On Research on HIV Infection and AIDS in Correctional Institutions

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THE AIDS EPIDEMIC CHALLENGES TRADITIONAL analyses of public health responsibilities and civil liberty protections. Urgent demands for prevention and treatment also require us to rethink many of our regulations and practices, including the elaborate regulatory provisions and professional proscriptions that have been developed to protect research subjects from the risks of innovative but untested therapies. Since there are specially identified problems in conducting research on prisoners, for whom federal regulations governing research on human subjects specifically provide additional protection, and since a disproportionate number of prisoners suffer from HIV infection, the AIDS epidemic poses unique problems and unique opportunities in jails and prisons for epidemiological research on HIV infection and AIDS and for the conduct of clinical trials of new treatments.

Indeed, the AIDS epidemic may be reversing the ways in which the public, in general, and regulatory agencies, in particular, think about risk and innovation in human experimentation and drug development. As is often the case, two perspectives competed for ascendancy—one intent on minimizing risk, the other eager to foster useful innovation. Until very recently most regulatory bodies, including the wide variety of institutional review boards for the protection of human subjects

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(IRB) and the United States Food and Drug Administration (FDA), defined the essence of their mission in terms of protection: the protection of the human subject from the excesses of researchers. The presumption that most often guided policy was the risk-minimizing one: unless researchers and drug companies were carefully regulated, abuse was likely to follow. The public seemed to concur in these policies, ready to support the presumption that researchers left on their own would allow scientific curiosity, eagerness to conquer disease, and possibly desire for fame and personal gain to take precedence over all other considerations, including the immediate well-being or the autonomy of the human subjects of their research.

The pressures generated by the AIDS epidemic may be transforming this orientation and definition of purpose. It is this prospect that forces the rethinking of policy on epidemiologic and therapeutic research on prisoners. Challengers to the FDA process are demanding bureaucratic and regulatory change to permit early approval and subsequent wide distribution of promising therapeutic interventions. The equilibrium is tilting, particularly in clinical trials, from restricting access to experimental protocols to enrolling as many subjects as possible. IRBs and federal regulators must consider whether these new perspectives should be allowed to alter policies and practices on experimentation in jails and prisons. With special reference to treatment, these bodies must decide whether the clinical situation of HIV disease demands a reevaluation of the previously constructed balance between protection from abuse and access to possibly beneficial treatments.

The *Code of Federal Regulations* (C.F.R. Title 45 Public Welfare Sections 46.101–46.409) adopted in 1978 sets forth rules to govern all research involving human subjects conducted by the Department of Health and Human Services (DHHS) or funded in whole or in part by federal funds. Subsequently, most research institutions adopted the federal schema and criteria to govern all research, whether or not federally supported.

The federal regulations established general rules and basic policy for adults capable of providing informed consent (Subpart A) neither mentally ill, mentally infirm, retarded, nor demented, and provided additional protections "Pertaining to Research, Development, and Related Activities involving Fetuses, Pregnant Women, and Human In Vitro Fertilization" (Subpart B); "Pertaining to Biomedical and Behavioral

Research Involving Prisoners as Subjects" (Subpart C); and "For Children Involved as Subjects in Research" (Subpart D).

Subpart A describes research with adult individuals capable of making health care decisions who, provided with sufficient information about the possible risks and benefits of protocol, may provide voluntary consent or may refuse to participate. Subpart A also requires institutions to create IRBs charged with two general tasks. An IRB must determine whether the sum of the possible benefit of the proposed research to the subject and to society outweighs the risk to an individual subject. If a positive benefit/risk ratio exists, the IRB must then review the informed-consent process to ensure that subjects are adequately informed in a timely and appropriate manner best suited to permit reflection and independent judgment. Prisoners and children are provided with enhanced protections because the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1975) found that the former, although capable, were subject to coercion and the latter not yet mature enough to provide morally or legally informed choice.

We will examine whether federal regulations apply to epidemiologic research on AIDS in a correctional setting and, if so, whether they apply when the research is completely anonymous with regard to identification of individual subjects. It will question whether such research should be reviewed by an IRB at all and, if so, what standards for review should be applied and what special factors should be considered.

We will then ask whether federal regulations permit prisoners to participate in clinical trials with possible therapeutic benefit and, if so, what special circumstances require the attention of an IRB. It will ask whether "free and informed" consent can be protected in a prison or jail setting and, if not, what leeway should be permitted for individual choice despite the theoretical dangers.

