." The Surgeon General's early predictions have been confirmed by recent studies on the heterosexual transmission of the AIDS virus.

An article in the February 6, 1987, issue of the Journal of the American Medical Association reported a study which found "a high rate of transmission of [HIV] among heterosexual couples" and concluded that "it is apparent that vaginal intercourse alone is sufficient for the heterosexual transmission of [HIV]." Fischl, Dickinson, Scott, Klimas, Fletcher & Parks, *Evaluation of Heterosexual Partners, Children, and Household Contacts of Adults With AIDS*, 257 J. AM. MED. ASSOC. 640, 643 (1987). *See also* Refield, Markham, Salahuddin, Sarngadharan, Bodner, Folks, Ballou, Wright & Gallo, *Frequent Transmission of HTLV-III Among Spouses of Patients With AIDS-Related Complex and AIDS*, 253 J. AM. MED. ASSOC. 1571 (1985). An even more recent article surveyed the sexual-partner studies conducted to date and concluded that they "clearly demonstrate substantial male-to-female transmission." Friedland & Klein, *supra* note 1, at 1129-30.

The same article addressed the more controversial issues surrounding the possibility of female-to-male transmission:

> In Africa, female-to-male transmission is well documented, whereas in the United States, female-to-male transmission has been reported infrequently. There are two possible explanations. First, transmission from women to men may be less efficient than from men to women. Second, the infrequent documentation of transmission of HIV from women to men may be a function of the history of the AIDS epidemic in the United States. Because of the prolonged incubation period of AIDS, cases that are now reported are the result of transmission events that occurred years ago, at a time when the virus was circulating

infected mother to her child.[187] As a result, there are a large number of occupations and programs where the risk that an employee or program participant infected with the AIDS virus could transmit the virus to others would be nonexistent.

Clearly, then, there are situations where the nature of the risk, when coupled with the probability that the virus will be transmitted, is so slight that this consideration will outweigh the duration and severity of the risk. Thus, the health and safety risk presented by classroom teachers[188] or food

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predominantly among the male population . . . . During this time, the number of infected women was low, and therefore the possibility of female-to-male transmission was small . . . . With an increase in the pool of infected women, female-to-male transmission may become more common and more easily documented.

The future direction and magnitude of heterosexual transmission in the U.S. are not known. If the experience in Africa is applicable in this country, substantial increases in heterosexual transmission must be anticipated. However, cultural, behavioral, and environmental factors may make the African experience not directly transposable.

Friedland & Klein, *supra* note 1, at 1129-30. *See also AIDS Virus May Be Increasingly Infectious: Time to Play Role in Transmission of Virus*, Washington Post, June 4, 1987, at A25 (results of study revealed carriers of the AIDS virus become more infectious with time and increase their ability to pass on the infection which suggests that the rate of heterosexual transmission might increase over the next few years); *Sexual Transmission of AIDS Unpredictable*, Washington Post, January 1, 1988, at A10 (results of study revealed that the risk of sexual transmission varies unpredictably, depending on unknown biological factors, which casts doubt on previous estimates that the risk of acquiring the AIDS virus from a single sexual contact with an infected person was one percent or less. The study gave examples of people who were infected with the AIDS virus after only a few sexual contacts).

At present, only 4% of AIDS cases in the United States occur among heterosexual partners of risk group members. Chamberland, White, Lifson & Dondero, *AIDS in Heterosexual Contacts: A Small but Increasing Group of Cases*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume, at 57. The Coolfant Planning Conference estimated that 9% of the 270,000 AIDS cases that are expected to occur by 1991 will be among heterosexuals. *Tenfold Increase in AIDS Death Toll is Expected by 1991*, N.Y. Times, June 13, 1986, at A1.

For the reasons cited above, as well as those discussed below, the future direction of heterosexual transmission should not be extrapolated from these low figures. Already AIDS has become the leading cause of death among women aged 25 to 34 in New York City. Washington Post, June 5, 1987, at D2. In addition, one in 61 babies born in New York City are infected with the AIDS virus. N.Y. Times, January 13, 1988, at A1.

In recent testimony to the President's AIDS Commission, Dr. Sheldon Landesman, director of the AIDS Study Group at the State University of New York's Health Science Center, estimated that the pool of infected heterosexuals probably exceeds a quarter of a million people. "The impact of this population on future generations of women and children is just starting to be felt," he said. *Spread of AIDS Abating, But Deaths Will Still Soar*, N.Y. Times, February 14, 1988, at 36.

The Defense Department is currently the only organization conducting a nationwide testing program, and has therefore produced the only reliable data on the nationwide prevalence of the AIDS virus among heterosexuals. A study based on this data, conducted by the Walter Reed Army Institute of Research, has concluded that a

finding of male:female prevalence ratios close to unity suggests that heterosexual transmission may already have emerged as an important mode of HIV infection in some regions in the United States . . . . In counties with the highest seroprevalences, young women may be infected at rates nearly comparable to those of men. Future statistics on AIDS will probably reflect these changes.

Burke, Brundage, Herbold, Berner, Gardner, Gunzenhauser, Voskovitch & Redfield, *Human Immunodeficiency Virus Infections Among Civilian Applicants For United States Military Service, October 1985 to March 1986*, 317 NEW ENG. J. MED. 131, 136 (1987).

187. *Surgeon General's Report*, *supra* note 6, at 8. A study presented at the III International Conference on AIDS reported that the risk of perinatal transmission of the AIDS virus from mother to infant "can be presently estimated to be around 44 percent." De Maria, Varnier, Melica, Pantarotto, Grovari & Terragna, *Transmission of HTLV III (HIV) in Infants of Seropositive Mothers*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume at 76.

188. The Court of Appeals for the Ninth Circuit recently ruled that the risk of transmission in the classroom setting was not significant enough to render a teacher not otherwise qualified for

service workers infected with the AIDS virus would not be significant enough to trigger the Rehabilitation Act's otherwise qualified requirement as a bar to a discrimination suit brought under section 504, regardless of the public misperceptions about the dangers of infection through food preparation and airborne transmission.[189]

There are other situations, however, where the nature of the risk and the probability that the virus will be transmitted is high enough so that the infected employee or program applicant will not be "otherwise qualified" to participate safely in functions required of the job or program in question.

There is a good argument, for instance, that health-care workers who perform or assist in invasive surgical procedures would not be otherwise qualified for employment because of the risk of their transmitting the virus to an unsuspecting patient undergoing such a procedure.[190] In addition, school children infected with the AIDS virus might be excluded from the classroom under certain, very narrow, circumstances.

c. *Potential for Transmission in the Classroom Setting*

Three federal district courts have addressed the issue of whether children infected with the AIDS virus are otherwise qualified to attend classes with other students.[191] The approaches taken by these courts reflect the implicit calculus, discussed in a previous section,[192] that has been applied by earlier courts attempting to determine when health and safety risks posed by an individual's handicap will trigger the Rehabilitation Act's otherwise qualified requirement.

In all three cases, the courts deferred to the reasonable medical judgments of public health officials by relying on a variety of guidelines concerning the education of children infected with the AIDS virus, including guidelines prepared by the Public Health Service's Centers for Disease Control and the American Academy of Pediatrics.[193] The guidelines uniformly

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employment as a result of his infection with the AIDS virus. Chalk v. District Court, 832 F.2d 1158 (9th Cir. 1987). *See supra* notes 38-40 and accompanying text.

189. A recent survey by the CDC's National Center for Health Statistics revealed widespread ignorance among Americans on the nature of AIDS virus transmission. Thirty six percent of those surveyed thought it very likely or somewhat likely that a person would get AIDS from eating at a restaurant where the cook had AIDS, while 18% believed that working near an AIDS patient was a threat. *Survey Finds Wide AIDS Ignorance*, N.Y. Times, January 30, 1988, at Y6.

190. An "invasive surgical procedure" is defined by the CDC as:

> surgical entry into tissues, cavities, or organs or repair of major traumatic injuries 1) in an operating or delivery room, emergency department, or outpatient setting, including both physicians' and dentists' offices; 2) cardiac catherization and angiographic procedure; 3) a vaginal or cesarian delivery or other invasive obstetric procedure during which bleeding may occur; or 4) the manipulation, cutting, or removal of any oral or perioral tissues, including tooth structure, during which bleeding occurs or the potential for bleeding exists.

Recommendations for Prevention of HIV Transmission in Health-Care Settings, 36 MORBIDITY AND MORTALITY WEEKLY REP. 2S, 6S-7S (1987).

191. *Thomas*, 662 F. Supp. 376; *Ray*, 666 F. Supp. 1524; Martinez, 675 F. Supp. 1574.

192. *See supra* text accompanying notes 58-65 & 139-152.

