/* Harris, part 2 of 2 */

Nevertheless, on the facts of this case, we are not inclined to disagree with the district court's assumption that the HIV-infected prisoners are "handicapped individuals" within the meaning of section 504 of the Rehabilitation Act. The definition of "handicapped individual" applies to persons who are "regarded as having" a physical or mental impairment. 29 U.S.C. Sec. 706(7)(B)(iii) (1982) (now Sec. 706(8)(B)(iii) (1988)). Implementing regulations provide that persons are "regarded as having an impairment" if they are treated by the recipient of federal funds as if they were handicapped-regardless of their actual condition. See Leckelt v. Board of Comm'rs of Hosp. Dist. No. 1, 909 F.2d 820, 825 (5th Cir.1990); Carter v. Orleans Parish Pub. Schools, 725 F.2d 261, 262-63 (5th Cir.1984). Specifically, 45 C.F.R. Sec. 84.3(j)(2)(iv) provides:

(iv) "Is regarded as having an impairment" means (A) has a physical or mental impairment that does not substantially limit major life activities but that is treated by a [federal funds] recipient as constituting such a limitation; (B) has a physical or mental impairment that substantially limits major life activities only as a result of the attitudes of others towards such impairment; or (C) has none of the impairments defined in paragraph (j)(2)(i) of this section but is treated by a recipient as having such an impairment. [footnote 44]

Alabama's blanket, differential treatment of seropositive inmates with regard to available activities and programs is based solely on the fact of the inmates' infection with HIV. Whether or not asymptomatic HIV infection alone is defined as an actual "physical impairment," it is clear that this correctional system treats the inmates such that they are unable, or perceived as unable, to engage in "major life activities" relative to the rest of the prison population. [footnote 45] Regardless of whether such treatment is ultimately justifiable, based as it is on the DOC's fear of and desire to contain the widespread contagion of HIV in Alabama prisons, we believe that it is appropriate in this case to find seropositivity a "handicap" within the meaning of the Act. [footnote 46]

2. "Otherwise Qualified"

The final issue regarding the application of section 504 in this case is the only one that the trial court addressed, albeit in cursory fashion. In order to obtain relief under the Rehabilitation Act, even if they are considered "handicapped," appellants must also establish that they are "otherwise qualified" for the programs or activities from which they have been excluded. The analysis actually breaks down into two steps.

[13, 14] First, the trial judge must determine whether the handicapped individual is "otherwise qualified." Martinez By and Through Martinez v. School Bd., 861 F.2d 1502, 1505 (11th Cir. 1988). "An 'otherwise qualified' person is one who is able to meet all of a program's requirements in spite of his handicap." Southeastern Community College v. Dams, 442 U.S. 397, 406, 99 S.Ct. 2361, 2367, 60 L.Ed.2d 980 (1979). When the individual's handicap is in the nature of a contagious disease, this determination requires the trial judge to conduct an individualized inquiry, and to make appropriate findings of fact. Martinez, 861 F.2d at 1505; see Arline, 480 U.S. at 287, 107 S.Ct. at 1130. The court's factual inquiry should include findings, "based on reasonable medical judgments given the state of medical knowledge," concerning

"(a) the nature of the risk (how the disease is transmitted), (b) the duration of the risk (how long is the carrier infectious), (c) the severity of the risk (what is the potential harm to third parties) and (d) the probabilities the disease will be transmitted and will cause varying degrees of harm."

Arline, 480 U.S. at 288,107 S.Ct. at 1131 (quoting Brief for American Medical Assoc. as Amicus Curiae 19). Secondly, if the individual does not appear initially to be otherwise qualified, the court must nevertheless evaluate, in light of the aforementioned medical findings, whether "reasonable accommodations would make the handicapped individual otherwise qualified."

Martinez, 861 F.2d at 1505 (citing Arline, 480 U.S. at 288, 107 S.Ct. at 1131). If, after reasonable accommodations, a signifi cant risk of transmission of the infectious disease still exists, a plaintiff will not be considered "otherwise qualified" within the meaning of the Rehabilitation Act. Id. at 1506; see Arline, 480 U.S. at 287 n. 16,107 S.Ct. at 1131 n. 16.

[15] In this case, applying the above factors to the seropositive prisoners, the trial judge found as follows:

(1) [HIV] is transmitted by contact of open wounds or body cavities with blood, semen or vaginal secretions. The primary ways the disease is transmitted in the prison environment is through homosexual activity, intravenous drug use and tattooing. Exchange of bodily fluids by homosexual rape or of blood resulting from fights is particularly hazardous in prison settings.

(2) The duration of the risk is perpetual.

(3) The severity of the risk is great with the potential harm to third parties' [SIC] ultimately being death.

(4) The probability of transmission, in the prison environment, is significant.

Harris, 727 F.Supp. at 1582. Accordingly, the district court found that "AIDS infected inmates are not otherwise qualified" within the meaning of section 504. Id. at 1583. The court next determined in a conclusory manner that even "after reasonable accommodations, a significant risk of transmission would still exist," offering no support for this proposition other than incorporating "its earlier finds with respect to the reasons that support segregation." Harms, 727 F.Supp. at 1583. Thus, the court found appellants not "otherwise qualified" under the Rehabilitation Act, and denied relief on this claim.

The district court's conclusions may prove ultimately correct. Its analysis, however, is devoid of the kind of individualized inquiry and findings of fact necessary to determine whether the members of the appellant class are "otherwise qualified" for any of the programs or activities offered to other prisoners by the DOC, or whether they can become so through reasonable accommodation.

First, we believe that the district court erred in its application of the fourth factor cited in Arline-the "'probabilities the disease will be transmitted and will cause varying degrees of harm.'" Arline, 480 U.S. at 288,107 S.Ct. at 1131. The district court found merely that "[t]he probability of transmission, in the prison environment, is significant." Harris, 727 F.Supp. at 1582. In this regard, we agree somewhat with appellants that the trial court asked and answered the wrong question. The Rehabilitation Act deals with the exclusion of "otherwise qualified" handicapped individuals from specific programs; an "otherwise qualified" person is "one who is able to meet all of a program 's requirements in spite of his handicap." Davis, 442 U.S. at 406, 99 S.Ct. at 2367 (emphasis added). In this case, the district court should have determined the risk of transmission not merely with regard to prison in general, but with regard to each program from which appellants have been automatically excluded.

[16] As suggested, it may turn out that the court's conclusion of the significance of the risk of HIV transmission with regard to each program will be unaltered. [footnote 47] But even if the risk is significant, the court is then obligated to examine as to each program whether "reasonable accommodations" by the DOC could minimize such risk to an acceptable level. Moreover, it is not enough for the district court simply to rely on general findings and prison policy reasons that support segregation. In this context, like other contexts, the purpose of the Act is to provide a balance-to assure through particularized inquiry that appropriate weight is given to the legitimate concerns of the prison-grantee in avoiding exposure of others to significant

health risks, while at the same time protecting the handicapped, contagious prisoners from sweeping deprivations based on prejudice, stereotypes or unfounded fear. See Arline, 480 U.S. at 287, 107 S.Ct. at 1130. We do not believe, as appellants suggest, that the application of the Rehabilitation Act in the unique, complex context of prison administration necessarily requires integration of seropositive prisoners into the general prison population, or integration into general population programs. We also do not believe, however, that the prison's choice of blanket segregation should alone insulate the DOC from its affirmative obligation under the Act to pursue and implement such alternative, reasonable accommodations as are possible [footnote 48] for HIV-positive prisoners with respect to various programs and activities that are available to the prison populations at large.