Our conclusions are:

- First, any research involving prisoners, even the performance of serologic studies for HIV infection on discarded blood taken for an independent clinical purpose with all identification removed, (i.e., "anonymous" epidemiologic studies) should be subjected to IRB review. Although it can be argued such studies do not represent "research on human subjects" because of the lack of identifi-

able information on individuals, we believe the special ethical problems that surround research in correctional settings require this review.

- Second, despite some confusion on this issue in the research and corrections communities, current federal regulations (according to an informal reading by the Office for the Protection from Research Risks (OPRR), the DHHS agency responsible for the implementation of the federal regulations) already permit an IRB to approve protocols that include prisoners in clinical trials, so long as there is no "control group" in the study who are untreated or who receive only a presumed inactive substance (placebo). Since there already exist some effective drugs for treatment of many patients with AIDS (e.g., AZT and aerosolized pentamidine) the option of placebo alone as a control should not ethically arise (in clinical trials of new drugs for such treatment) in or out of a prison. For other aspects of treatment of people with AIDS or with presymptomatic HIV infection, a placebo may indeed be an appropriate control and these studies may not be appropriate for performance in prisons.
- Third, although a prison setting precludes the voluntary and uncoerced choice classically envisioned by the regulations, prisoners should be permitted to choose to participate in therapeutic trials with no placebo arm that hold out the possibility of benefit. This should be the case not only for prisoners with AIDS but for prisoners with any illness for which no standard, accepted, effective, generally available method of treatment exists.

These conclusions are based largely on the results of a consensus panel of experts in corrections, prison health care, and public health, supported by a grant from the Jails Division of the National Institute of Corrections, held in June of 1988. Particularly helpful were reports prepared prior to the panel by a distinguishable group of contributors: Alvin J. Bronstein, National Prison Project, American Civil Liberties Union; Theodore M. Hammett, Abt Associates; Robert J. Levine, Yale University School of Medicine; Charles R. MacKay, Office for Protection From Research Risks, DHHS; William J. Rold and John A. Beck, Prisoners' Rights Project, Legal Aid Society, New York; and David J. Rothman, College of Physicians and Surgeons, Columbia University.

Discussions about research on prisoners with HIV infection or AIDS are useful as a lens to examine not only prisoners but other infected populations. Most new and promising treatments are developed through experimental protocols, but research shades imperceptibly into accepted treatment long before regulatory agencies have approved the treatment. Examining the availability of needed care and treatment of prisoners with HIV infection crystalizes the issues in the clash between two views of morality: the punitive view which decrees that voluntary actions that deviate from an accepted norm may be punished, and the caring view which holds that the sick and afflicted require comfort and care no matter how reprehensible and subject to punishment they may be. Nowhere else do those principles war as openly as in prison, although they exist clearly in the background of discussions about IV drug users and, in a slightly more veiled form, in debates about gay and bisexual men. Prisons put into bold relief the unresolved dilemma of this next wave of the epidemic: Should the deviant be punished, or should the sick be cared for? Discussions about inclusion or exclusion from innovative therapeutic interventions may be subsumed by the technical regulatory language of the federal regulations, but they are really about punishment, protection, and access to care.

The Prison Setting

Prison Conditions

Corrections is a growth industry. In 1977 Rikers Island, the major New York City jail, was responsible for 7,043 inmates; in 1987 the population was 13,941 (New York City 1989). From 1986 to 1987, the average increase in inmate population for the nation's largest prison system was 6.7 percent. California's inmates increased by 12.6 percent, Michigan's by 15.1 percent, and Ohio's by 7.9 percent. At the close of 1988, 627,402 men and women were in federal and state prisons, an increase of 7.4 percent over the previous year. Since 1980, "eighteen states, the District of Columbia and the federal prison systems have more than doubled their prisoners, and of those eighteen, Alaska, California, New Hampshire and New Jersey have had threefold" increases. This startling growth reflects tougher police and judicial policies, the

"heightened likelihood that a serious offender will receive a prison sentence and a 113 percent increase in the number of adults arrested for drug trafficking or manufacturing" (*New York Times* 1989b).

In 1986 blacks constituted 47 percent of inmates nationally; 12.6 percent were Hispanic. The median age of state prison inmates in 1986 was 28. In that same year 54 percent of state prison inmates were under the influence of drugs or alcohol at the time of the offense (U.S. Bureau of Justice Statistics 1988, 3–6; Potler 1988). At a time in which IV drug use is increasingly associated with HIV infection, these are alarming statistics.