193. *Education and Foster Care of Children Infected With [the AIDS] Virus*, 34 MORBIDITY & MORTALITY WEEKLY REP. 517-21 (1985) (published by the Centers for Disease Control); American Academy of Pediatrics, *Report of the Committee on Infectious Diseases* (1986); American Red Cross, *AIDS and Children* (1986); Public Health Service, *Surgeon General Workshop on Children with HIV Infection and Their Families* (1987).

conclude that in most situations, a child infected with the AIDS virus should be allowed, with the approval of the child's physician, to attend school without restrictions.[194]

The CDC's guidelines frame the nature of the inquiry a court should conduct in deciding whether to order a school to admit a child infected with the AIDS virus. The CDC guidelines recommend:

> Decisions regarding the type of educational and care setting for [HIV]-infected children should be based on the behavior, neurological development, and the physical condition of the child and the expected type of interaction with others in the setting. . . . In each case, risks and benefits to both the infected child and to others in the setting should be weighed.[195]

Guidelines prepared by the American Academy of Pediatrics argue that the present scientific data leads to the conclusion that, in the majority of cases involving school age children infected with the AIDS virus, the benefits of unrestricted school attendance will outweigh the possibility that they will transmit the infection in the school environment.[196]

However, the guidelines prepared by the CDC, the American Academy of Pediatrics, and other organizations also uniformly recognize that decisions must be made on a case by case basis and that there are exceptions to the general medical consensus that children infected with the AIDS virus are otherwise qualified to attend class with other students. The American Academy of Pediatrics' guidelines, for instance, recognize that:

> *Some infected students may pose an increased risk to others in school.* Students who lack control of their body secretions, who display behavior such as biting, or who have open skin sores which cannot be covered require a more restricted school environment *until more is known about the transmission of the disease in these circumstances.*[197]

The CDC's guidelines also recognize that, under certain circumstances, children infected with the AIDS virus will present enough of a risk to other children that they will not be otherwise qualified to attend school:

> For the infected preschool-aged child and for some neurologically handicapped children who lack control of their body secretions or who display behavior, such as biting, and those children who have uncoverable, oozing lesions, *a more restricted environment is advisable until more is known about transmission in these settings.* Children infected with [the AIDS virus] should be cared for and educated in settings that *minimize exposure of other children to blood or body fluids.*[198]

In both *Ray v. School District of Desoto County*[199] and *Thomas v. Atascadero Unified School District*,[200] federal district courts granted preliminary injunctions ordering the respective school districts to allow hemophiliac chil-

194. *Martinez*, 675 F. Supp. at 1580 (quoting from the American Academy of Pediatrics' *Report of the Committee on Infectious Diseases*).
195. *Martinez*, 675 F. Supp. at 1581.
196. *Id.* at 1580.
197. *Id.* at 1580 (emphasis added).
198. *Thomas*, 662 F. Supp. at 381 (emphasis added).
199. 666 F. Supp. 1524 (M.D. Fla. 1987).
200. 662 F. Supp. 376 (C.D. Cal. 1986).

dren who were carriers of the AIDS virus to attend classes with other children. The *Thomas* court held that "there is no evidence that Ryan Thomas poses a significant risk of harm to his kindergarten classmates or teachers," concluding that "[a]ny theoretical risk of transmission of the AIDS virus by Ryan in connection with his attendance in regular kindergarten class is so remote that it cannot form the basis for any exclusionary action by the School District."[201]

The *Ray* court cited *Thomas* in support of its decision to grant a preliminary injunction ordering the School District to admit three hemophiliac brothers infected with the AIDS virus.[202] Relying in large part on the CDC guidelines, Judge Kovachevic concluded that the injury to the children caused by denying the Rays' access to school outweighed the potential harm to the other children resulting from the risk of AIDS virus transmission in the classroom setting.[203]

Several months later, in *Martinez v. School Board of Hillsborough County*,[204] Judge Kovachevic was again presented with a request for a preliminary injunction requiring a school district to allow a child infected with the AIDS virus to attend classes with other children. Unlike the circumstances in *Thomas* and *Ray*, which involved older children who were relatively healthy asymptomatic carriers of the AIDS virus, *Martinez* involved a six year old retarded girl, with a mental age of one year, who had been diagnosed as suffering from severe AIDS dementia complex, AIDS Related Complex (ARC), and was incontinent.[205]

The court consulted the guidelines developed by the CDC and the American Academy of Pediatrics, balanced the public interest in non-discrimination against the potential harm to others, and denied the request for the preliminary injunction based on the risk of AIDS virus transmission in the classroom setting.[206] The court made note of the fact that the child was unable to control body secretions and, as a result, concluded that, under the

201. *Thomas*, 662 F. Supp. at 382, 380. The initial judgement ordering a preliminary injunction was modified on February 20, 1987, at which time the court granted the plaintiff's request for a permanent injunction.

202. *Ray*, 666 F. Supp. at 1536.

203. *Id.* at 1535. The Court noted that

> [t]he public at large has several interests to be considered here . . . :
>
> First, is the concern of the public to provide adequate, non-discriminatory education to all the children of this state. The children of this state include children like the Ray boys, who, through no fault of their own, have contracted this disease; it clearly provokes in many, fear and a desperate desire to segregate them from mainstream life. However, there is an equally important public interest in protecting the health and safety of the public at large, and here, specifically, the school population which would be in contact with the Ray boys, if they are returned to an integrated classroom.
>
> It is the duty of this Court to weigh all factors in this case and balance the competing interests, in order to determine if a preliminary injunction is appropriate. The Court finds that the actual ongoing injury to Plaintiffs in this case clearly outweighs the potential harm to others, and that the public interest in this case weighs in favor of returning these children to an integrated classroom setting.

Id. (citations omitted).

204. 675 F. Supp. 1574 (M.D. Fla. 1987).

205. *Martinez*, 675 F. Supp. at 1576. Although the child in *Martinez* was a year older than the child in *Thomas*, the risks associated with her age were the risks that would be presented by a one year old rather than a six year old.

206. *Id.* at 1583.

facts of this case, the child "poses a real and present threat to the school population, . . . the specific potential harm to others clearly outweighs the interests of the plaintiff, and that the public interest in this case weighs in favor of not returning Eliana Martinez to a classroom setting."[207]

The court's decision seemed to hinge on the divided expert opinion and general scientific uncertainty surrounding the transmission of the AIDS virus through an exchange of body secretions.[208] Noting that it was "unaware of any researcher who claims to completely understand the transmission of AIDS,"[209] the court cautioned that "[t]he mystery of the virus and its communicability challenges jurists legally to be assured our decisions do not lead us to allow proliferation of this disease by our ignorance."[210]

Not unlike the Supreme Court's approach to determining the severity of health and safety risks in *Industrial Union*,[211] the Martinez court errs in favor of overprotection, rather than underprotection, when faced with a closely contested issue involving substantial medical uncertainty. The court concluded that "[w]here, as here, there is any question as to whether the public safety and welfare is threatened, the court must rule on the side of the public interest."[212]

For the most part, the nature of the risk posed by the program is the same in all three of these cases. They can be distinguished, however, by the nature of the risk posed by the handicap at issue in *Martinez*—an incontinent mentally impaired child infected with the AIDS virus—which is greater than in the other two cases and sufficient to trigger the otherwise qualified requirement to temporarily bar the child's attendance until the case is resolved.[213]

The same rationale can be applied to a comparison between *Martinez* and *Carey*,[214] both of which involved the risk of contagion posed by mentally retarded children in the classroom setting.[215] Once again, the disparate

207. *Id.* at 1582 (emphasis in original).

208. The court noted that "[s]uch assertion of risk as to transmission is not clearly rebutted by the evidence in this case. There is clearly divided expert medical evidence and opinion in this case." *Id.*

209. *Id.* at 1579.

210. *Id.* at 1578.

211. Like the Supreme Court's determination of the significance of the risk in *Industrial Union*, Judge Kovachevic's decision in *Martinez* was based largely on policy considerations rather than a presentation of evidence approaching scientific uncertainty. *See Industrial Union*, 448 U.S. at 655 n.62.

212. *Martinez*, 675 F. Supp. at 1582.

213. In *Martinez*, Judge Kovachevic relied on the fact that the infected child was "incontinent, lacking control over her bowels and bladder, as well as the CDC's expression of uncertainty and lack of knowledge regarding the transmission of the AIDS virus through contact with body fluids." *Id.* at 1576. *See supra* notes 193-94 and accompanying text. In *Ray*, on the other hand, Judge Kovachevic relied on two studies which came to the conclusion that the risk that hemophiliacs infected with the AIDS virus would transmit the virus to others through the type of casual contact normally associated with an integrated classroom setting was extremely low. *Ray*, 666 F. Supp. at 1531.

214. *Carey*, 612 F.2d 644.

215. *Carey* involved a challenge to the New York City Board of Education's attempt to exclude mentally retarded children from regular school classes because they were carriers of the hepatitis B virus. *See supra* notes 69-76 and accompanying text.

result in the two cases can be distinguished by the nature of the risk posed by the handicap and the severity of the harm that is likely to occur as a result of this risk.

In *Carey*, there was no mention of the retarded children being incontinent and the severity of the harm posed by infection with hepatitis B is not as great as the severity of the harm posed by infection with the AIDS virus.[216] In addition, the remoteness of the risk of transmission did not seem to be a closely contested issue of medical uncertainty.[217] In fact, the language of the *Carey* court's opinion—where the court concedes that it may be appropriate to resolve closely contested issue in favor of program administrators where the challenged governmental action turns on technical matters foreign to the experience of most courts[218]—could probably be used to support the result in *Martinez* and other cases involving similar circumstances. In the end, future cases addressing this issue will ultimately be decided on the basis of the specific facts peculiar to each situation.[219]

d. *Potential for Transmission in the Health Care Setting*

The nature of the risk involved with the infection of patients by health care workers (HCWs) carrying the AIDS virus centers around the nature of the risk of transmission through the inoculation of blood, as would occur during an invasive surgical procedure where the health care worker is injured and their blood mingles with the blood of the patient.[220] The Centers for Disease Control (CDC) issued early guidelines which recognize that:

> [a] risk of transmission of [the AIDS virus] would exist in situations where there is both (1) a high degree of trauma to the patient that would provide a portal of entry for the virus (e.g., during invasive procedures) and (2) access of blood or serous fluid from the infected HCW to the open tissue of a patient, as could occur if the HCW sustains a needle-stick or scalpel injury during an invasive procedure.[221]

In more recent guidelines, which contained recommendations on the testing of health care workers, the CDC reiterated its finding that "transmission [of the AIDS virus] during invasive surgical procedures remains a possibility," and expressed its hope that, if followed, its updated guidelines "will minimize the risk of transmission of [the AIDS virus] from health care

216. "The acute stage of this disease, which is relatively rare, is manifested by symptoms that vary from a mild fever to jaundice and inflammation of the liver." *Carey*, 612 F.2d at 647.