Accordingly, we remand this issue to the district court for a particularized inquiry with full findings of fact and conclusions of law as to each program and activity from which HIV-positive prisoners are being excluded, and a proper weighing of the dangers of transmission in each context.

Access to Courts

Appellants finally contend that the district court erred in failing to order relief on the claimed violation by the DOC of appellants' constitutional right of access to courts. Specifically, appellants alleged that the DOC had failed to provide sufficient and meaningful access for HIV-positive prisoners to the prison law library or, in the alternative, if access is denied, provide assistance of a person with legal training. Harris, 727 F.Supp. at 1578.

[17, 18] As the trial court recognized, inmates infected with HIV, like all other prisoners, possess a fundamental constitu tional right of access to the courts. See Bounds v. Smith, 430 U.S. 817, 821, 97 S.Ct. 1491,1494, 52 L.Ed.2d 72 (1977); Barfield v. Brierton, 883 F.2d 923, 937 (11th Cir.1989). This right cannot be impaired by prison officials; it "'requires prison authorities to assist inmates in the preparation and filing of meaningful legal papers by providing prisoners with adequate law libraries or adequate assistance from persons trained in the law.'" Barfield, 883 F.2d at 937 (quoting Bounds, 430 U.S. at 828); see Wolff v. McDonnell, 418 U.S. 539, 578-80, 94 S.Ct. 2963, 298587, 41 L.Ed.2d 935 (1974).

[19] The trial court found that "[b]ased upon the evidence before this Court, it appears that the AIDS infected inmates are entitled to more time in the library than has been allotted." Harris, 727 F.Supp. at 1578. The court also found that "[p]resently, there does not exist sufficient evidence to

determine whether or not constitutionally adequate assistance is available." Id. at 1579. Citing the deference that is typically due prison officials in implementing policy, the court opined that the DOC should "formulate a plan that would allow for more time in the library or, in the alternative, assure effective assistance by one trained in the law." Id. The court nevertheless did not order such relief, instead concluding that "the recent policy with respect to library hours does not constitute a denial of meaningful access to prison legal materials nor does it deny them their right of access to courts in violation of the First or Fourteenth Amendment." Id. at 1583. We agree with the plaintiffs that the court's conclusion seems inconsistent with its findings that HIV-infected prisoners were entitled to more library time, and that insufficient evidence existed to determine whether constitutionally adequate assistance was available. Further, because the issue and adequacy of separate access to legal materials and assistance for HIV-positive prisoners is much akin to the inquiries that we have asked the trial court to undertake on remand with regard to appellants' Rehabilitation Act claim, we are obliged to remand this claim as well for additional findings and clarification by the district court.

CONCLUSION.

For the foregoing reasons, the judgment of the district court regarding appellants' medical care and privacy claims is AFFIRMED. Appellants' Rehabilitation Act and access to courts claims are REMANDED for further proceedings consistent with this opinion. [footnote 49]

FOOTNOTES:

1. A recent National Institute of Justice update remarked:
Prisons and jails are squarely in the public eye as they attempt to deal with the difficult issues posed by AIDS. Correctional administrators must address many of the same issues faced by public health and other government officials beyond the walls-education, testing, confidentiality, infection control-as well as others not as central to the response on the outside-segregated housing, rape, and other violent victimization.
T. Hammett, Update 1988 Aids in Correctional Facilities 1, National Inst. of Justice: Issues and Practices (Jan.1989) (Pl.Exh. 376) [hereinafter Update 1988].

2. Ala.Code Sec. 22-11A-17(a) (1990) provides in pertinent part:
(a) All persons sentenced to confinement or imprisonment in any city or county jail or any state correctional facility for 30 or

more consecutive days shall be tested for those sexually transmitted diseases designated by the state board of health, upon entering the facility, and any inmate so confined for more than 90 days shall be examined for those sexually transmitted diseases 30 days before release. The results of any positive or reactive tests shall be reported as provided...

3. As mentioned, the ELISA and Western Blot tests are not tests for AIDS, nor do they detect the presence of the HIV virus itself. Rather, the tests reveal the presence in the blood of antibodies to the virus, which evidence the immune systems attempt to fight off infection. The ELISA test was originally developed to screen the nation's blood supply, and was very effective for that purpose. As the Alabama system's policy reveals, however, antibody tests such as the ELISA have in recent years been used to screen people. In this regard, because the ELISA test may produce a significant number of false positives, the Center for Disease Control ("CDC") strongly recommends that initially positive specimens be subjected to a second ELISA test, and that a more accurate test, such as the Western Blot, be used to confirm the ELISA result. See T. Hammett, Aids in Correctional Facilities 4, National Inst. of Justice: Issues and Practices (3d ed. Apr.1988) (Def.Exh. 511) [hereinafter Correctional Facilities]. When this sequence of tests is used, the tests have proven extremely accurate, with very few false positives. "'[W]hen performed under well controlled conditions in good laboratories. [the current sequence of tests] yield[s] both a sensitivity and specificity of greater than 99.8 percent.'" Vir gin Islands v. Roberts, 756 F.Supp. 898, 900 (D.V.I.1991) (quoting Report of the Presidential Commission on the Human Immunodeficiency Virus Epidemic 2 (June 1988)). Nevertheless, there is a continuing debate over the reliability of the tests, particularly when used to mass screen in the correctional setting. Because of the apparent lag time, which is usually 612 weeks, between HIV infection and the appearance of detectable antibodies, there is a "window period" during which an infected person would nevertheless test negative, yielding a so-called "false negative." This means that "it is impossible to guarantee detection of all infected members of a population through one-time screening." Correctional Facilities, supra, at 61.

4. HIV "seropositivity simply means that a person possesses HIV antibodies, which indicates that HIV infection has occurred at some time in the past. Although antibody tests such as the ELISA cannot pinpoint the date of infection, the CDC's present position is that, for purposes of counseling and public health recommendations, any seropositive person should be considered MW-

infected and potentially infectious. "[T]he view commonly presented in articles regarding AIDS (as well as in some correctional departments' educational material and policy state ments) that HIV seropositivity merely indicates possible 'exposure' to the virus is considered by many physicians and epidemiologists to be a serious misunderstanding." Correctional Facilities, supra note 3, at 6. Seropositivity is a serious problem, because the potentially indefinite incubation period of AIDS renders it virtually impossible for a seropositive person "to know for certain that he or she is free from risk of becoming ill or infecting others." Id. Nevertheless, "[e]vidence continues to accumulate that virtually everyone infected with the virus will, sooner or later, progress to active disease." Update 1988, supra note 1, at 5.

5. A small number of HIV seropositive male inmates with security classifications of close, maximum or protective are kept in cells at Limestone.

6. Specifically, as the trial court found, plaintiffs argued that the DOC had violated various constitutional and federal rights of the inmates by allegedly engaging in the following practices: 1) requiring all prisoners to submit involuntarily to blood tests upon entrance into and exit from Alabama penal institutions; 2) failing to advise prisoners as to the inconclusive and sometimes misleading significance of the results; 3) failing to provide essential emotional support and mental health counseling to those prisoners who test positive; 4) compelling seropositive prisoners to live in segregated units (like "leper colonies") with all other prisoners who have tested positive for HIV; 5) publically branding the inmates, through the fact of their segregation, as carriers of a dread, socially unacceptable and fatal disease; 6) causing the infected inmates to lose the opportunity to participate in vocational and ed ucational programs, to earn good time credits, and to participate in work release and similar programs. thus limiting the prisoners' opportunities for early release and parole; and 7) providing the inmates with grossly deficient medical, mental health, and dental care. Harris v. Thigpen, 727 F.Supp. 1564, 1566 (M.D.Ala.1990).