They concern us not only in what they predict for the prison system but what they foretell for society. Accidents of history and the vagaries of an over-burdened judicial system determine whether IV drug users are incarcerated or free. Almost all poor drug users rely on criminal behavior to support their habits. Increasing police scrutiny and tougher sentencing policies lead to longer incarcerations for greater numbers. Most important, however, the Bureau of Justice Statistics conducted a study that examined release records for 11 states in 1983 and showed that within three years 62.5 percent of those released had been again arrested and jailed, 47 percent convicted, and 41 percent reincarcerated. "The study included projections, based on its sample, which showed about 68,000 of the 109,000 released . would be arrested within three years and charged with 326,000 new crimes," the greatest number of which (46,000) would be for drug offenses. Recidivism rates were highest for black and Hispanic men (*New York Times* 1989a).

The majority of inmates in the New York State prison system serve an average of 18 months and are reincarcerated within three years (*New York Times* 1989a). Prison walls effectively restrain criminals only for short time spans; they neither delimit nor contain the public health dilemmas of HIV infection. How we care for the incarcerated will in the future have a direct effect on needed clinical and public health services in the community.

The enormous growth in the numbers of incarcerated people has led the federal government and most state governments to construct new correctional facilities. The 1988 increases translate into a nationwide need for more than 800 new prison beds per week (*New York Times* 1989b). Given the explosive rise in confined populations, however, many of the facilities are overcrowded when they open or become so shortly thereafter. Overcrowding and the lack of essential services, such

as health care, may have a direct negative psychological impact on any individual inmate and may compromise the well-being of the general population and the safety of the public health environment as infectious diseases such as tuberculosis go undetected. The net result has generally been curtailment of occupational, educational, and recreational programs as the masses of inmates who need to be moved and supervised outstrip the architectural design of the facility and the staff's ability to provide adequate supervision (Dubler 1986). Some systems, such as those in Florida and Texas, are under court orders limiting population increases which cause the periodic disgorging of inmates despite unfinished sentences (Fairchild 1988). The "revolving door" is not a Massachusetts phenomenon and not an artifact of furlough policies, but a widespread national pattern, hastened and exacerbated by overcrowding.

Although many of the most shocking prison abuses of inmates have been remedied, corrections commissioners, line officers, and professional associations all agree that basic, adequate housing and health and safety measures that meet a national standard must be maintained. The primary problem today is overcrowding. Overcrowding tends to overwhelm the best intentions of correctional administrators. It has a devastating impact on the adequacy of all services and on health care services especially. It causes idleness and creates concerns about security and safety. It creates conditions that are intolerable, although different from the abuses of the past. Most significantly, in the AIDS context, prison overcrowding creates tensions and fears that may cause prisoners to agree to almost anything to escape from their horrible conditions.

Health Care in Prisons

Rudimentary health care has been provided to confined inmates since the mid-nineteenth century. In England in 1784 social reformer Sir George Onesiphorus Paul instituted basic procedures for hygiene, not for the benefit of the prisoners but rather to increase the "salutory humiliation" of prison life and to prevent the spread of epidemic disease beyond the prison walls to the general citizenry. The object was clear: "The daily cleanups and hygienic inspections were intended not only to guard against disease, but also to express the State's power to order every feature of the institutional environment, no matter how minor" (Ignatieff 1978, 100–1).

Health care in most correctional settings was woefully inadequate through the late 1960s when, following the revolt at Attica and the reports of civil rights advocates who had experienced incarceration, citizen groups, civil liberties organizations, and newly funded prisoners' rights attorneys began to investigate conditions of confinement. The descriptions presented to the federal courts were shocking: prisoners performing surgery on fellow inmates; inmates left to die with wounds covered with maggots and encased in their own filth[1]; and systems that separated sick and disabled inmates from medical care givers by two locked sets of doors and no means of communication across them.[2] A survey by the American Medical Association in 1973 to determine the health care capacity of jails found that among over 3,000 jails surveyed, 82 percent had no formal arrangement for any medical care; 18 percent said they called a doctor when needed; 65 percent had only first aid available on site; and 16.7 percent had no medical facility, not even a first-aid kit (American Medical Association, 1973).