217. The *Carey* court's decision hinged on the "strength of the appellees' evidence and the weakness of the Board's evidence" and the fact that "the Board completely failed to prove its case." *Carey*, 612 F.2d at 647.

218. *See supra* notes 163-65 and accompanying text.

219. *See supra* note 191 (CDC guidelines listing factors that should be taken into account when deciding the issue on a case-by-case basis).

220. It is well documented that the AIDS virus can be transmitted through an exchange of blood. *See generally Surgeon General's Report*, *supra* note 6. *See supra* notes 1 & 181. There have even been cases reported where health care workers were infected with the virus after accidently being stuck with an HIV contaminated needle or when broken skin was exposed to the blood of a virus carrier. Friedland & Klein, *supra* note 1, at 1126. *See infra* notes 228-37 and accompanying text.

221. *Recommendations for Preventing Transmission of Infection with HTLV-III/LAV in the Workplace*, 34 MORBIDITY & MORTALITY WEEKLY REP. 691 (1985) (hereinafter *Workplace Recommendations*).

workers to patients during invasive surgical procedures."[222] Guidelines issued by the American Hospital Association (AHA) also recognize the possibility of transmission of the AIDS virus during invasive surgical procedures.[223] The AHA has urged that health care workers infected with the AIDS virus should wear two pairs of gloves when performing invasive surgical procedures and has recommended the "immediate replacement of damaged gloves during the performance of these procedures."[224]

It is significant that the CDC document does not say that following the guidelines will eliminate the risk of transmission, but that such practices will only "minimize the risk."[225] To determine the extent of the risk, and whether it would be significant enough to render a health care worker not qualified to perform or assist in invasive surgical procedures, one must begin by comparing the risk that a health care worker will incur an injury that draws blood and the risk of infection once the blood from the health care worker's injury has mingled with the patients open wound.

i. *Risk of Injury to Health Care Workers*

The CDC has already acknowledged that gloves can be damaged during invasive surgical procedures.[226] The gloves used during surgical procedures are very thin and skin tight in order to ensure maximum dexterity. The surgical instruments used during surgical procedures, such as the scalpel used for opening surgical wounds and the suturing needle used to close the wounds, are razor sharp. It is unlikely that an injury to the glove would not also produce a blood drawing injury to the skin.

A recent article on the CDC guidelines for prevention of surgical wound infections published in the professional journal *Infection Control* observed that punctures in gloves "occur frequently."[227] The article cited an earlier bacteriological study of surgical gloves from operations which noted that 20 percent of the gloves used in invasive surgical procedures may be perforated during operations.[228]

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222. *Recommendations for Prevention of HIV Transmission in Health-Care Settings*, 36 MORBIDITY & MORTALITY WEEKLY REP. 15S (1987) (hereinafter *Health-Care Recommendations*)

223. American Hospital Ass'n, *Recommendations of the AHA Advisory Committee on Infections within Hospitals* 12 (1986).

224. *Id.* Guidelines issued by the Centers for Disease Control also warn that "[i]f a glove is torn or a needlestick or other injury occurs, the glove should be removed and a new glove used as promptly as patient safety permits." *Health-Care Recommendations, supra* note 222, at 7S.

225. *See supra* note 222 and accompanying text.

226. *See supra* note 224.

227. Garner, *CDC Guideline for Prevention of Surgical Wound Infections, 1985*, 7 INFECTION CONTROL 193, 196 (1986). A study presented at the III International Conference on AIDS reported that 42% of dental hygienists who routinely wore gloves reported 2 puncture wounds per month while an additional 25% reported as many as six puncture wounds per month. Harper, Flynn, Van Horne, Jain, Carlson & Pollet, *Absence of HIV Infection Among Dental Professionals*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume, at 199.

228. Walter & Kundsin, *The Bacteriologic Study of Surgical Gloves From 250 Operations*, 129 SURGERY, GYNECOLOGY & OBSTETRICS 949 (1969).

ii. *Risk of Infection From Injured Health Care Worker to Uninfected Patient*

The risk of infection from the inoculation of blood is perhaps the most difficult part of the calculus to quantify since it is the subject of the most scientific uncertainty and debate. So far no health care workers have infected a patient with the AIDS virus in spite of the fact that as of May 1, 1986, 5.5 percent of all patients with AIDS in the United States reported that they were employed in health care or clinical laboratory settings.[229] This is not surprising after considering that the epidemic is only seven years old and is not so pervasive that more than a handful of health care workers who perform or assist in surgical procedures have been infected yet.

Cases have been documented, however, where health care workers have infected patients with the Hepatitis B virus (HBV) during invasive surgical procedures.[230] In the past, the CDC has compared the epidemiology of the HBV to the epidemiology of the AIDS virus and has extrapolated from its experience with the HBV in an effort to understand the risk of workplace transmission of the AIDS virus.[231]

There have been a number of reported cases where patients have infected health care workers with the AIDS virus through an accidental inoculation of blood.[232] In one highly publicized case, a doctor was infected with the AIDS virus after a glass vial filled with blood broke in his hand and lacerated one of his fingers.[233] In other cases, nurses have been infected with the AIDS virus after a patient's blood came into contact with mucous membrane or broken skin,[234] and a researcher has been infected with the AIDS virus in a laboratory setting without any traceable contact with blood or

229. *Health-Care Recommendations, supra* note 222, at 4S.

230. While acknowledging that the risk of Hepatitis B virus transmission in health care settings far exceeds that for the AIDS virus, the most recent CDC guidelines have acknowledged that "[t]ransmission of hepatitis B virus (HBV) [during invasive surgical procedures] . . . from health care workers to patients has been documented." *Health-Care Recommendations, supra* note 222, at 15S.

231. The CDC has previously noted that "[t]he epidemiology of [AIDS virus] infection is similar to that of hepatitis B virus (HBV) infection, and much that has been learned in the past fifteen years related to the risk of acquiring hepatitis B in the workplace can be applied to an understanding of the risk of [AIDS virus] transmission." *Workplace Recommendations, supra* note 221, at 682-83 (1985).

232. *Health-Care Recommendations, supra* note 222, at 4S.

233. *Physician Sues Johns Hopkins After Contracting AIDS*, Am. Med. News, June 19, 1987, at 15.

234. The following case studies are excerpted from the May 22, 1987, issue of the CDC's *Morbidity and Mortality Weekly Report*:

> Health Care Worker 1: A female health-care worker assisting with an unsuccessful attempt to insert an arterial catheter in a patient suffering a cardiac arrest in an emergency room applied pressure to the insertion site to stop the bleeding. During the procedure, she may have had a small amount of blood on her index finger for about twenty minutes before washing her hands . . . . She had no open wounds, but her hands were chapped [and] . . . she was not wearing gloves during this incident . . . . Health Care Worker 2: A female phlebotomist was filing a 1.0 ml vacuum blood collection tube with blood from an outpatient with a suspected HIV infection when the top of the tube flew off and blood splattered around the room, on her face, and in her mouth . . . . She had facial acne but no open wounds.
>
> Health Care Worker 3: A female medical technologist was manipulating an apherisis machine (a device to separate blood components) to correct a problem that developed during an outpatient procedure when blood spilled, covering most of her hands and forearms. She does not recall having any open wounds on her hands or any mucous-membrane exposure. However, she had dermatitis on one ear and may have touched it.

blood products.[235]

The minimum dose of virus in contaminated blood that can successfully establish infection is currently unknown and perhaps the area of greatest medical uncertainty in the field of AIDS research.[236] However, AIDS patients are known to be more viremic at certain phases of the disease and the particles of a given virus vary widely in their pathogenicity.[237]

Perhaps the most useful analogy to use in attempting to determine the risk of transmission from surgical wounds is the data that have been collected on the risk of transmission from needle-stick injuries. This is particularly useful since the amount of blood involved in needle stick injuries is extremely small[238] and presents a conservative assessment of the risk from exposure to inoculated blood. The amount of blood involved in an average surgical wound is likely to be much larger than that involved in an average needle-stick injury.

A recent article in the *New England Journal of Medicine* surveyed and summarized the available data from the studies of the risk of HIV infection associated with needle-stick injuries.[239] The article concluded that these studies "[c]learly demonstrate the possibility of transmission by HIV-infected blood," even though they do not provide a rate of risk since the at-risk population is not known.[240] The studies did reveal that the rate of acquisition of HIV infection is 1.3 to 3.9 per 1000 health care workers with needle stick exposures to small amounts of blood contaminated with the AIDS virus.[241]

Update: Human Immunodeficiency Virus-Infections in Health-Care Workers Exposed to Blood of Infected Patients, 36 MORBIDITY AND MORTALITY WEEKLY REP. 285 (1987).

The CDC report noted that "[c]areful investigation of these three cases did not identify other risk factors for HIV infection, although unrecognized or forgotten needle-stick exposures cannot be totally excluded." *Id.* at 285-86.

235. This researcher was contaminated with a rare strain of the AIDS virus which could not have been contracted anywhere else except for the laboratory where they were being cultured. A second laboratory worker was contaminated after he cut his gloved finger with a blunt stainless steel needle while cleaning a contaminated piece of equipment. Weiss, Goedert, Gartner, Popovic, Waters, Markham, Veronese, Gail, Barkley, Gibbons, Gill, Leuther, Shaw, Gallo & Blattner, *Risk of Human Immunodeficiency Virus (HIV-1) Infection Among Laboratory Workers*, 239 SCIENCE 68 (1988); *AIDS Virus Creates Lab Risk*, 239 SCIENCE 348 (1988).