7. At the time of trial, named defendants to the action were as follows: 1) Morris Thigpen, Commissioner of the DOC, responsible for the DOC's control, as well as the enforcement of rules concerning the testing and segregation of inmates; 2) Jean Hare, the Warden of Tutwiler, charged with administering the HIV segregation unit there; 3) J.D. White, the Warden of Limestone, charged with the administration of the HIV segregation unit at Limestone; Lynn Harrelson, Warden of the Kilby Prison in Mt.

Meigs, Alabama, charged with implementing the HIV testing program at Kilby; Correctional Health Care, Inc. ("CHC"), an entity under contract with the DOC to provide medical care services to Alabama state prisoners; and Dr. George Sutton, Medical Director for CHC. Harns, 727 F.Supp. at 1566. Prior to the trial's commencement, defendant CHC stipulated that it was the DOC's contractual health care provider, and that it would comply with any final order entered by the court relative to medical care for HIV-positive prisoners. The court accordingly dismissed CHC subject to this stipulation. (R11-[trans. vol. 1]-22-24).

8. Although the battle against HIV infection is often characterized in terms of an "epidemic," it should be noted that the data suggest that there is not yet a general epidemic of MW infection in the United States. Rather, the struggle to contain the spread of the disease is perhaps better conceptualized as "a series of smaller, overlapping epidemic - for example homosexual men, IV [intravenous] drug users, and sexual partners of IV drug users - each with its own dynamic, history, and projected course." Update 1988, supra note 1, at 16 (citing J.W. Curran, Epidemiology of HIV Infection and AIDS in the United States, Science, 239:613 (Feb. 5, 1988)).

9. Thus, the Presidential Commission studying the epidemic observed: 'The medical, public health, political, and community leadership must focus on the full course of HIV infection rather than concentrating on later stages of the disease (ARC [AIDS-Related Complex] and AIDS)." Report of the Presidential Commission on the HIV Epidemic at XVII (June 24, 1988) (Pl.Exh. 408).

10. For example, an editorial in the New England Journal o/ Medicine has suggested that the process of HIV infection may be broken down into three stages: (1) the early or acute stage, which usually lasts weeks; (2) the middle or chronic stage, which can last years and is characterized by “‘minimal, but measurable, pathologic changes'"; and (3) the final or crisis stage, generally termed "AIDS" and lasting months or years, depending in part on availability of treatment. Moini & Hammett, 1989 Update: Aids in Correctional Facilities 1, National Inst. of Justice: Issues and Practices (May 1990) [hereinafter 1989 Update] (citing D. Baltimore & M. Feinberg, HIV Revealed: Toward a Natural History of the Infection, New England Journal of Medicine, 321:167-75 (Dec. 14, 1989)).

Over time, HIV-infected persons may begin to develop symptoms such as weight loss, malaise, fatigue, anorexia, abdominal discomfort, diarrhea with no specific cause, night sweats, head aches, and swollen lymph glands. Casual Contact and the Risk of HIV Infection, Report of Special Initiative on AIDS, APHA, at 1

(July 1938) (Pl.Exh. 424) [hereinafter Casual Contact]. AIDS itself, as mentioned, is characterized by the development of some type of opportunistic infection in HIV-infected persons, as the patient's increasingly deteriorating immune system is no longer able to respond. Id. One infection common to AIDS patients, and especially AIDS-afflicted inmates, is a form of pneumonia called Pneumocystis carinii ("PCP"). See id; Correctional Facilities, supra note 3, at 3. As appellants' expert witness, Dr. Thomas Brewer of the Johns Hopkins School of Hygiene and Public Health, testified, "[p]robably half the people in this room have [the protozoan] pneumocystis in their respiratory tract, in one place or another. We don't come down with pneumocystis pneumonia unless our immune system has been damaged. So, that is what we mean by opportunistic disease." (R11-[trans. vol. 1]-39).

11. It should also be pointed out, however, that points along the continuum of illness "cannot be considered simply as stages of an orderly progression in the spectrum of HIV infection." In stitute of Medicine, National Academy of Sciences, Confronting Aids: Directions for Public Health, Health Care, and Research (Washington, D.C., 1986), at 46. For "individuals who do pass through these conditions sequentially, there is no standard rate or pace of progression. Some patients remain asymptomatic for long period-perhaps indefinitely-while others quickly develop end-stage AIDS and die. What causes these wide variations in clinical history is not known." Correctional Facilities, supra note 3, at 4.

12. "Sexual transmission has been most common among homosexual men, although heterosexual transmission has been clearly established." Update 1988, supra note 1, at 11. "[A]nal intercourse (especially for the receptive, as opposed to the insertive, partner) and other practices that may involve trauma or bleeding" have been determined to be especially risky with regard to transmission of HIV infection. Correctional Facilities, supra note 3, at 9. Anal intercourse is considered far more likely than vaginal intercourse to result in direct insertion of the virus into the bloodstream. Id at 12 (citing Norman, AIDS Trends: Projections From Limited Data, Science, 230:1021 (Nov. 29, 1985)); (R11-[trans. vol. 1]-42) (testimony of Dr. Thomas Brewer).

Although the future is uncertain, the risk of heterosexual transmission at present still seems to be confined to cases involving direct sexual contact with a member of one of the currently predominant risk groups, such as homosexual and bisexual men, or IV drug users. See id at 12. Indeed, this fact, along with the estimated low probability of transmission through a single sexual encounter with a member of the non-IV drug using

heterosexual population, the apparently much less efficient transmission of the virus from female to male, and the higher incidence of anal intercourse among homosexuals, is often cited by those who argue against a "break-out" of HIV infection in the non-IV drug using heterosexual population. Id. Nevertheless, even accepting this still-debated proposition, heterosexual transmission must continue "to be of concern to correctional administrators-particularly with regard to pre-release education-because intravenous drug users are over-represented among inmate populations." Id.

13. Blood-to-blood transmission has occurred primarily through the sharing of needles and paraphernalia by IV drug users, as well as through transfusions of infected blood, and provision of infected blood preparations to hemophiliacs. Update 1988, supra note 1, at 11; see Correctional Facilities, supra note 3, at 12. The latter two modes of transmission have been virtually eliminated by the universal screening of donated blood and by heat treatment of the blood concentrate regularly given to hemophiliacs. Update 1988, supra note 1, at 11. Because exposure to contaminated blood now occurs almost exclusively through needle-sharing by IV drug users, this group has been of particular interest to correctional officials, since it is over-represented among correctional inmates. Correctional Facilities, supra note 3, at 12.

Although small, there is a risk of contracting HIV infection from accidental punctures and needlesticks; this occurs when contaminated blood present on a needle or instrument comes into contact with the person suffering the wound. Correctional Facilities, supra note 3, at l3-14. As of 1989, there were at least 15 well-documented cases of on-the-job infection of health care workers, including nurses, medical technicians, laboratory technicians and dentists-although a number of these infections apparently were caused by a failure to follow established precautionary procedures. Update 1988, supra note 1, at 11-12. Finally, there is also a very slight risk of contracting HIV infection through non-needles-tick, open-wound or mucous membrane (e.g. eyes, nose, mouth) exposure. Such cases have involved health-care workers whose broken skin or mucous membranes have come into contact with contaminated blood, usually as a result of failure to follow CDC-recommended precautions. Correctional Facilities, supra note 3, at 14.