In 1973 the U.S. Supreme Court decreed the end of the "hands off" doctrine that had maintained that prisons and jails were so administratively complex and so ill-suited to judicial consideration and decree that decisions made by administrators would be shielded from judicial scrutiny and review.[3] This decision opened a floodgate of litigation challenging prison conditions, in general, and the lack of adequate health care, in particular, and searching for a constitutional standard to measure the adequacy of health care in correctional facilities. In 1976 the Supreme Court held that the Eighth Amendment, which prohibits "cruel and unusual" punishment, required that "the deliberate indifference to the serious medical needs of inmates" constitutes a violation of an inmate's protected rights. The court reasoned that to put people in prison where they cannot secure their own care and then to fail to provide that care results in precisely the sort of pain and suffering that the Eighth Amendment was designed to prohibit.[4]

Since then federal court decisions have documented continuing and severe health deprivations in many states. The use of federal masters to

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[1] *Newman v. Alabama*, 503 F.2d 1320 (5th cir. 1974), *cert. denied*, 421 U.S. 948 (1975).

[2] *Todaro v. Ward*, 565 F.2d 48,52 (2nd Cir. 1977).

[3] *Procunier v. Martinez*, 416 U.S. 396 (1973).

[4] *Estelle v. Gamble*, 429 U.S. 97 (1976).

supervise court-ordered change based on complex specific instructions has helped to ameliorate some of the worst situations.

Correctional facilities vary widely in the age and architecture of the buildings, the training and numerical adequacy of staff, the level of overcrowding, and the history of hostility between inmates and officers. It is, of course, the nature of all such institutions to permit, encourage, or impose systematic deprivations of individual liberties and offer possibilities for intimidation, coercion, and violence. Correctional health services must diagnose, comfort, and treat in a setting designed to confine and punish. The resulting tension between the deprivation of liberty and the provision of care has led many jurisdictions to conclude they cannot provide care and to contract out correctional health services. The Supreme Court has recently held that these contracted services are equally subject to requirements of the Eighth Amendment.[5] The moral imperatives of care and punishment must coexist. This uncomfortable alliance provides a paradigm for the care of IV-drug-using AIDS patients in the community: the visible indication of criminal behavior in persons needing, wanting, and demanding care.

Thirty-nine states, the District of Columbia, Puerto Rico, and the Virgin Islands now operate their entire state prison systems, major jails, or large prisons under court orders or under the specific direction and supervision of specially appointed court masters because of findings of unconstitutional conditions, overcrowding, or poor medical care (Bronstein 1988). To provide one example, a Federal court found in 1977 that the State of Rhode Island was providing constitutionally inadequate medical care. The system then incarcerated 650 prisoners.[6] By late 1985 there were more than 1400 prisoners, totally overwhelming the changes and improvements in the medical services that had been ordered by the court (Bronstein 1988).

Health care standards developed by the American Public Health Association (Dubler 1986), the American Medical Association (now the standards of the National Commission on Correctional Health Care), and the American Correctional Association now provide additional guidance (Harrison 1987a, 1987b). While the dilemmas of providing constitutionally adequate health care have, at least theoretically, been addressed by the accumulation of Supreme Court and federal court

[5] *West v. Atkins*, 487 U.S., 108 5 S.Ct. 2250 (1988).
[6] *Palmigiano v. Garrahy*, 443 F. Supp. 956 (D.R.I. 1977).

cases that have determined the specific content of the Eighth Amendment protections, prisons and jails continue to present unique problems for health service delivery.

AIDS in Prisons

The AIDS epidemic, which is transforming so much of the health care delivery system outside prisons, also profoundly affects prison and jail health care. In 1988 the State of New York found a 17.4 percent HIV seroprevalence among prisoners tested anonymously as they entered the state prison system, which presently incarcerates over 43,000 prisoners (Truman et al. 1989). As the previous discussion indicates, this percentage will only increase. The number of inmates with symptomatic disease will also increase over time, as these inmates present themselves for care in the correctional and public health systems. Epidemiologists estimate that AIDS cases among New York State Department of Corrections Services prisoners will increase dramatically (table 1).

Abt Associates has conducted surveys of AIDS in correctional facilities for the National Institute of Justice in 1985 through 1988. The surveys included the Federal Bureau of Prisons, all 50 state correctional departments, and 33 large city/county jail systems (Hammett 1989). Among inmates with AIDS, 95 percent are men; the distribution in a subsample was 27 percent white, 46 percent black and 27 percent

TABLE 1
Incidence of AIDS among New York State Department of Corrections Prisoners (Includes projections)

Year	Incidence during the year	Cumulative incidence
1988	325	999
1989	376	1,375
1990	435	1,809
1991	494	2,393
1992	553	2,856
1993	612	3,468
1994	671	4,139

Source: AIDS Advisory Council 1989.