236. Friedland & Klein, *supra* note 1, at 1126.

237. Leishman, *AIDS and Insects*, Atlantic Monthly, September 1987, at 71. This article quoted Dr. Albert Sabin, the creator of the oral polio vaccine, who noted that

> [a]mong naturally occurring polio viruses there could be a difference between viruses such that a single tissue-culture-infectious dose of one polio virus could kill a monkey when inoculated into the brain, whereas a million doses of another couldn't kill when put in the brain .... The molecular biology is all very nice, but we need more of the classical biological studies of HIV. There were studies for thirty years of the natural history of polio before we knew what to do to eradicate it.

The article concluded that "no one can say precisely what an infectious human dose is—it may be as little as a single active HIV particle." *Id.* at 58. The article also noted that "[r]esearchers now know that HIV virus in infected people multiplies in the superficial skin tissue." *Id.* at 58-59. *See* Tschacler, Gro, Gartner, Rappersberger, Schenk & Stingl, *The Skin Represents a Site of Virus Replication During Infection With Human Immunodeficiency Virus (HIV)*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume, at 80.

238. Friedland & Klein, *supra* note 1, at 1126.

239. *Id.*

240. *Id.*

241. *Id.* at 1126-27.

iii. *Summary*

In general, courts that follow the *Arline* court's endorsement of the AMA's criteria, and consider the duration and severity of the risk of transmitting the AIDS virus when deciding whether an employee infected with the virus is otherwise qualified for employment, are likely to take a conservative approach when assessing such a risk to third parties. Not only will they take a conservative approach because of the deference they should pay to the decisions of program administrators in the face of the medical uncertainty surrounding the nature and possible routes of transmission of the AIDS-virus,[242] they will also take a conservative approach in the health care setting, erring on the side of overprotection rather than underprotection, because of the special nature of the doctor-patient relationship and the immense responsibility a hospital undertakes when it agrees to care for a sick patient.[243]

The nature of the relationship between a prostrate, helpless, surgical patient and the members of the surgical team is such that the employment standards used to hire these health care workers should ensure that the patient is not subjected to any unnecessary health risks. The right of the patient to have peace of mind and all steps taken to avoid any unnecessary risks to his health dictate a high standard of safety that the members of the surgical team should be required to meet.[244]

After conceding that the risk of health care workers transmitting the AIDS virus to patients during invasive surgical procedures cannot be eliminated, the CDC specifically refused to rule out the utility of a serological testing program for health care workers who perform invasive procedures.[245] The implementation of such a testing program as a requirement for employment of health care workers who perform or assist in certain types of invasive procedures is likely to be upheld by the courts because of the close relationship between the test and the reasonable employment qualifications of the position being sought.[246]

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242. *See infra*, notes 278 & 296 and accompanying text.

243. *See infra* note 240 and accompanying text.

244. A similar sentiment was expressed in a recent editorial in the *Baltimore Sun* which took issue with the American Medical Association's refusal to recommend mandatory testing of health care workers: "A hospital patient, particularly one having surgery, is highly vulnerable and apprehensive. To have to worry about being infected with AIDS by a health care worker is intolerable." *AIDS and the AMA*, Baltimore Sun, June 23, 1987, at 12.

245. *Health-Care Recommendations, supra* note 218, at 15S.

246. *See supra* note 19 and accompanying text. In *Local 1812*, the court upheld the State Department's AIDS testing program against fourth and fifth amendment privacy and substantive due process challenges. The court also held that testing for the AIDS virus is not prohibited by the Rehabilitation Act where the presence of the virus impacts on job qualifications to the extent that an infected worker is not "otherwise qualified" for employment. The court ruled:

> On the evidence presently before the court, inclusion of the test for HIV infection appears rational and closely related to fitness for duty .... The testing involves only an additional examination of a blood sample that the person undergoing an examination must provide as a matter of course under procedures already established for a number of years .... The Department of State has acted to ensure tests are conducted in a reasonable manner to protect privacy ... [and] ... its focus is on fitness for duty in a specialized government agency .... The Department of State could not justify testing for the virus if its presence did not impact on job qualifications for worldwide foreign service duty .... The court must conclude on the present record that the likelihood plaintiff will prevail on the merits

In addition, the Second Circuit's decision in *Doe* makes clear that where hospitals and medical schools are unable to eliminate the risk of potential harm through a reasonable accommodation of the employee's handicap they will not be required to accept asymptomatic carriers of the AIDS virus into their programs.[247] The highly competitive nature of medical school admission practices and hospital employment practices dictates that asymptomatic carriers of the AIDS virus will not be otherwise qualified for admission to a medical school or employment in a hospital even if they pose only a minimal risk of harm to others, as long as there are other qualified applicants who pose no risk at all.

Diminished Mental Capacity

An increasing body of medical evidence indicates that the AIDS virus, apart from any affect it has on the immune system, attacks the central nervous system resulting in some form of mental deficiency or brain dysfunction in a large proportion of those carrying the virus.[248] Such a debilitating effect

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of its constitutional claim is insufficient to justify a preliminary injunction against the testing program.

Local 1812, 662 F. Supp. at 53. In another case, the District Court for the District of Columbia held that a hearing test used by the Federal Aviation Administration to screen out applicants for the position of aeronautical information specialist violated the Rehabilitation Act since the test was not job related, did not have adequate control, and generally did not reflect on the applicant's ability to perform the job. Crane v. Dole, 617 F. Supp. 156 (D.D.C. 1985).

247. *See supra* notes 127-34 and accompanying text.

248. *See* Grant, Atkinson, Hesselink, Kennedy, Richman, Spector & McCutchan, *Evidence for Early Central Nervous System Involvement in the Acquired Immunodeficiency Syndrome (AIDS) and Other Human Immunodeficiency Virus (HIV) Infections*, 107 ANN. INTERN. MED. 831 (1987); Price, *The Brain in AIDS: Central Nervous System HIV-1 Infection and AIDS Dementia Complex*, 239 SCIENCE 586 (1988); Thomas, *HIV and Schizophrenia*, Lancet, July 11, 1987, at 101 ("[a]s the natural history of AIDS unfolds, it is becoming evident that HIV [the AIDS virus] often infects neuronal matter and this may be the first and sometimes only manifestation of the disease"). *See also* Navia & Price, *The acquired immunodeficiency syndrome dementia complex as the presenting or sole manifestation of human immuno-deficiency virus infection*, 44 ARCH. NEUROL. 65-69 (1987) ("Neurological illness may develop before, or in the absence of, HIV-related immunodeficiency. . . . "); Jones, Kelly & Davies, *HIV and Onset of Schizophrenia*, Lancet, April 25, 1987, at 982.

As this Note was going to press, an international conference convened by the World Health Organization announced that it had found no evidence that people infected with the AIDS virus were likely to suffer mental disturbances before suffering from the disease itself. While acknowledging that neurological abnormalities are sometimes an initial disease symptom of infection with the AIDS virus, the conference issued a statement saying that screening for infection with the AIDS virus was "not a useful strategy" for discovering potential mental disorders in otherwise healthy people. The statement added that there was no evidence that such screening "would be useful in predicting the onset of functional impairment in persons who remain otherwise healthy." World Health Organization, *Statement on Neuropsychological Aspects of HIV Infection* 2 (March 13, 1988) (on file with ARIZ. L. REV.).

After an exhaustive review of the scientific literature on the effect of the AIDS virus on the central nervous system, this Note concludes that since a majority of AIDS victims suffer from some form of mental impairment, and at least 35 to 50 percent of those carrying the virus can be expected to develop AIDS, a significant minority of those asymptomatic carriers of the AIDS virus can be expected to eventually develop mental impairment as a result of their infection with the AIDS virus. The literature not only indicates that in many of these cases the mental impairment will develop before and independently of a clinical diagnosis of AIDS, but also indicates that the mental impairment will develop slowly and may often be misdiagnosed until more serious symptoms of neurological dysfunction manifest themselves.

At the very least, it would seem reasonable to test a workforce for infection with the AIDS virus and single out those testing positive for further cognitive testing designed to detect mental impairment resulting from their infection with the AIDS virus. In fact, this Note argues that such an

has wide ranging employment implications for asymptomatic carriers of the AIDS virus who hold sensitive jobs, are entrusted with the safety of others, or whose employment is intellectually demanding, particularly complex, or requires a high degree of mental acuity.

> The Surgeon General's Report, released in October, 1986, noted:
>
> [t]he AIDS virus may also attack the nervous system and cause delayed damage to the brain. This damage may take years to develop and the symptoms may show up as memory loss, indifference, loss of coordination, partial paralysis, or mental disorder. These symptoms may occur alone, or with other symptoms mentioned earlier.[249]

In discussing the future strain on the nation's health care delivery system that will be caused by the rapid increase of AIDS patients, the Surgeon General's Report warns that "[m]ental disease (dementia) will occur in some patients who have the AIDS virus before they have any other manifestation such as ARC or classic AIDS."[250]

Researchers have learned that the damage to the central nervous system caused by the AIDS virus is usually independent of any damage to the immune system caused by the virus[251] and is more prevalent among those infected with the virus than was previously thought.[252] Dr. Robert Gallo, a researcher at the National Institute of Health, recently reported that "[i]n the brain and spinal cord the virus appears to have a direct pathogenic effect that is not dependent on the immune deficiency . . . [which] gives rise to a wide range of symptoms including dementia and mimicry of other neurological syndromes such as multiple sclerosis."[253]

Soon after HIV infection was identified as the causative agent for the failure of the body's immune system in AIDS patients, researchers observed direct viral infection of the central nervous system and other neural tis-

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accommodation would not be reasonable and that employers and program administrators would be justified in discriminating against carriers of the AIDS virus without cognitive testing where the risk of mental impairment developing in a significant minority of those infected with the virus would pose a significant health or safety risk to others.