14. Perinatal transmission occurs when an unborn infant is infected by the mother during pregnancy, through exposure to infected blood and other fluids during labor and delivery, and possibly in one case, through infected breast-milk. Casual Contact, supra note 10, at 2; see Correctional Facilities, supra

note 3, at 14. Most children with AIDS have had at least one parent either with AIDS or in a group at high risk for HIV infection. Correctional Facilities, supra note 3, at 14.

15. The goal of producing an HIV vaccine is extremely elusive and new knowledge about the virus as often frustrates as contributes to progress on vaccine development. HIV is a retrovirus, which means that it invades and incorporates itself into the genetic material. It is thus more hidden than an ordinary virus, and it tends to change its guise, rendering it, in effect, a "moving target" difficult to attack with a single. static vaccine.

Correctional Facilities, supra note 3, at 17. Although significant strides have been made in the development of AIDS vaccines, canvass of progress at the end of 1989 estimated that "it still may be five to ten years before an effective AIDS vaccine is widely available for human use." 1989 Update, supra note 10, at 3 (citing Bolognesi, Progress in Vaccines Against AIDS, Science, 246:1233-34 (Dec. 8, 1989)).

16. At the outset, we agree with appellants that the trial court's discussion of medical (physical and psychological) care of the seropositive in. mates could have been more helpful by providing complete, specific findings of fact to support its conclusions, as indeed is called for the Federal Rules of Civil Procedure. See Fed.R.Civ.P. 52(a) (providing that "[i]n all actions tried upon the facts without a jury, ... the court shall find on the facts specially and state separately its conclusions of law thereon"). Nevertheless, Rule 52(a) is not a jurisdictional requirement; it is simply intended to provide an adequate basis for appellate review of a district court's deci sion. "[A] remand is not required 'if a complete understanding of the issues may be had without the aid of separate findings.'" Armstrong v. Collier, 536 F.2d 72, 77 (5th Cir.1976) (citation omitted). The parties have done a good job of referring us to relevant portions of the record. On this issue, the record is well developed, and a remand is unnecessary to aid our evaluation of appellants' contentions. See id.

17. The Supreme Court has recently clarified that the "deliberate indifference" standard, which states the culpable state of mind required of prisons in eighth amendment claims involving inadequate or improper medical care, also applies generally to prisoners' eighth amendment challenges to their conditions of confinement. Wilson v. Seiter, - U.S. - , 111 S.Ct. 2321, 2324, 115 L.Ed.2d 271(1991).

18. The eighth amendment applies to the states through the due process clause of the fourteenth amendment. Robinson v. California, 370 U.S. 660, 666, 82 S.Ct. 1417, 1420, 8 L.Ed.2d 758

(1962).
19. In addition, the policy of deferring to the judgment of prison officials in matters of prison discipline and security does not usually apply in the context of medical care to the same degree as in other contexts. Wellman v. Faulkner, 715 F.2d 269, 272 (7th Cir.1983) (citation omitted), cert. denied 468 U.S. 1217, 104 S.Ct. 3587. 82 L.Ed.2d 885 (1984).
20. In Bonner v. City of Prichard 661 F.2d 1206 (11th Cir.1981) (en banc). the Eleventh Circuit Court of Appeals adopted as precedent the decisions of the former Fifth Circuit issued before October 1, 1981.
21. Dr. Sutton testified that a physician is available at Limestone and Tutwiler for one-half of a day, each day of the week. (R21-[trans. vol. 11]-107). Although actual hours vary with the workload and the facility, Dr. Sutton indicated that physicians quite often spend more than a half-day at the institutions until they have fully completed sick call, which can be as much as eight to ten hours a day. (R21-[trans. vol. 11]-110). Sutton testified that physicians at both Limestone and Tutwiler devote a routine sick call to HIV-positive inmates one day each week.
(R21-[trans. vol. 11]-122). During the remainder of the week HIV-positive inmates may sign up for regular sick call and be seen by a nurse at triage within 24 hours; every such encounter is reviewed by the next day's physician, and the patient called in if necessary. (R21-[trans. vol. 11]-198). In cases of urgency, both Sutton and local physicians are on call, and the patient will not be delayed until the next available HIV sick call-seven days a week they would go to the nearest appropriate acute health care facility. Id
According to Sutton, CHC also has elected to offer inmates approximately 120 consults of free world physician time on a state-wide basis. (R21-[trans. vol. 11]-191). Thus, although plaintiff's expert Dr. Rundle testified that the institutions at Tutwiler and Limestone were understaffed because "the usual guideline is one full-time physician for every five or six hundred inmates," (R19[trans. vol. 9]-2, 4), Sutton suggested that the manning documents for the prisons may not reflect, in terms of physician equivalence, the "many, many resources" (such as free world resources) that are utilized by the Alabama system. See (R21-[trans. vol. 11]-191-92).
22. Dr. Sutton testified that he has assumed a direct role in the treatment of the seropositive inmates (R21-[trans. vol. 11]-113). With respect to HIV-positive prisoners at Limestone and Tutwiler, he reads the T-4 test results and makes all general treatment decisions. (R21-[trans. vol. 11]-71). This involves,

for example, written communication with Dr. Pendleton, a primary care physician for the inmates, and a Ms. Baxley, the Director of Nursing at Limestone, on a daily basis. (R21-[trans. vol. 11]-113). Sutton also apparently visits Limestone personally two days a month, typically examining 20-40 inmates, approximately half of whom are HIV-positive. Sutton spends up to an hour per day reviewing the status and treatment regimens of HIV-positive prisoners, and about one-third of his time monitoring CHC's consultation requests. drug requests, T-4 cell counts, blood counts, and other CHC lab work. (R21-[trans. vol. 11~11314). While primary care physicians like Drs. Benson and Pendleton make recommendations as attending physicians, Dr. Sutton makes the "judgment calls" regarding the treatment of seropositive prisoners. (R21-[trans. vol. 111-203). Dr. Sutton's testimony at trial evidenced a thorough and detailed clinical knowledge of HIV infection and AIDS. In addition to his medical credentials, Sutton testified that he had seventeen HIV-positive patients in his private practice, and regularly participated in a monthly HIV-treater workshop sponsored by Burroughs Wellcome (currently the sole manufacturer of AZT) and the University of South Alabama. (R2 1-[trans. vol. 11]-68).

CHC assumed contractual responsibility for the health care of DOC inmates in November, 1988. Dr. Sutton testified that in March or April of 1989, he decided in his capacity as medical director to implement an aggressive medical treatment program for HIV inmates. The first element of this program was the implementation of periodic T-4 cell count testing to determine the current immunologic status of the inmates. (R21-[trans. vol. 11]-65-66). Next, after evaluating the reliability of those counts in a laboratory or clinical setting, he helped develop a program and protocol to aggressively administer AZT to those HIV-infected prisoners with a persistently low T-4 count with the absence of any other clinical finding; those with a rapidly dropping T-4 count and with or without any concurrent secondary infections; or those with any of the opportunistic infections that have been identified as comorbidity factors with AIDS with any compromise of the CD4 count. (R21-[trans. vol. 11]-66-67). Since April of 1989, all T-4 blood cells have been reported to the nursing director and local physician at each facility, as well as to Sutton personally by fax machine the same day by the director of nursing at Limestone or Tutwiler. (R2 1-[trans. vol. 111-70). Abnormal counts are repeated and read by an independent lab in Birmingham, Alabama. (R21-[trans. vol. 11]-69).