Hispanic (Hammett 1988). Among inmate AIDS deaths in the New York State correctional system, the distribution was 45 percent Hispanic, 43 percent black, and 12 percent white. Blacks and Hispanics are clearly overrepresented among AIDS cases in prison as in the nonincarcerated world (Gido and Gaunay 1987, 27).

Incomplete survey data suggest that among inmates with AIDS, as among nonincarcerated AIDS patients, there is preponderance of IV drug users (IVDUs) and homosexuals. In some key states such as New York, however, the proportion of IVDUs is much higher: 96 percent of the New York state correctional system's AIDS cases compared to 34 percent of all New York state cases. Among prisoners dying of AIDS in the New York State correctional system, 95 percent had admitted to IV drug use (Potler 1988). Again, this reflects the fact that 40 to 80 percent (depending on the source) of incarcerated persons admit to IV drug use.

Impact of AIDS in Prisons

A survey conducted by the National Prison Project of the American Civil Liberties Union Foundation, in the fifty states and the Federal Bureau of Prisons, found a dramatic increase in the number of prisoners with AIDS since the previous survey in 1985. In 1985 prisons reported 420 cases of AIDS; in 1988 the figure rose to at least 1,650. This excludes prisoners with AIDS in jails; a recent National Institute of Justice study in the thirteen largest jails found 644 cases (Greenspan 1988, 7).

The Correctional Association of New York noted that the median time between diagnosis of AIDS and death was 159 days for prisoners incarcerated in the New York State prison system compared with 318 days, nearly double, for nonprisoners. The report reviewed 177 cases and found that 25 percent of cases of AIDS among prisoners were not diagnosed until autopsy (Potler 1988, 27). These data lead inescapably to the conclusions that opportunistic infections and AIDS are not recognized as rapidly or treated as adequately within the New York State prison system as on the outside.

Inmates interviewed for the report stated that the diagnosis of HIV infection or AIDS often leads to isolation and exclusion in the prison by other inmates and staff. Infected inmates are shunned and often attacked; some have been killed by other inmates. Inmates with symp-

toms are left to suffer alone with inadequate or totally absent care. Those dying of AIDS mourned most the loneliness of death away from family and support networks (Potler 1988, 18–21).

Prison systems are moving slowly but inexorably to policies of segregation. The Colorado prison system in 1987 was among the first to segregate HIV seropositive male prisoners. The low number (under 20), however, permitted the program to counteract any overt discrimination by providing first access to the most desirable jobs and education programs.

New York State recently collected all known HIV positive inmates and segregated them in one facility. This attempt was enjoined by the court as a violation of the inmates' rights to privacy because individuals were not permitted choice and because the special services promised, the quid pro quo for segregation, had not been provided.[7] In its opinion, however, the court seems to intimate that a change in either area may have been sufficient for it to uphold the program.

Mississippi, Vermont, and New York City at the Rikers Island jail provide condoms, the first two with no barriers to access and the last only by a medical prescription and only on the "gay" dorm. Much prurient popular medical and press attention has focused on prison rape, from the staging of the play *Fortune and Men's Eyes* in the late 1960s to the famed episode of "St. Elsewhere" in the mid 1980s. Prison rape, the ultimate violation and degradation of prison life, is a reflection of the violence and power struggles that characterize prison society rather than a preprison pattern of homosexual behavior. This type of forced homosexuality is distinct from most homosexuality outside prisons. Prison rape has no relation to sexual need. The provision or withholding of condoms tests how prison authorities will respond to the real situation of inmates—a choice to confine or to punish.

Some prison systems are reluctant to parole HIV seropositive inmates in response to an unrealistic fear of possible future liability if the inmate infects someone after release. New York State has refused known HIV seropositive inmates or those with AIDS permission not only for conjugal visits with a knowledgeable spouse but also for visits with parents, siblings, and children. Inmates dying of AIDS are deprived of the time and space for private moments of grieving.

Confinement and separation are invariable principles of correctional

[7] *Doe v. Coughlin*, 697 F.Supp. 1234 (1988).

philosophy; levels of punishment and deprivation, as expressions of these principles, change over time. HIV infection converts segregation and separation to punishment, deprivation, or even brutality, if the health and social needs of HIV infection in the prison population are not adequately and humanely met.