249. *Surgeon General's Report*, *supra* note 6, at 12.

250. *Id.* at 16.

251. Gallo, *The AIDS Virus*, *supra* note 1, at 53. *See supra* note 158 ("[t]he neurological effects of HTLV-III [the AIDS virus] are distinct from immune deficiency"); Ornitz, Amitai, Sidtis & Price, *Scales for the Neurological Examination and History in the AIDS Dementia Complex*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume, at 189 ("[t]he AIDS dementia complex (ADC) is a frequent complication of HIV infection which usually develops after the systemic manifestations of HIV infection, but at times will precede AIDS and apparently pursue an independent course").

252. Institute of Medicine, National Academy of Sciences, *Confronting AIDS: Directions for Public Health* 49 (1986) ("[a]s many as 90% of patients dying from HIV-related conditions have histopathologic abnormalities of the nervous system at postmortem examination, and the majority of patients have some clinical manifestation of neurologic disease in their lifetime"); Wetterbeg & Sonnerberg, *HIV Infection in the Central Nervous System*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume, at 153 ("[n]europathological findings in the brains of patients with AIDS are common and suggest that HIV might induce irreversible damage").

253. Gallo, *The AIDS Virus*, *supra* note 1, at 53. One study, presented at the III International Conference on AIDS, warned that "a neuromuscular disease may be the presenting sign of an ARC or developing AIDS or the only clinical manifestation of HIV seroconversion." Dalakas, Pezeshkpour & Sever, *Neuromuscular Complications of Human Immunodeficiency Virus (HIV)*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume, at 87.

sues.[254] Dr. Peter Selwyn, Assistant Professor of Epidemiology and Social Medicine at the Albert Einstein College of Medicine in New York, noted in a 1986 article that these findings suggested that in most cases, neurologic symptoms might be due to a direct effect of the virus and not to secondary opportunistic infections associated with a deterioration of the immune system:

> Recent clinical and epidemiologic data suggest that *the range of neurologic and neuropshyciatric illness related to [the AIDS virus] infection maybe much broader than that seen in AIDS itself.* It has been estimated that between 30 percent and 60 percent of AIDS patients will manifest a characteristic dementia syndrome, which has been designated AIDS dementia complex (ADC); that 10 percent of patients may present with neurological symptoms before developing any signs of AIDS; *and that perhaps an even larger number of infected individuals may show persistent evidence of neurologic impairment in the absence of an actual diagnosis of AIDS.*
>
> The AIDS dementia complex . . . is often marked by initially subtle cognitive or behavioral dysfunction occurring over weeks to months. Patients initially report memory loss, difficulty in concentrating, social withdrawal, and lethargy. *Those early signs may often be attributed to depression and may be ignored until they eventually progress to more dramatic deficits involving severe dementia and psychomotor retardation.* Motor disturbances initially include loss of coordination, tremors, and unsteady gait, and may lead to severe ataxia and paraplegia.[255]

Selwyn underscored the critical nature of research into the effects of the AIDS virus on the central nervous system and the impact these effects will have on the public as a result of "the apparent frequent involvement of brain tissue in AIDS patients *and the perhaps even more common possibility of virus-mediated CNS dysfunction in some percentage of the large number of infected persons without AIDS—a group currently estimated to include between 1 and 2 million people in the United States.*"[256]

A more recent article discussed the results of a study which confirms Selwyn's earlier conclusions. The study, which involved systematic neuropsychologic testing of ambulatory patients at various stages of AIDS related illness, detected abnormal impairment in eighty-seven percent of the patients with AIDS, fifty-four percent of the patients with ARC, and in forty-four percent of the patients who were asymptomatic carriers of the AIDS

254. Jones, Kelly & Davies, *HIV and Onset of Schizophrenia*, Lancet, April 25, 1987, at 982 ("HIV [the AIDS virus] seems to be neurotropic, the CNS [central nervous system] acting as a sanctuary for the virus, and HIV has been isolated from cerebospinal fluid, brain, spinal cord, and peripheral nerve in some instances"). *See also* Ho, Rota & Schooley, *Isolation of HTLV-III Cerebospinal Fluid and Neural Tissues of Patients With Neurologic Syndromes Related to the Acquired Immunodeficiency Syndrome*, 313 NEW ENG. J. MED. 1493-97 (1985); Navia, Jordan & Price, *The AIDS dementia complex: 1. Clinical Features*, 19 ANN. NEUROL. 517-24 (1986); Lloyd, Dwyer, Robertson & Wakefield, *Antibodies to HIV Are Produced Within the Central Nervous System of All Subjects With All Categories of HIV Infection*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume, at 182.

255. Selwyn, *AIDS. What is Now Known. III. Clinical Aspects*, 21 HOSPITAL PRACTICE 123-24 (1986) (emphasis added).

256. *Id.* at 124 (emphasis added).

virus.[257]

The researchers found that common neuropsychologic problems suffered by the test subjects included impaired abstracting ability, learning difficulties and slowed speed of information processing from which they postulated that central nervous system involvement by HIV may begin early in the course of AIDS and cause mild cognitive defects in otherwise asymptomatic persons.[258] The authors of the article reported that "most significantly, our data suggests that persons with asymptomatic HIV infections may have incipient central nervous system impairment" and concluded that "a progression of brain involvement occurs in persons with HIV infection that can begin with rather subtle cognitive changes early in the natural history of the viral disease and end with gross dementia in some patients with AIDS."[259]

There is thus a well documented medical likelihood that large numbers of those infected with the AIDS virus are subject to central nervous system dysfunction, that the cause of the dysfunction is difficult to detect and often misdiagnosed until it reaches a more serious stage, and that this dysfunction can occur in asymptomatic carriers of the virus entirely independent of any damage to the immune system associated with a diagnosis of AIDS. These findings have an impact on a wide range of employees infected with the AIDS virus who may not be "otherwise qualified" because of therisk that they will sustain damage to their central nervous system resulting in varying forms of mental deficiency and brain dysfunction that might place others in danger and prevent them from performing the "essential functions" of their jobs.

The employees that such a risk would most immediately impact are those whose jobs entail significant responsibility for the safety of others: bus drivers, airline pilots,[260] air traffic controllers, police officers, elevator and fire inspectors, as well as a host of other jobs where an employee's mental deficiency or brain dysfunction could threaten the safety of others. There are many other jobs, which require complex abstracting ability or rapid information processing, where the asymptomatic carrier of the AIDS virus would not be otherwise qualified for employment under the "business necessity and safe performance" defense provided by the Department of Labor's regulations interpreting section 504 of the Rehabilitation Act.[261]

257. Grant, *supra* note 248, at 831. Another study, presented at the III International Conference on AIDS, specifically excluded ARC and AIDS patients with overt central nervous system disease and still found that over 80% of the participants exhibited abnormal neurological findings such as memory loss, poor concentration, and incoordination. Out of the twenty-five patients studied, the neurological assessment was completely normal in only four patients. Berger, Fischl, Resnick, Dix & Parks, *Evidence of Human Immunodeficiency Virus Encephalopathy in the Absence of Overt Neurological Disease*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume, at 85.

258. Grant, *supra* note 248, at 828.

259. *Id.* at 835.

260. British Airways confirmed on February 16, 1987, that the company will begin screening all new pilots for the AIDS virus, following new concern over deterioration of the brain caused by infection with the virus. *British Airways To Screen New Pilots For HIV Virus*, AIDS Policy & Law, (BNA), March 11, 1987, at 5.

261. *See supra* notes 62 & 108 and accompanying text.

It therefore seems likely that the medical risk of these employees developing some form of brain dysfunction as a result of their infection with the AIDS virus is significant enough so as to render them not "otherwise qualified" for employment. This seems especially true when one considers the medical community's evolving but uncertain knowledge of the AIDS virus' effects on the central nervous system, and the deference many courts pay to employers and program administrators in the face of closely contested questions involving medical uncertainty.[262]

As has been noted, programs that are highly competitive are not required to choose a handicapped individual who poses a minimal risk of harm to others over another applicant who poses no risk at all.[263] Testing programs for these employees, and a restriction of activities for those who test positive, would seem to be a reasonable response to a public safety threat and would therefore not be precluded by the Rehabilitation Act's prohibition of discrimination against an "otherwise qualified" handicapped person.

Employment Related Danger to the Employee Infected With the AIDS Virus

A number of courts have recognized that a handicapped individual may not be otherwise qualified for employment or participation in a program if his handicap poses a risk to his own health or safety, regardless of any health or safety risk his handicap poses to others. At least one court has already suggested that employees infected with the AIDS virus will not be "otherwise qualified" for employment that places them "at significant and progressively serious medical risk."[264]

In *Local 1812, American Federation of Government Employees v. Department of State*,[265] the district court ruled that the State Department did not violate the Rehabilitation Act by testing its Foreign Service employees for the AIDS virus, and restricting the activities of those that test positive, since "it does not appear from the present record that HIV-infected persons are 'otherwise qualified' for worldwide service duty."[266] The court based its decision on "the substantial medical evidence" supporting the State Department's view that HIV-infected individuals placed on worldwide service status would be at significant and progressively serious medical risk.[267]

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262. *See, e.g., Davis*, 442 U.S. 397 (1979); *Arline*, 107 S. Ct. 1123 (1987). *See also Doe*, 666 F.2d at 777; *Strathie*, 716 F.2d at 232; *Bentivegna*, 694 F.2d at 622; *Mantolete*, 767 F.2d at 1422.

263. *See supra* notes 142-44 and accompanying text.

264. *Local 1812*, 662 F. Supp. at 52.