23. Although not licensed by the state of Alabama, Ms. Hendricks--Ortiz testified that she had earned a double master's degree in educational psychology and counseling, as well as

attended various workshops dealing especially with the AIDS virus.

24. Moreover. some of the testimony evidently meant to establish the DOC's "deliberate indifference" to serious mental health needs dealt with the manner in which the DOC's policy of separating HIV-positive prisoners accentuated the "atmosphere of depression, sometimes to the point of despair, of hopelessness, of futility, of the purposelessness of life; this isolated life... a resentment and a sense of the injustice of the conditions of [the HIV] unit and why they are being kept there under these conditions." (R17-[trans. vol. 7]-127) (testimony of Dr. Frank Rundle). The problem with such testimony is that it also describes mental states that are often the byproducts of punishment by incarceration, which by its terms is not intended to be pleasant. In prison, "[f]rustration, resentment and despair are commonplace." Wolff v. McDonnell, 418 U.S. 539, 562, 94 S.Ct. 2963, 2977, 41 L.Ed.2d 935 (1974). Although we do not wish to be insensitive to the plight of any individual infected with the AIDS virus, the appellants in this case are prisoners as well as patients. Even among the general population prisoners, nonpunitive segregation is the type of confinement reasonably to be expected at some point during incarceration. Hewitt v. Helms, 459 U.S. 460, 468, 103 S.Ct. 864, 870, 74 L.Ed.2d 675 (1983). Further, as Chief Justice Rehnquist has observed,

> nobody promised them a rose garden; and I know of nothing in the Eighth Amendment which requires that they be housed in a manner most pleasing to them, or considered even by most knowledgeable penal authorities to be likely to avoid confrontations, psychological depression, and the like. They have been convicted of crime, and there is nothing in the Constitution which forbids their being penalized as a result of that conviction.

Atiyeh v. Capps, 449 U.S. 1312, 131516, 101 S.Ct. 829, 831-32, 66 L.Ed.2d 785 (1981). To the extent that a reasonably commonplace condition of confinement exacerbates the despair an individual feels at being stricken with a terminal and stigmatizing illness such as HIV disease, or vice versa, it nevertheless in this context seems a measurable extension of eighth amendment jurisprudence to consider the effect of the confinement itself as constituting evidence of "deliberate indifference."

25. Preliminarily, we observe that appellants' decision to ground their challenge to the DOC's segregation policy in the rather nebulous right of privacy leads us to tread in "relatively unexplored territory." Doe v. Coughlin, 697 F.Supp. 1234, 1236 (N.D.N.Y.1988). In a few prior federal cases, prisoners have challenged the segregation of HIV-positive or AIDS-afflicted inmates as violative of equal protection, due process, the right

of free association, and the right to be free from cruel and unusual punishment; thus far, such challenges have met with little success.
Rodriguez v. Coughlin, 1989 WL 59607 at *2, 1989 U.S.Dist. LEXIS 15898 at *6-*7 (W.D.N.Y.1989); Doe, 697 F.Supp. at 1236; see also St. Hilaire v. Arizona Dep't of Corrections, 934 F.2d 324 [table], 1991 WL 90001 at *2; 1991 U.S.App. LEXIS 11620 at *6 (9th Cir.1991) (noting that in contrast to suits by non-infected prisoners to compel correctional systems to segregate seropositives, "some courts have upheld prison decisions to quarantine HIV-infected in-mates"); Baez v. Rapping, 680 F.Supp. 112, 116 n. 6 (S.D.N.Y.1988) (noting that right of prison administrators to segregate inmates with AIDS has been upheld against challenges based on the first, eighth, and fourteenth amendments) (citing McDuffie v. Rikers Island Medical Dep't., 668 F.Supp. 328, 329 (S.D.N.Y.1987)); see, e.g., Muhammad v. Carlson, 845 F.2d 175, 178-79 (8th Cir.1988) (no liberty interest violated by decision to segregate inmate in restricted AIDS unit), cert. denied, 489 U.S. 1068, 109 S.Ct. 1346, 103 L.Ed.2d 814 (1989); Cordero v. Coughlin, 607 F.Supp. 9, 1011 (S.D.N.Y.1984) (segrega tion of AIDS sufferers from general population did not violate afflicted inmates' constitutional rights asserted under first, eighth and fourteenth amendments). Thus, "[p]erhaps chastened by the uniform failure of these attacks, plaintiff has chosen the less travelled path marked by the uncertain borders of the constitutionally protected right of privacy." Doe, 697 F.Supp. at 1236.
26. Although the Constitution does not explicitly establish a right of privacy, the Supreme Court has recognized for almost a century that certain rights of personal privacy do exist. In Whalen v. Roe, the Supreme Court observed that its "privacy" jurisprudence, grounded primarily in the fourteenth amendment's concept of personal liberty and restrictions upon state action, delineates at least two different kinds of privacy interests. Whalen v. Roe, 429 U.S. 589, 598-99 & n. 23, 97 S.Ct. 869, 875-76 & n. 23, 51 L.Ed.2d 64 (1977). "One is the individual interest in avoiding disclosure of personal matters, and another is the interest in independence in making certain kinds of important decisions." Id at 599-600, 97 S.Ct. at 876-877(footnotes omitted).
Appellants apparently claim that both such interests are implicated in the instant setting. The nature of the right claimed by appellants is perhaps most aptly described as a right to privacy in preventing the nonconsensual disclosure of one's medical condition or diagnosis. See Doe v. Coughlin, 697 F.Supp. at 1237. There is some authority supporting such a right, Plowman

v. United States Dep't of Army, 698 F.Supp. 627, 633 & n. 22 (E.D.Va.1988), specifically in contexts dealing with HIV-positive prisoners. See, e.g., Doe, 697 F.Supp. at 1237 (acknowledging seropositive inmate class members' right to privacy in preventing nonconsensual disclosure of their medical diagnosis); Woods v. White, 689 F.Supp. 874, 876 (W.D.Wis.1988) (despite incarceration, constitutional right to privacy extended to inmate's seropositive status: "[I]t is difficult to argue that information about [AIDS or HIV disease] is not information of the most personal kind, or that an individual would not have an interest in protecting against the dissemination of such information."), aff'd 899 F.2d 17 (7th Cir.1990); see also St. Hilaire, 1991 WL 90001 at *2, 1991 U.S.App. LEMS 11620 at *6 (speculating that publication of seropositive inmates' HIV status "might violate infected inmates' rights to privacy and confidential medical treatment"); Inmates of New York State With Human Immune Deficiency Virus v. Cuomo, 1991 WL 16032 at *3, 1991 U.S.Dist. LEXIS 1488 at *7-*8 (accepting for purposes of resolv ing discovery dispute proposition that "the federal Constitution protects against the unwarranted and indiscriminate disclosure of the identity of HIV-infected individuals and their medical records"); Rodriguez 1989 WL 59607 at *3, 1989 U.S.Dist. LEXIS at *10 (finding reasoning supporting constitutional privacy right in disclosure of HIV status to be "eminently persuasive"); Doe v. Meachum, 126 F.R.D. 452, 453 (D.Conn.1989) (quoting passage from Doe v. Coughlin quoted in text above, and recognizing "significant privacy interest" of seropositive plaintiff class members in suit challenging policies of Connecticut Dep't of Corrections). But see Cordero v. Coughlin, 607 F.Supp. 9, 1011 (D.C.N.Y.1984) (segregation of AIDS sufferers from general population did not violate afflicted inmates' numerous asserted constitutional rights, including privacy). The scope of such a right, however, is far from settled, and we need not divine its precise parameters here, given our holding infra that any such right is outweighed by the legitimate penological interests of the Alabama DOC.