History of Research Involving Prisoners

Historical Background

Prisoners have always been extraordinarily welcomed into research. In ancient Rome potential poisons were tested on convicted prisoners; if the prisoners survived the reputed poison they were freed. Ancient Persian kings and Egyptian pharaohs treated criminals as expendable experimental material. In our own century prisoners were used for research purposes much as a modern laboratory researcher might use a supply of rats or rabbits.

The Nuremberg tribunals after the end of World War II judged as war criminals Nazi doctors conducting research on prisoners and called to the attention of the world the potential for abuse in research involving human subjects. One result of the Nuremberg tribunals was the Nuremberg code, the first principle of which states that in research "the voluntary consent of the human subject is absolutely essential." The code goes on to specify what constitutes voluntary consent, including the requirement that "the person involved . . . should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, overreaching, or other ulterior form of constraint or coercion." To many commentators this principle completely ruled out the use of prisoners as subjects in research. Indeed, after Nuremberg many countries virtually outlawed the use of prisoners in research (Lasagna 1970).

There was particular pressure in the United States to use prisoners as part of the drug development process, especially as normal volunteers for phase I drug testing, the phase in which the drug is first tested for safety among humans (Levine 1986, 23; Blackwell 1972). For this reason the drug industry invested heavily in the development of drug-testing programs involving prisoners. Prisons were an almost unique suitable site for obtaining large numbers of apparently healthy people

who could not be lost to follow-up and who had time available to participate in the tedious taking of drugs and collection of blood and urine samples.

In the 1960s, however, prison policies in the United States began to assert that offering the hope of parole should be regarded as an "undue inducement" to participate in research. In the early 1970s there developed increasing resistance to research involving prisoners and several popular books and articles expressed strong disapproval of such research (National Commission 1975, 2–5). Perhaps the most influential was Jessica Mitford's (1974) book, *Kind and Usual Punishment.* Mitford portrayed the involvement of prisoners as subjects in drug studies as exploitation, based largely upon economic considerations by the drug industry, as well as by investigators and prison authorities. She, in addition, leveled heavy criticism against the use of various medical, surgical, and behavioral techniques designed to "cure" some criminal behaviors, particularly violent ones. The problem of consent to these procedures was addressed by the 1973 case, *Kaimowitz v. Department of Mental Health For State of Michigan*,[8] in which the court found that "the very nature of his incarceration diminishes the capacity to consent to psycho-surgery." The surgery proposed in that case was amygdalectomy to "cure" a "disease" called "compulsive aggression." It was also noted that aversive conditioning—e.g., shocking with cattle prods—and castration were being used to "treat" similar "diseases."

By the mid 1970s eight states outlawed prisoner involvement as research subjects, and in March 1976 the Federal Bureau of Prisons forbade the use of federal prisoners as subjects in "medical experimentation." Furthermore, the U.S. Department of Health, Education and Welfare (DHEW) had proposed regulations specifying very strict limitations on the use of prisoners as research subjects.

Recommendations of the National Commission

The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (the "National Commission") was

[8] *Kaimowitz v. Dep't of Mental Health for State of Michigan*, Civ. Action No. 73-19434-AW (Cir. Ct., Wayne County Michigan, July 10 (1973)), (as reported in Wadlington, Waltz, and Dworkin 1980).

formed in this political climate. The times clearly influenced the outcome of the commission's deliberations. The commission would undoubtedly have found it much more difficult to defend a permissive stance on the issue of research involving prisoners than to defend the restrictive position it adopted.

The commission was also influenced by the fact that through the mid 1970s there was a widely held belief that acting as a research subject was highly perilous. This assumption is shown clearly in the legislative history of the act that created the commission (Kay 1975). After the commission completed its report the results of the several empirical studies were published showing that the risks to subjects had been vastly overestimated (Levine 1986). For example, Zarafonetis et al. (1978) found that in phase I drug testing in prisoners a "clinically significant medical event" occurred once every 26.3 years of individual exposure. In 805 protocols involving 29,162 prisoner subjects over 614,534 days there were 58 adverse drug reactions, of which none produced death or permanent disability. The only subject who died did so while receiving a placebo. Had such data been available to the commission, it might have been less restrictive in its recommendations which made research virtually impossible to conduct. The specific factual and analytic reports and recommendations of the National Commission resulted in the passage of federal regulations governing research on human subjects, in general, and research on prisoners, in specific (C.F.R. 1983 a,b). The result of these regulations has been, as was their goal, the virtual elimination of biomedical research activity in prisons and jails.