265. *Id.*

266. *Id.* at 54. Although the court merely rejected the plaintiff's motion for a preliminary injunction to stop the testing program, and was not deciding the case on the merits, the court did note that "the prospects for success on the merits are slight." *Id.*

267. *See supra* note 260. The court noted that the State Department's testing program:

> reflected its determination that HIV-infected persons are impaired and medically unfit for worldwide service, because such persons would be put at serious hazard by service at many posts where medical care is wholly inadequate to deal with HIV-related infection, and health and sanitary conditions are particularly hazardous to carriers of the virus . . . .
>
> . . . The court is satisfied that the Department of State has demonstrated serious ground for concern about the additional risk that disease will develop from placement of HIV carriers in many foreign posts and that medical care at such posts will be inadequate to diagnose and treat medical problems that may develop in any infected person . . . .

In an affidavit filed with the court by the State Department, Surgeon General C. Everett Koop testified that Foreign Service personnel who are infected with the AIDS virus would not have access to adequate health care,[268] would be put at "unnecessary risk" by exposure to contagious diseases overseas,[269] as well as the live virus vaccines required before a Foreign Service employee travels overseas.[270] In addition, he noted that Foreign Service employees infected with the AIDS virus would place other personnel at unnecessary risk in those countries where the Foreign Service personnel have to act as their own blood bank because of an undependable blood supply.[271]

Dr. Paul Goff, the Department of State's Deputy Director of the Office of Medical Services, submitted another affidavit in defense of the State Department's policy of precluding those employees infected with the AIDS virus from being assigned to foreign service posts overseas.[272] Dr. Goff cited the classification scheme for diagnosing infection with the AIDS virus devised by the CDC which notes that carriers of the virus may be subject to "serious sometimes rapidly evolving life-threatening complications of HIV-infection" and that "vague symptoms may herald the onset of life-threatening complications which can occur precipitously."[273]

Dr. Goff argued that

> [b]ecause of the potential to develop life threatening illness, the vague non-specific symptoms of progression, and the fact that early diagnosis and treatment of the common complications of the HIV infection can be lifesaving, individuals in the quiescent or asymptomatic state of the HIV infection require periodic monitoring by experienced health care providers with adequate facilities at their disposal to assess the risk of complications . . .[274]

Based on this evidence, the court concluded that because the necessary health care is often not available to foreign service employees assigned over-

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> [Since] symptomless HIV-infected individuals derive at least some medical benefit from regular medical monitoring of their condition . . . the absence of adequate medical knowledge and care at many posts greatly enhances the medical risks associated with assigning HIV-infected employees to these areas.

Local 1812, 662 F. Supp. at 52-54.

268. Surgeon General Koop testified that "recent data suggest that once HIV-infection becomes established, immunological compromise can be detected in most, if not all, infected individuals, including those who remain free of any clinical symptoms of AIDS." The Surgeon General also noted that "the recognition and treatment of the many symptoms, clinical manifestations, and diseases associated with HIV infection can be very complex," and recommended that "[i]t is important that all people who are infected have readily available qualified health professionals who can diagnose and treat these symptoms at the earliest possible time." *Surgeon General's Report, supra* note 6, at 2-3.

269. "HIV infected personnel who are exposed to contagious diseases overseas, such as malaria or hepatitis, are also placed at unnecessary risk. Such infections may activate potentially life-threatening disease in HIV infected people." *Id.* at 4.

270. "Foreign Service Members who are HIV infected would be placed at unnecessary risk if they received attenuated live virus vaccines." *Id.*

271. "Under such conditions, it is important that individuals be free of HIV infection for the health and safety of the other personnel at such posts." *Id.* The court noted that this argument "was not sufficiently developed to be controling . . . ." *Local 1812*, 662 F. Supp. at 52 n.1.

272. Declaration of Paul A. Goff, M.D., in *Local 1812*, 662 F. Supp. 50 (D.D.C.).

273. *Id.*

274. *Id.*

seas, and that availability for assignment overseas is a reasonable and essential function of employment with the Foreign Service,[275] those employees infected with the AIDS virus are not otherwise qualified for worldwide Foreign Service duty.[276] The same rationale should apply to any other employment situation which raises the same risks and dangers that the State Department's Foreign Service duty poses to an employee infected with the AIDS virus.[277] In addition, these basic principles should apply to other employment-related dangers such as the safety risk an employee suffering from AIDS Dementia Complex poses to himself, or the vulnerability of a health care worker infected with the AIDS virus whose impaired immune system is exposed to diseases through on the job contact with sick patients.

Summary

In all three of these cases—contagiousness, mental deficiency caused by a deterioration of the brain, and the weakened state of an infected employee's immune system—an asymptomatic carrier of the AIDS virus would not be "otherwise qualified" for employment because his infection presents a significant health or safety risk for himself or others. Courts have uniformly recognized that health and safety concerns are a legitimate defense to a suit brought under section 504.[278] In other words, "a person is not otherwise qualified to participate in a covered program or activity if his participation will put the health or safety of others participants (or, indeed, himself) at risk."[279]

At present, there is a great deal of scientific uncertainty over the exact nature of the health and safety risks that might be posed by the employment of asymptomatic carriers of the AIDS virus in a given profession, or their participation in a given program.[280] The case history touching on the problem of how to allocate health and safety risks in the face of scientific uncertainty indicates that the burden in a 504 suit is on the plaintiff to prove that a

275. The court discussed the statutory requirements for foreign service duty which provide that " '[c]areer members of the Service shall be obligated to serve abroad and shall be expected to serve abroad for substantial portions of their careers.' " 22 U.S.C. § 3984(a). The legislative history of this provision stresses that "availability for worldwide assignment must be clearly expressed and understood as a basic requirement in the Foreign Service as well as for retention and promotion in the Foreign Service throughout the individual's career." *Local 1812*, 662 F. Supp. at 51 (citations omitted).

276. *Local 1812*, 662 F. Supp. at 54.

277. Large international corporations, for instance, may fall into this category if assignment of American employees to positions overseas is a well-established requirement of the job for which they have been hired.

In addition, the Department of Defense has a similar testing program for new recruits, service academy applicants, and candidates for Reserve Officer Training Corps, which uses the same rationale for discriminating on the basis of HIV infection. *See A Policy on Identification, Surveillance, and Administration of Personnel Infected With Human Immunodeficiency Virus (HIV)*, Memorandum For Secretaries of the Military Departments From the Secretary of Defense (April 20, 1987). "Individuals with serological evidence of HIV infection are not eligible for appointment or enlistment for military service." *Id.* at 1. Active duty personnel "who show no evidence of clinical illness or other indication of immunologic or neurologic impairment related to HIV infection shall not be separated solely on the basis of serologic evidence of HIV infection." *Id.* at 7.

278. *See supra* note 258.

279. *Cooper Memorandum*, *supra* note 12, at 37.

280. Although it is generally accepted that there are only three known routes of AIDS virus transmission, *see supra* notes 1 & 181 and accompanying text, isolated anecdotal instances of non-

traditional transmission continue to appear in the scientific literature. The following examples raise some doubt as to whether other routes for AIDS virus transmission exist:

An article in the July 5, 1986, issue of The Lancet described the survival of the HIV virus in the common bedbug and concluded that "the mechanical transmission of the virus between human beings could be carried out by the bedbug." Lyons, Jupp & Schoub, *Survival of HIV in the Common Bedbug*, Lancet, July 5, 1986, at 45. Noting that there is string evidence for mechanical transmission of the hepatitis B virus by the common bedbug, the report concluded that "[s]imilar transmission of HIV by bedbugs may be a cause of infection in African children." *Id.* In Africa, 15-22% of the AIDS cases have been in children, whereas this proportion is only 1-4% in the United States.

The fact that 15-22% of the AIDS cases in Africa have been found in children, who presumably are neither sexually active nor intravenous drug users, is significant when one considers that the vast majority of babies infected with the AIDS virus before or during birth usually die within two years and rarely survive to age 36 months. Lancet, April 4, 1987, at 806. As a result, there may be large numbers of African children who are being infected with the HIV-virus and yet are not contracting the disease through a vertical transmission associated with any of the known risk factors.

The seriousness of such a prospect is attested to by the reports conclusion that the disparity in these figures may indicate "that there are modes of transmission [of the AIDS virus] other than those recognized in the USA." Lyons, *supra*, at 45. One study explains this phenomenon by examining the practice of using blood transfusions as a treatment for children with malaria in Kinshasa, Zaire. Greenberg, Nguen-Dinh, Mann, Kabote, Colebunders, Francis, Quinn, Baudoux, Lyamba, Davachi, Roberts, Kabeya, Curran & Campbell, *The Association Between Malaria, Blood Transfusions, and HIV Seropositivity in a Pediatric Population in Kinshasa, Zaire*, 259 J. AM. MED. ASSOC. 545 (1988).

A 1986 article documents an apparent case of horizontal transmission of HIV infection between two siblings. The younger child contracted the AIDS virus after undergoing heart surgery, which required four units of transfused blood, and died three and a half years later from AIDS. All family members were tested for the AIDS virus and a brother, three years older than the boy who had died, was found to be seropositive. The researchers who reported this case concluded that:

> the most plausible explanation for seropositivity in the older boy appears to be a horizontal transmission of the HIV infection. The mother reported that both children were always kept under her observation. The relationship between the two children had been a caring and cooperative one, and this was confirmed by an unrelated neighbor. One possible route of virus transmission was a bite on the older brother's forearm by the younger child about six months before he died. The mother had seen teeth imprints on the skin but no bleeding or hemotoma. This observation suggests that even minor bites by HIV infected children may carry the risk of virus transmission. Parents, teachers, and other people responsible for HIV infected children should be aware of this possibility and try to prevent spread of the virus by this route.

Wahn, Kramer, Voit, Bruster, Scrampical & Scheid, *Horizontal Transmission of HIV Infection Between Two Siblings*, Lancet, September 20, 1986, at 694.