27. Cf. Doe v. Borough of Barrington, 729 F.Supp. 376 (D.N.J.l990). There, in the context of a civil rights action brought by the wife and children of a citizen whose infection with the AIDS virus was publically disclosed by a police officer, the district court found "persuasive" the rationales of cases that acknowledged a constitutional right to privacy in disclosure of medical records, and reasoned:

The sensitive nature of medical information about AIDS makes a compelling argument for keeping this information confidential. Society's moral judgments about the high-risk activities

associated with the disease, including sexual relations and drug use, make the information of the most personal kind. Also, the privacy interest in one's exposure to the AIDS virus is even greater than one's privacy interest in ordinary medical records because of the stigma that attaches with the disease. The potential for harm in the event of a nonconsensual disclosure is substantial[.]
Id. at 384.
28. The DOC evidently agrees with the testimony of appellant's expert, Dr. Patrick McManus, that "[a]nybody who cares to know can find out who is HIV positive and who is not HIV positive just simply because they are segregated and visually identifiable" (R25[trans. vol. 15]-55); "confidentiality of HIV positive inmates in this system is gone once they are moved into one of the [HIV] units." (R25[trans. vol. 15]-56). "Thus, absent the elimination of separation, it is not possible [for the correctional facilities] to maintain the confidentiality of prisoners' HIV status." Brief of Appellees/Cross-Appellants at 3.
29. As the district court observed:
[P]rison officials or this Court must also consider the rights of other inmates within the prison walls and whether or not those persons have a right to be shielded from such dangers as are known to prison authorities or may reasonably be expected to result from the close confinement associated with a prison environment which, at best, is volatile. It appears to this Court that the Plaintiffs in this case selfishly assert their rights to expose other inmates to their problems independent of any right of the other inmates to be protected from what is admitted to be a dread fatal disease of the Plaintiffs (all of whom are capable of transmitting the disease). This Court must consider the rights of the general population inmates in determining whether or not the policies in question are constitu tionally permissible.
Harris, 727 F.Supp. at 1572.
30. The Court in Turner v. Safley, 482 U.S. 78, 107 S.Ct. 2254, 96 L.Ed.2d 64 (1987), crafted its "reasonable relationship" test in the context of reviewing the constitutionality of two regulations promulgated by the Missouri Division of Corrections, one placing certain restrictions on inmate correspondence, the other allowing an inmate to marry only after obtaining permission of the prison superintendent, which could only be given in the face of "compelling" reasons.
31. The Court went on to explain its reasons for adopting such a standard:
In our view, such a standard is necessary if "prison

administrators ..., and not the courts, [are] to make the difficult judgments concerning institutional operations." Subjecting the day-to-day judgments of prison officials to an inflexible strict scrutiny analysis would seriously hamper their ability to anticipate security problems and to adopt innovative solutions to the intractable problems of prison administration. The rule would also distort the decisionmaking process, for every administrative judgment would be subject to the possibility that some court somewhere would conclude that it had a less restrictive way of solving the problem at hand. Courts inevitably would become the primary arbiters of what constitutes the best solution to every administrative problem, thereby "unnecessarily perpetuat[ing] the involvement of the federal courts in affairs of prison administration."

Turner, 482 U.S. at 89, 107 S.Ct. at 2262 (citations omitted).

32. Thus, the DOC's expert, Dr. Nadim Koury, Medical Director for the California Department of Corrections, was asked whether in his opinion the testing of inmates for HIV was important in minimizing the spread of the disease. He responded:

If you test all inmates and you identify all the inmates infected and you do separate them far from the general population of a prison system in there, then you are minimizing the possibility of altercation; minimizing the possibility of IV drug sharing, which does occur in prison; minimize that, too, needle sharing does occur inside the present system, then, yes. The answer is yes. You will reduce that transmission. Definitely.

(R23-[trans. vol. 13]-23).

33. For example, James White, the Warden of the Limestone facility. testified that in his view, if the separation policy were not maintained, "[w]e will have violence, inmate to inmate," as well as a vast increase in inmates requesting protective custody in order to avoid being exposed to seropositive prisoners. (R22-[trans. vol. 12(b)]-34). James W. Hayes, a classification supervisor at Limestone, opined that "there would be an increase in the fights between inmates in population, not only between non HIV inmates and HIV inmates. There would be altercations and fights and aggressive behavior between other inmates for favors of some of the HIV inmates." (R20-[trans. vol. 10]-206). One of the defendant-intervenor prisoners, testi fying to the fear of prison guards at the prospect of integrating seropositive prisoners with those in the general population, observed, "They don't want the AIDS people in the main population. They know what trouble is going to come. There will be killing." (R14-[trans. vol. 4]-99). In discussing his view of the need for separation of seropositives, Dr. Koury explained:

Because of my knowledge I can come to a conclusion that you need

to have HIV people separated. And the reason is not only on medical basis because of the tuberculosis and syphilis and this way you can provide them good treatment and you can allow your medical staff to concentrate on them to a lot of degree, it is because of the aspect of being seen by the other inmate population as a possible source of infection. Not necessary that they are, but because they can be, as a fact of fist fights or altercations of any kind, and the perception of the inmate population that they are a kind of a troublemaker for them. (R2~[trans. vol. 13]-19-20).

34. Warden White also expressed concern that there would be a much higher turnover in the number of correctional officers at Limestone if seropositive prisoners were reintegrated without their identities being revealed to correctional staff. (R22-[trans. vol. 12(b)]-34).

35. In addition, there was evidence that a majority of inmates who had already tested positive for HIV infection experienced psychological "denial," and steadfastly denied their seroposi tivity. Other evidence established that inmates in the HIV unit who had been previously instructed by nursing staff not to engage in high risk behavior nevertheless were subsequently treated for sexually transmitted diseases such as syphilis, gonorrhea, chlamydia, and anal warts acquired through anal intercourse.

36. The close quarters and heightened occurrences of high-risk activity in prisons undoubtedly accentuate "AIDS phobia" for those who must continually deal with the presence of HIV in the correctional context; "'[w]hen patients with AIDS [or HIV] are discovered in the prison system, there is a crescendo of concern leading to panic on the part of prisoners. correctional staff, as well as the medical staff."' Note, In Prison with AIDS- The Constitutionality of Mass Screening and Segregation Policies, 1988 U.Ill. L.Rev. 151 (quoting Pear, Prisons Are on the Alert Against AIDS, N.Y. Times, Jan. 12, 1986, at 28E, col. 1). However, we are unwilling merely to dismiss as alarmist or illegitimate all of the concerns expressed by the class of general population prisoners that has intervened in this lawsuit. High-risk behavior, particularly IV drug use and homosexual activity (consensual and nonconsensual), is a given in the prison setting, and no correctional approach can eliminate it. Homo-sexual rape is commonplace. As Justice Blackmun has observed, "[a] youthful inmate can expect to be subjected to homosexual gang rape his first night in jail, or, it has been said, on the way to jail. Weaker inmates become the property of stronger prisoners or gangs, who sell the sexual services of the victim." United States v. Bailey, 444 U.S. 394, 421, 100 S.Ct. 624, 640, 62 L.Ed.2d 575 (1980) (footnotes omitted) (Blackmun, J.,