The special section on prisoners (Subpart C of the DHHS Regulations for the Protection of Human Subjects) stated in Section 46.302 that the purpose was "to provide additional safeguards . . . inasmuch as prisoners may be under constraints because of their incarceration which could affect their ability to make a truly voluntary and uncoerced decision whether or not to participate in research."

In response to regulations of the U.S. Food and Drug Administration (FDA, a branch of DHEW), which were substantially identical to those of DHEW, prisoners at the Jackson State Prison filed a lawsuit claiming that they had been deprived unconstitutionally of their liberties by the regulations (*Code of Federal Regulations* 1980). Indeed, it was not surprising that the prisoners would take the position that they did. When the National Commission visited the Jackson State Prison in

Michigan on November 14, 1975, they met with a group of highly articulate prisoners. The leader of the group greeted them with the following opening statement: "Ladies and gentlemen: You are in a place where death at random is a way of life. We have noticed that the only place in this prison that people don't die is in the research unit. Just what is it that you think you are protecting us from?" (Bronstein 1988).

Structure and Interpretation of the Federal Regulations

Applicability of IRB Review

Part 46 of Title 45 of the Code of Federal Regulations presents the regulations that now govern research on human subjects supported by federal funds. Subpart C (45 C.R.F. §46.301–46.306) sets forth the additional protections for prisoners. The regulations require that an IRB evaluating research on prisoners augment its membership with a prisoner or a prisoner representative (§46.304 (b)). The IRB must then certify that the research is in one of the permissible categories and that the possible advantages are not so enticing in these deprived, hidden, and "limited choice environments" as to impair individual ability to weigh and evaluate the risks and benefits of research. The IRB must also ensure that the risks involved are "commensurate with risks that would be accepted by nonprisoner volunteers"; the "procedures for the selection of subjects . . . are fair to all prisoners"; the information is in clear language; the parole board will not take participation into account and inmates know this; and adequate follow-up care will be provided taking into account the varying lengths of individual prisoners' sentences (§46.305(a)(1)–46.305(a)(7)).

Research, as defined in the general sections (45 C.F.R. §46), is a "systematic investigation designed to develop or contribute to generalizable knowledge." The Office for the Protection from Research Risks (OPRR) suggests correctly that HIV testing is not in and of itself a "research activity" as defined in the regulations. Similarly, collection of information about prisoners that is part of the routine prison entry intake or obtained for administrative purposes is not, as such, "research" to the extent that it is not intended to result in generalizable knowledge.

In addition, for the regulations to be applicable they require that the activity must involve "human subjects," i.e., the information obtained by the researcher must involve "private information" about identifiable individuals. Statistical data in aggregate form, for example, do not in the interpretation of the regulations set forth by the OPRR involve "human subjects" and therefore need not trigger IRB review. This point is important in the use of routinely collected information about prisoners or use of discarded blood taken as part of routine entry screening.

The exemptions from IRB review that exist for specimens collected for a separate purpose, however, which are described in the general regulations on human research (45 C.F.R. §46.101(b)), do not apply with respect to the special regulations for research on prisoners. If blood samples already authorized and obtained for routine administrative purposes are subsequently made available for HIV antibody testing, for example, in a manner that ensures that the samples are anonymous, unlinked, and unlinkable to individual identifiers, then the activity arguably would not involve "human subjects" because there would not be "private information" that could be associated with an identifiable individual.

This appears to be the rationale in the design of some recent epidemiological studies. Dr. Leroy Walters (1988, 602) of the Kennedy Institute for Ethics describes the approach in a recent article:

> Epidemiologic research will provide a scientific basis for policies in public health and health care delivery. . . . Cross-sectional studies of demographic groups—newborn infants, patients in "sentinel" hospitals and residents in metropolitan areas—will facilitate more refined estimates of the number of people infected with HIV. . . . One of the major [ethical] questions in cross-sectional studies has been whether to retain the identifying links between blood samples and the individuals from whom the samples were taken. Anonymous unlinked testing without consent seems to be emerging as the method of choice. . . . The advantages of anonymous epidemiologic studies are that no identifiable subjects are placed at risk and the research results are not skewed by refusals. The disadvantage is that seropositive individuals cannot be identified, notified and counseled.

This narrow reading of the definition of research on human subjects and the obligations of specially constituted IRBs for prisoner research seem to be contradicted by the structure and language of the regula-

tions themselves. Thus, as noted before, the special exemptions from IRB review stated in the general research regulations (§46.101(b)) for anonymous samples do not apply to the subpart on prisoners. These exemptions permit epidemiological research on large populations and abrogate the requirements of informed individual consent which, if applied, could permit individuals to remove themselves from a study population, thus possibly invalidating the study results.