A 1984 study revealed that infectious HIV virus was found in the saliva of a 61 year old seronegative caucasian woman whose husband had been infected with the AIDS virus through a blood transfusion. The couple had not had sexual intercourse for three years, since the patient was rendered impotent as a result of the operation that required the blood transfusion, but had exchanged saliva by kissing during that time. Salahuddin, Markham, Redfield, Essex, Groopman, Sarngadharan, McLane, Sliski & Gallo, *HIV-III in Symptom-Free Seronegative Persons*, Lancet, December 22/29, 1984. Professor William Haseltine of the Harvard Medical School has said that "[a]nyone who tells you categorically that AIDS cannot be contracted by saliva is not telling you the truth . . . . There are sure to be cases of proved transmission through casual contact." Dershowitz, *Emphasize Scientific Information*, N.Y. Times, March 18, 1986, at A27.

A 1985 report revealed that the AIDS virus "is resistant at room temperature, either in dry form or in liquid medium . . . . [and that] [t]his resistance of [the AIDS virus] at room temperature may explain the appearance of some AIDS cases in non-risk groups." Barre-Sinousi, Nugeyre & Cherman, *Resistance of AIDS Virus at Room Temperature*, Lancet, September 28, 1985, at 721-22.

A more recent article warned that "[laboratory personnel who come into contact with [HIV] contaminated materials, especially concentrated preparations, should be aware that infectious virus can persist in a liquid or dried state for prolonged periods of time, possibly even at elevated temperatures." Resnick, Veren, Salahuddin, Tondreau & Markham, *Stability and Inactivation of HTLV-II/LAV Under Clinical and Laboratory Environments*, 255 J. AM. MED. ASSOC. 1887-91 (1986). *See supra* note 231 and accompanying text (documenting infection of unique laboratory strain of the AIDS virus in the laboratory setting).

A paper presented at the III International Conference on AIDS documented the case of 45 year old housewife who contracted AIDS after providing terminal home nursing care for a 33 year old African man infected with the AIDS virus. The report noted that a detailed social history of the

health or safety risk does not exist.[281] The case history also indicates that severity of the risk that will trigger the Rehabilitation Act's otherwise qualified requirement will depend on the nature of the risk posed by the program, the nature of the risk posed by the handicap, and the employer's ability to reasonably accommodate the employee's or participant's handicap.

The implicit calculus that has been used to make such determinations indicates that a program whose nature requires a higher standard of care for the safety of others, or that is particularly competitive, will tend to require a more minimal risk of potential harm before an individual's handicap will render him not otherwise qualified for acceptance into a program.[282] A much higher risk of harm will be required for those programs that do not present an elevated risk of harm or whose nature enables the employer or administrator to eliminate the risk of potential harm to others by reasonably accommodating the individual's handicap.[283]

THE REHABILITATION ACT'S "REASONABLE ACCOMMODATION" REQUIREMENT

As has been noted, the federal regulations provide that an otherwise qualified handicapped person must be able to perform all of the functions of the job or complete all of the requirements of the program in question in spite of his handicap.[284] In *Arline*, the Supreme Court noted that when a handicapped person is not able to perform the essential functions of the job, and is therefore not otherwise qualified, the regulations provide that the court must also consider whether any reasonable accommodation by the employer would enable the handicapped person to perform those functions.[285]

In *Davis*, the Supreme Court ruled that an accommodation is not reasonable if it would necessitate a modification of the essential nature of the program or if it would place undue burdens, such as extensive costs, on the recipient of federal funds.[286] In such a case, the burden is on the defendant to establish a factual basis in the record demonstrating that an accommodation of an applicant's handicap would be unreasonable.[287]

The *Arline* Court's discussion of the Rehabilitation Act's reasonable ac-

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woman revealed no other exposure to the relevant risk factors. Grint, Rademaker & McEvoy, *A Case of Acquired Immune Deficiency Syndrome Without the Recognized Risk Factors*, III International Conference on AIDS (June 1-5, 1987, Washington, D.C.), Abstracts Volume, at 21.

These are just some anecdotal examples which contribute to the scientific uncertainty surrounding the transmission of the AIDS virus. We are still in the very early stages of a viral epidemic whose etiology and epidemiology are still not completely understood.

281. *See supra* notes 157-67 and accompanying text. *See also Cooper Memorandum, supra* note 12, at 38 n.88 (". . . [T]he language and structure of § 504, under which otherwise qualified' is a necessary element of a cause of action, suggest clearly that the burden is on the plaintiff").

282. *See, e.g., supra* notes 127-34, 142-44 and accompanying text.

283. *See, e.g., supra* notes 84-88 and accompanying text.

284. *See supra* note 57.

285. *Arline*, 107 S. Ct. at 1131 n.17 (The Court suggested that two factors, originally employed by the Court in *Davis*, should be used to ascertain the reasonableness of an employers refusal to accommodate a handicapped individual: Accommodation is not reasonable if it either imposes 'undue financial and administrative burdens' on a grantee, or requires 'a fundamental alteration in the nature of [the] program.').

286. *Davis*, 442 U.S. at 405, 410, 412.

287. *Strathie*, 716 F.2d at 231.

commodation requirement sets the context for an analysis of the application of this requirement to employers of asymptomatic carriers of the AIDS virus. According to the *Arline* Court, the regulations provide that an employer has an affirmative obligation to make a reasonable accommodation for a handicapped employee.

The Court noted that while an employer is not required to find another job for an employee who is not qualified for the job he or she was doing, they cannot deny an employee alternative employment opportunities that are reasonably available under the employer's existing policies.[288] The Court also noted that the regulations provide that where a reasonable accommodation does not overcome the effects of a person's handicap, or where reasonable accommodation causes undue hardship to the employer, failure to hire or promote the handicapped person will not be considered discrimination.[289]

It is unlikely, given these factors, that a reasonable accommodation would ever allow an asymptomatic carrier of the AIDS virus to continue in a profession where his viral infection renders him not "otherwise qualified" because of the danger his condition would pose to others. This is clearly the case with health-care workers infected with the AIDS virus who perform invasive surgical procedures,[290] incontinent or violent school children in-

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288. *Arline*, 107 S. Ct. at 113 n.19. The Department of Health and Human Services' Analysis of Final Regulations provides:

> Reasonable accommodation includes modification of work schedules, including part-time employment, and job restructuring. Job restructuring may entail shifting nonessential duties to other employees . . . . If such accommodations would cause undue hardship to the employer, they need not be made.

Analysis of Final Regulations, 45 C.F.R. § 84 App. A, at 331 (1987).

289. *See supra* note 13. 45 C.F.R. § 84.12(c) provides:

> In determining pursuant to paragraph (a) of this section whether an accommodation would impose an undue hardship on the operation of a recipient's program, factors to be considered include: (1) The overall size of the recipient's program with respect to number of employees, number and type of facilities, and size of budget; (2) The type of the recipient's operation, including the composition and structure of the recipient's workforce; and (3) The nature and cost of the accommodation needed.

See 29 C.F.R. § 32.13(b) for the Department of Labor's factors to be considered in determining whether an accommodation imposes an undue hardship.

The HHS's Analysis of Final Regulations notes that the weight given to the factors used in determining whether an accommodation constitutes undue hardship will vary depending on the facts of a particular situation:

> Thus, a small day-care center might not be required to expend more than a nominal sum, such as that necessary to equip a telephone for use by a secretary with impaired hearing, but a large school district might be required to make available a teacher's aid to a blind applicant for a teaching job. Further, it might be considered reasonable to require a state welfare agency accommodate a deaf employee by providing an interpreter, while it would constitute an undue hardship to impose that requirement on a provider of foster home care services.

Analysis of Final Regulations, 45 C.F.R. § 84 App. A, at 331 (1987).

290. The CDC has suggested a number of precautions for performing invasive surgical procedures on HIV infected patients which could be applied as accommodations for HIV infected health care workers: "For example, surgical procedures . . . might be altered so that hand-to-hand passing of sharp instruments would be eliminated; stapling instruments rather than hand-suturing equipment might be used to perform tissue approximation; electro-cautery devices rather than scalpels might be used as cutting instruments." *Health-Care Recommendations, supra* note 218, at 14S-15S. These accommodations would most likely not be found to be reasonable because, among other reason, the CDC has noted that "[w]hile such modifications might further minimize the risk of HIV infection . . . some of these techniques could result in prolongation of operative time and could potentially have an adverse effect on the patient." *Id.* at 15S.

fected with the AIDS virus who wish to attend classes with other students, and asymptomatic carriers of the AIDS virus who are employed in jobs that give them responsibility for the safety of others.

In *Local 1812*, the court was willing to recognize the validity of requiring accommodations for asymptomatic carriers of the AIDS virus who are already employed in the Foreign Service.[291] This court was unwilling to extend their recognition of such a limited accommodation to those who are applying for these positions.[292]

As the *Arline* Court has noted,[293] limited accommodations might be required if alternative employment is reasonably available under the employers existing policies. For example, a health-care worker infected with the AIDS virus might be restricted to other medical duties that do not involve his participation in invasive surgical procedures. Based on the previously discussed interpretation of the Harkin-Humphrey amendment, an argument could be made that even such a limited accommodation would not be available to an employee whose infection with the AIDS virus poses a direct health or safety threat to others, or prevents her from performing the duties of her job.[294]

Given the medical community's evolving but uncertain knowledge of the AIDS virus' effects on the central nervous system,[295] and the plaintiff's burden of disproving a health or safety defense in section 504 cases, it is hard to imagine how a reasonable accommodation could be made for bus drivers, airline pilots, air traffic controllers, policemen,[296] or other professions that

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291. The court noted that

> [c]urrent employees and their families . . . are given limited medical clearances. The Department of State has determined that HIV-infected individuals showing no symptoms of related disease and without significant immune system dysfunction, as determined by further blood tests, are eligible for placement in the United States and 47 posts in 19 foreign countries which do not present unusual health hazards and where adequate medical care is believed to be available.