dissenting).
Once the element of an infectious, terminal disease is added to this ugly scenario, the potential variations become even more gruesome.
See Harris, 727 F.Supp. at 1581 n. 6. For example, assume that nonviolent seropositive prisoner A is integrated into the general prison population because he appeared to pose no direct threat of HIV transmission. A is raped by inmate B, who as a result contracts HIV. B later forcibly rapes C, further transmitting the disease.
In the above example, education, as urged by appellants, would alert B to the risk, and would teach him the deadly consequences of his behavior. But suppose B ignores the risk. The above scenario consequently yields not only B, a prisoner who has contracted the disease through his own maliciousness or folly (by ignoring AIDS education), but also C, a completely faultless prisoner whose punishment for whatever crime has now in effect been increased to a sentence of certain death. A, who apparently posed no direct behavioral threat, has nevertheless become an agent for further transmission of the disease in the general population.
Although the prison obviously has a responsibility to use its best efforts to prevent the attacks upon A and C, as the parties have acknowledged, no system is perfect. Moreover, it is virtually certain that the next lawsuit will be C v. DOC, with C contending that the prison is liable for his harm, since it knew, or should have known, that A was infected with a contagious, deadly disease, and that even under the best circumstances the system could not guarantee that C would not be raped.
It is not our intent to offer an extended parade of horribles here, particularly because we are not at all sure (nor is it our role to be sure) that the DOC's correctional approach in this case is the best one. We simply offer these thoughts to reinforce our conclusion that Alabama's response to the problem of HIV is at the minimum a reasonable attempt to accommodate the interests of all of the prisoners affected by this case.
37. We find unpersuasive appellants' argument that the presence of a "window period" in the DOC's screening procedure, which theoretically allows a small percentage of "false negative" HIV-infected prisoners to enter undetected into the general population, renders the DOC's approach completely unreasonable. It may be, as appellants suggest, that such a "window period" lulls high-risk general population prisoners and correctional authorities into a false sense of security about the general risk of HIV transmission in prison. However, while the presence of a "window period" certainly argues for increased education about

the disease, to help prevent transmission by those individuals that have slipped through the net, we fail to see how it argues against separating out those prisoners who have tested positive for the virus. We agree with the district court, which noted: "[I]f, as [appellants'] experts claim, education is the answer, knowledge of the existence of false negatives in the population, coupled with segregation of known carriers, provides protection to those likely to heed precautions and, to a lesser extent, to those who rush on where educated men fear to tread." Harris, 727 F.Supp. at 1581 n. 6.

38. As the Turner majority observed:

Running a prison is an inordinately difficult undertaking that requires expertise, planning, and the commitment of resources, all of which are peculiarly within the province of the legislative and executive branches of government. Prison administration is, moreover, a task that has been committed to the responsibility of those branches, and separation of powers concerns counsel a policy of judicial restraint. Where a state penal system is involved, federal courts have, as we indicated in Martinez, additional reason to accord deference to the appropriate prison authorities.

Turner, 482 U.S. at 8~85, 107 S.Ct. at 225~2260 (citation omitted).

39. Appellants have also challenged the affirmative disclosure by the DOC of prisoner's HIV status to the Parole Board. In light of our finding that segregation of HIV-infected prisoners, with the disclosure of HIV status that necessarily results, is reasonable, we also find reasonable this additional incursion upon appellants' disclosural privacy rights.

40. Unlike general population inmates, for example, seropositive prisoners have no access to college classes, other than correspondence classes. Limestone HIV unit prisoners have very few job opportunities, and Tutwiler HIV prisoners have none at all. In some areas, such as recreation, law library, or chapel use, segregated programming is not comparable to that of the general prison population; in others it is altogether nonexistent. In addition, the DOC apparently concedes that seropositive prisoners are not offered any vocational training, nor are they eligible for community placement programs such as Supervised Intensive Restitution (SIR), work release, and Prediscretionary Release (PDL).

41. Only the Ninth Circuit appears to have specifically addressed the issue of whether section 504 extends to prisoner claims, see Bonner v. Lewis, 857 F.2d 559, 562 (9th Cir.1988), finding that the broad language of the Rehabilitation Act cover ing "any program" that receives federal financial assistance, and

with the congruence of the Act's goals with those of prison officials, suggest that prisoner claims are potentially cognizable under section 504. Id. We agree.

42. School Board v. Arline, 480 U.S. 273, 107 S.Ct. 1123, 94 L.Ed.2d 307 (1987), involved the dismissal of a schoolteacher with recurring tuberculosis. There, the government had conceded that contagious diseases could be handicapping to the extent that they leave people with "diminished physical or mental capabilities," and that the teacher, Arline, possessed a record of physical impairment. Id at 281,107 S.Ct. at 1128. The government argued however, that these factors were irrelevant because "the school board dismissed Arline not because of her diminished physical capabilities, but be-cause of the threat that her relapses of tuberculosis posed to the health of others." id. (footnote omitted). Justice Brennan, writing for the majority, disagreed with the government's notion "that, in defining a handicapped individual under Sec. 504, the contagious effects of a disease can be meaningfully distinguished from the disease's physical effects on a claimant in a case such as this. Arline's contagiousness and her physical impairment each resulted from the same underlying condition, tuberculosis." Id at 282, 107 S.Ct. at 1128.

Despite this suggestion, however, the Court did not directly address the government's argument that it is possible for persons to be carriers of a disease, capable of transmitting it, without suffering from any symptoms or any type of "physical impairment." Id at 282 n. 7, 107 S.Ct. at 1128 n. 7. Rather the Court dismissed the government's conclusion-that discrimination solely on the basis of contagiousness is never discrimination on the basis of a handicap -by terming it "misplaced" on the facts, since Arline's tuberculosis gave rise to both physical impairment and contagiousness. Id. Thus, the Court expressly left open the question of "whether a carrier of a contagious disease such as AIDS could be considered to have a physical impairment, or whether such a person could be considered, solely on the basis of contagiousness, a handicapped person as defined by the Act." Id.

43. Although it is true, as appellants point out, that our Circuit has previously recognized AIDS as a handicap under section 504, Martinez By and Through Martinez v. School Board, 861 F.2d 1502, 1506 (11th Cir.1988), the scope of this holding for purposes of deciding whether seropositive, asymptomatic carriers of HIV (i.e., those who have not yet progressed to active disease) are to be considered "handicapped individuals" is at least questionable. In Martinez, we found simply that a mentally retarded girl with AIDS suffered "from two handicaps under section 504 of the Rehabilitation Act: she is mentally

retarded and has AIDS; each condition results in a physical or mental impairment which substantially limits one or more major life activities.'" Id. (citations omitted) (emphasis added). Because by the time of trial the appellant-child in Martinez was a stabilized but advanced-stage AIDS patient who at that point was clearly impaired physically by the disease, it is not clear from the above language whether the panel found AIDS to be a "handicap" simply by virtue of the child's infection with the virus (which the court then considered to be in itself a "physical impairment"), or whether the court's finding of handicap was predicated, as with the Arline plaintiff, upon the presence of both actual physical impairment and contagiousness. The distinction is obviously important, because if seropositivity alone were not enough to qualify an individual as "handicapped" under section 504, then at least some of the plaintiff class members in this case would be foreclosed from relief on this claim.