Local 1812, 662 F. Supp. at 52.

The court recognized, however, that there was a limitation to the accommodation that employees infected with the AIDS virus can expect. The court noted that

> [e]very effort is being made to accommodate existing employees and any further accommodation would require the Department of State fundamentally to alter its medical fitness program's allowance of service only at posts where the Department reasonably believes medical care is adequate to an employee's situation, or to incur an undue financial burden in upgrading medical care services at all foreign posts to deal with the relatively rare problems associated with HIV infection. The Department of State's obligation reasonably to accommodate handicapped employees does not extend this far.

Local 1812, 662 F. Supp. at 10.

292. The court noted that, as with other serious medical conditions, new applicants will be denied employment if they are found to be infected with the AIDS virus. *Id.* at 52.

293. *Arline*, 107 S. Ct. at 1129 n.19.

294. See supra notes 56-61 and accompanying text.

295. *See* Price, *The Brain in AIDS*, *supra* note 244, at 591 ("The mechanisms underlying the neurological dysfunction of the AIDS dementia complex are far from clear").

296. The U.S. Merit Systems Protection Board has ruled that a police officer who was psychologically unfit to carry a firearm was not an otherwise qualified handicapped person under the Rehabilitation Act. The Board ruled that since carrying a firearm is an essential duty of employment as a police officer, the agency was not required to reasonably accommodate the appellant by reassigning him to less demanding positions. Pickut v. Department of the Air Force, 24 M.S.P.R. (1984). However, in Simon v. St. Louis County, 656 F.2d 316, 321 (8th Cir. 1981), the Eighth Circuit recognized that a paraplegic policeman might be reasonably accommodated by assigning him to a desk job, even though he was not otherwise qualified to make a forceful arrest. Police departments that require

exhibit very little flexibility in possible job assignment.

It is difficult to believe that the courts would take the chance that an air traffic controller infected with the AIDS virus is not going to be one of those asymptomatic carriers who may suffer mental impairment as he negotiates jumbo jets in for safe landings. The same can be said of the risk posed by the prospect of dementia appearing in a medical intern who must spend long sleepless hours on call in hospitals, ready to respond to a life-threatening emergency at a minutes notice, as a part of his or her training.

One could argue that these employees could be subject to periodic cognitive testing designed to detect impairment.[297] Such an accommodation would most likely not be considered reasonable, however, in light of the burden such a cognitive testing program would impose on the employer. In addition, the usefulness of such a testing program is brought into question by the fact that the mental impairment caused by the AIDS virus is so subtle and so slow in its development that one could never be sure that it would be caught in time to prevent a disaster.[298]

CONCLUSION

This Note has tried to identify those circumstances, under the Rehabilitation Act's anti-discrimination prohibitions, in which asymptomatic carriers of the AIDS virus would not be otherwise qualified for employment. It has examined the relevant case law in an effort to determine when a health or safety risk posed by an individual's handicap would be significant enough to trigger the Rehabilitation Act's otherwise qualified requirement. It has also documented the current medical knowledge on AIDS in an effort to determine under what employment situations asymptomatic carriers of the AIDS virus would pose a threat to themselves or the general public.

This Note concludes that section 504 of the Rehabilitation Act differs from the general corpus of federal anti-discrimination law in that section 504 does not contain an explicit affirmative action requirement, but only mandates the even-handed treatment of handicapped individuals. As a result employers are not required to disregard a handicapped employee's inability to safely perform the essential functions of the job or program for which he or she is being considered. Once the employer or program administrator has demonstrated that the qualifications or employment standards he has invoked to justify the rejection of a handicapped individual are relevant to the

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their officers to carry firearms at all times, regardless of their duties, would probably not be required to accommodate an officer who was psychologically unfit to carry a firearm as a result of AIDS virus-induced dementia.

297. The development of "standardized neurological history and examination scales to complement formal neuropsychological testing" was reported by researchers at the III International Conference on AIDS:

> These involve ADC [AIDS dementia complex]-directed questions related to cognitive, motor and behavioral dysfunction that are oriented toward functional status. The neurological examination is also scaled to evaluate these same functions by mental status, motor, and coordination tests . . . . We have begun to use these scales together with standardized functional status scales and neuropsychological tests in HIV-infected individuals ranging from clinically asymptomatic to severe ADC.

Ornitz, *supra* note 247, at 189.

298. *See supra* note 251 and accompanying text.

specific position being sought, and are consistent with business necessity or safe performance, the burden of proof will fall on the plaintiff to prove that he is in fact qualified for the position sought. Where the risk of harm is a closely contested issue which hinges on the scientific uncertainty surrounding the AIDS virus, deference should be paid to the decisions of the employers and program administrators.

Nearly every court that has addressed the issue of whether the health or safety risk posed by an employee's handicap is significant enough to render him not otherwise qualified for employment under the Rehabilitation Act has used an implicit calculus rooted in public policy. This calculus develops a standard for determining the significance of the health or safety risk that will trigger the Rehabilitation Act's otherwise qualified requirement. The calculus attempts to determine the significance of the risk by determining the severity of harm that is likely to occur as a result of the nature of the risk posed by the employee's handicap and the nature of the risk posed by the employment situation or program in question.

Thus, when the nature of the risk posed by the handicap is central nervous dysfunction caused by the AIDS virus, the significance of the degree of risk required to trigger the Rehabilitation Act's otherwise qualified requirement will be great in cases where an employer is discriminating against the cashier at the local K-Mart or the operator of a mail sorting machine, where the severity of the harm that may occur is minimal. In such a case, a high likelihood of danger to others or inability to complete the essential functions of the job will be required before the employer will be allowed to discriminate against the cashier. By contrast, cases involving discrimination against an airline pilot or applicants to a highly competitive medical school program,[299] where the severity of the harm that may occur is great, will require much less of a degree of risk to trigger the otherwise qualified requirement. Similar comparisons can be made using the other employment-related health and safety risks posed by infection with the AIDS virus that have been discussed in this Note.[300]

The right to work is perhaps one of the most fundamental human rights and should not be taken lightly. Our nation's anti-discrimination laws should be vigorously enforced. Where they are deficient, states should step in to fill the gap to protect AIDS victims from irrational and unwarranted employment discrimination.

At the same time, however, it is important to recognize that not all AIDS-related employment distinctions are discriminatory. Federal and state anti-discrimination laws allow employers to make employment decisions

299. The competitiveness of the program may be an additional factor to take into consideration.

300. *Cooper Memorandum, supra* note 12, at 37 ("The final resolution of this inquiry in any particular case is one of fact and thus cannot be answered in the abstract, but the calculus will in general focus on the likelihood that the injury-causing event will occur, and the extent of the harm if it does. In the context of contagious illnesses, the injury-causing event is transmission of the illness, and its likelihood depends on the means by which, and circumstances under which, the illness can be transmitted."). In the context of mental deficiency, the injury causing event is extremely fact specific. Its likelihood and severity depends on the responsibility of the employee infected with the AIDS virus and the circumstances under which a lapse in mental coherence or psychomotor coordination might occur.

based on bonafide occupational qualifications. Prohibiting discrimination is important, but must not be taken to an extreme where it endangers the public.

It is clear that in a limited number of circumstances asymptomatic carriers of the AIDS virus will pose a significant risk of harming themselves or others if employers are not allowed to exclude them from holding certain jobs. The danger to the public posed by these individuals will only increase in the wake of a disease that Surgeon General C. Everett Koop has predicted will become "the most devastating epidemic since the Black Death."[301]

It is true that in the case of the AIDS epidemic, as one California judge facetiously commented, "our skies are not black with smoke from cities burned to prevent the spread of plague."[302] But we cannot allow indifference and negligence to obscure the duty of the federal government and the recipients of federal funds to protect the public from the widespread impact of the AIDS epidemic.

At the same time, it is the duty of the government to educate and inform a public that would otherwise be susceptible to fear, panic and ignorance about the nature of the AIDS epidemic. In 1721, when the plague that had ravaged Europe in 1665 again threatened to spread the Black Death across the continent, Daniel Defoe tried to warn the people of London that irrational panic, which breeds ignorance, could be as dangerous to the public as the ravages of the disease itself. "The plague was itself very terrible and the distress of the people very great," he wrote. "But the rumor was infinitely greater."[303]

We cannot allow an atmosphere of rumor that results in employees being fired because employers have an irrational fear that they have AIDS. But we also cannot allow an atmosphere of rumor to develop that obscures the facts and prevents employers and program administrators from protecting the public from the more indirect dangers of the AIDS epidemic. As Secretary of Education William J. Bennett has warned, "[t]he fear of seeming to be insensitive, intolerant, or mean-spirited has had an intimidating effect, a chilling effect on open, honest, public debate on AIDS. It is time that this chilling effect end. It is time that we tell the truth and face the facts about AIDS."[304]

301. *Legal Issues Relating to AIDS*, Remarks by Assistant Attorney General Charles J. Cooper 21, Summer Meeting of the Virginia Bar Association (White Sulphur Springs, West Virginia, July 10, 1987) [On file with ARIZ. L. REV.].

302. Barlow v. Superior Court, 236 Cal. Rptr. 134, 140 (Cal. App. 4 Dist. 1987).

303. D. DEFOE, A JOURNAL OF THE PLAGUE YEAR 210 (1960).

304. *AIDS: Education and Public Policy*, Address By Secretary of Education William J. Bennett (Gaston Hall Auditorium, Georgetown Univ., Washington, D.C., April 30, 1987) [On file with ARIZ. L. REV.].