44. The Arline Court elaborated on this aspect of the definition, the discussion of which is worth noting here in the context of HIV infection:

By amending the definition of "handicapped individual" to include not only those who are actually physically impaired, but also those who are regarded as impaired and who, as a result, are substantially limited in a major life activity, Congress acknowledged that society's accumulated myths and fears about disability and disease are as handicapping as are the physical limitations that flow from actual impairment. Few aspects of a handicap give rise to the same level of public fear and misapprehension as contagiousness.... The Act is carefully structured to replace such reflexive actions to actual or perceived handicaps with actions based on reasoned and medically sound judgments: the definition of "handicapped individual" is broad, but only those individuals who are both handicapped and otherwise qualified are eligible for relief. The fact that some persons who have contagious diseases may pose a serious health threat to others under certain circumstances does not justify excluding from the coverage of the Act all persons with actual or perceived contagious diseases. Such exclusion would mean that those accused of being contagious would never have the opportunity to have their condition evaluated in light of medical evidence and a determination made as to whether they were "otherwise qualified." Rather they would be vulnerable to discrimination on the basis of mythology-precisely the type of injury Congress sought to prevent.

Arline, 480 U.S. at 28485. 107 S.Ct. at 1129-30 (footnotes omitted) (emphasis in original); see S.Rep. No. 931297, 93rd

Cong., 2d Sess. 39, reprinted in 1974 U.S.Code Cong. & Admin.News 6373, 6388-89.

45. "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. Sec. 84.3(j)(2)(ii) (1990). In prison. many of these activities, such as learning and working, are tied directly to the availability of various activities and programs. Seropositive inmates are treated systemically as if they are unable to participate in such programs, even if this is not in fact the case.

46. Other courts, including a panel of our Circuit, have either suggested or recognized that seropositivity itself is a "handicap" under section 504. See, e.g. Leckelt v. Board of Comm's of Hosp. Dist. No. 1, 909 F.2d 820, 825 (5th Cir.1990) (assuming for purposes of appeal that seropositivity is an impairment protected under section 504, and that hospital officials treated HIV-infected nurse as if he had such an impairment); Doe v. Garrett, 903 F.2d 1455, 1459 (11th Cir.1990) (noting in case involving apparently asymptomatic HIV-carrier that it is "well established that infection with AIDS constitutes a handicap for purposes of the [Rehabilitation] Act"); Glanz v. Vernick, 756 F.Supp. 632, 635 (D.Mass.1991) (noting that several district courts and the Dep't of Justice have found HIV-positive status to be a "handicap" within meaning of Rehabilitation Act); Doe v. Centinela Hosp., 1988 WL 81776 at *7, 1988 U.S.Dist. LEXIS 8401 at *18 *21 (C.D.Cal.1988) (section 504 "handicap" found where "potential for transmission of HIV infection was a one hundred percent limitation on plaintiff's becoming a beneficiary of' drug rehabilitation program; HIV-positive plaintiff was perceived and treated as handicapped by recipient); Thomas v. Atascadero Unified School Dist., 662 F.Supp. 376, 379 (C.D.Cal.1987) (in determining AIDS-infected child to be "handicapped" under section 504, court found that even asymptomatic carriers of AIDS virus were physically impaired by abnormalities in hemic and reproductive systems which make procreation and childbirth dangerous to themselves and others); Local 1812, Am. Fed'n of Government Employees v. United States Dep't of State, 662 F.Supp. 50, 54 (D.D.C.1987) (finding that persons who carry HIV are "handicapped" by either perception that known carriers of the virus will develop incurable, fatal AIDS, or by actual, measurable deficiencies in their immune systems even where disease symptoms have not developed); District 27 Community School Bd v. Board of Educ., 130 Misc.2d 398, 415, 502 N.Y.S.2d 325, 336 (Sup.Ct.1986) (stating that asymptomatic HIV carriers are within protection of Rehabilitation Act); see also

Dep't of Justice, Office of Legal Counsel, Application of Section 504 of the Rehabilitation Act to HIV- infected Individuals (Sept. 27, 1988); cf. Cain v. Hyatt, 734 F.Supp. 671, 678-79 (E.D.Pa.1990) (in suit under Pennsylvania Human Relations Act, court finds consensus of opinion in constructions of various other federal and state antidiscrimination laws, including Rehabilitation Act, that HIV infection is a "handicap," and concludes that even if asymptomatic, plaintiffs HIV infection would constitute "substantial physical limitation on major life activities"); Kohl By Kohl v. Woodhaven Learning Center, 672 F.Supp. 1226, 1236 (W.D.Mo.1987) (finding that asymptomatic infection with contagious hepatitis-B virus is section 504 "handicap," in part due to life-skills and vocational facilities' fear that impairment would pose a threat to third parties). See generally Khan, The Application of Section 504 of the Rehabilitation Act to the Segregation of HIV-Positive Inmates, 65 Wash.L.Rev. 839 (1990); Note, Asymptomatic Infection with the AIDS Virus as a Handicap Under the Rehabilitation Act of 1973, 88 Colum.L.Rev. 563 (1988).

Notwithstanding what appears to be an emerging consensus on this issue, we wish to emphasize the narrowness of our holding, and confine it only to the record before us. We express no opinion as to whether asymptomatic seropositive individuals would in all contexts be "handicapped" for section 504 purposes.

47. Intuitively, however, it seems as if there are several programs or activities in which the risk of transmission would be rather minimal. An example is the participation of the seropositive prisoners in college classes. Other decisions involving the classroom setting in non-prison contexts have determined the risk of transmission to be too remote or insignificant to justify exclusion of the HIV-infected individual. See, e.g., Chalk v. United States Dist. Court, 840 F.2d 701, 707-08 (9th Cir.1988) (ordering grant of preliminary injunction to HIV-infected teacher, where medical evidence showed that there was no significant risk that teacher would communicate disease to others); Ray v. School Dist., 666 F.Supp. 1524, 1535 (M.D.Fla.1987) (granting preliminary injunction prohibiting school district from excluding three seropositive brothers from classroom where "future theoretical harm" of transmission of AIDS virus was unsupported by the weight of the medical evidence); Thomas v. Atascadero Unified School Dist., 662 F.Supp. 376, 380 (C.D.Cal. 1987) (granting preliminary injunction prohibiting school district from excluding AIDS-infected child from classroom even after child had been involved in biting incident; court concluded that "[a]ny theoretical risk of transmission of the AIDS virus in connection" with kindergarten attendance was “so

remote that it cannot form the basis for any exclusionary action" by school district). We understand, of course, that infected prisoners are different from infected schoolchildren or teachers, and that their presence may pose different risks than those associated with the typical classroom scenario. However, whether the risk of transmission is sufficient to warrant categorical exclusion, and if so, whether that risk can be rendered minimal through accommodation, are findings the district court must make on remand.

48. Accommodation is not reasonable if it imposes "undue financial and administrative burdens" on a grantee, Southeastern Community College v. Davis, 442 U.S. 397, 412, 99 S.Ct. 2361, 2370, 60 L.Ed.2d 980 (1979), or if it requires "a fundamental alteration in the nature of [the] program." Id. at 410, 99 S.Ct. at 2369; Arline, 480 U.S. at 287 n. 17, 107 S.Ct. at 1131 n. 17.

49. Prior to the second phase of trial, appellants filed a motion in limine to exclude various exhibits based upon survey data and testimony prepared by appellee's experts, on the basis that it had not been provided to them during discovery. The trial court granted appellants' metion. Appellees filed a motion to reconsider the order, as well as an offer of proof regarding Defendants' Exhibit 482, the so-called "Ingram Study." The trial court denied appellees' motion.

In light of our decision to remand part of this case for further proceedings and the attention called to this issue, we trust that the parties will have resolved any discovery problems with this potentially relevant evidence. We therefore reverse the trial court's exclusion of the evidence insofar as the DOC is now free to re-offer it, and the district court is now free to reexamine its admissibility.