The rationale for this exemption from informed consent is that no breach of confidentiality is possible and thus no central interest of any particular human subject is threatened. At least one IRB has added an additional protection for these types of studies before individual informed consent is not required, i.e., that a reasonable person, in the position of an individual in the study population, could not object to the conduct or purposes of the research (Montefiore Medical Center 1987).

In the case of anonymous epidemiological research on HIV infection in correctional settings two questions arise. First, must these research designs be reviewed by an IRB or are they exempt from review and, second, if IRB review is required, what factors must or may be considered by the IRB in providing or withholding its approval? In fashioning answers, consider that cross-sectional studies of demographic groups in the population at large differ in an important respect from studies of prisoners as a distinct demographic subgroup. The other populations being studied are not incarcerated. This means that research involving prisoners needs to be assessed in a different ethical framework. For one thing, the personal freedom and choices for prisoners are already heavily circumscribed. A small diminution of liberty may be worth tolerating in the general population. In the case of prisoners, however, another small scintilla of general freedom would be extinguished with no discernible gain for the prisoner subjects. Even if this exercise of self-determination is considered principally symbolic, it ought not be lightly curtailed.

A second consideration is the potential increase in discrimination against prisoners that may result from a study of HIV prevalence in the prisoner population. Even in specific subgroups of the general population, a reported high degree of HIV prevalence often reinforces or results in discriminatory attitudes or actual discrimination as in the case of minorities or IV drug abusers or homosexuals. Prisoners and ex-prisoners already have an impaired civil status and an official label.

They, in particular, may suffer a disproportionately adverse impact from further "labeling" consequences. They, unlike the general population, are not so situated as to be largely indistinguishable from the population or to be able to leave behind or unacknowledged their prisoner status (William J. Rold and John A. Beck, personal communication 1988).

Accordingly, the need for "more refined estimates" of HIV infection in the general population must be separately assessed with regard to differential impacts on specific subgroups when these subgroups are singled out. The case of prisoners, in particular, ought to suggest a different weighting of the factors that in the general population support "anonymous, unlinked testing without consent . . . as the method of choice." One might begin, for example, by asking about how necessary in fact are "more refined estimates" of HIV infection in prisoner populations? What actual changes in prison conditions would likely result? Are these changes likely to benefit most or even some prisoners or are they more likely to result in more restrictive conditions of confinement? And are the only relevant issues those relating to the well-being of prisoners as a group? Let us assume that epidemiological studies of confined populations could enhance our ability to understand this next wave of infected IV drug users and plan more effectively for their care. Sacrifices of prisoners for the public good have a long history. This would not be the sacrifice of individuals for the sake of a new vaccine, but rather before the jealous demands of public health. Does it make a difference?

In summary, the current OPRR position is that records that cannot identify individual subjects do not require IRB approval but may be subjected to review if the IRB chooses. The vulnerability of prisoners as a class, however, argues that IRB approval should be necessary for any and all research involving prisoners, including anonymous studies. This view opts for a more expansive and inclusive reading of the federal regulations and places great weight on the theme that, where prisoners are used in research, the basic question does not relate to study design—whether the study is anonymous or whether it uses preexisting blood or data—but rather whether the research involves prisoners.

Basic to this analysis is the concept that prisoners are always a defined group that is small enough to be identified on the basis of data despite the anonymity of individuals. Central to the analysis is the argument that the federal regulations state the minimum requirements

for the ethical evaluation of research. They do not prevent or prohibit a more rigorous or more elaborated ethical evaluation. An IRB must comply with the regulations, but it may create additional protections. The position of the OPRR is instructive as it sets forth an interpretation of required review; it is not a barrier to more stringent application of the language of the regulations or more rigorous moral scrutiny.

Yet, we do ourselves as a society injustice if we unduly restrict access to epidemiological data derived from anonymous blinded studies on prison populations. As previously noted, prison populations are burgeoning and, at least in New York, are largely black and Hispanic and are heavily associated with drug use. The proportion of black and Hispanic inmates nationally is less. Prisons may provide the best or perhaps the only window through which to view the natural history of the disease and the contours of the disease in the IV-drug-using community. The public health imperatives—to understand the epidemic and to intervene appropriately to prohibit its further spread—may both best be effectuated in prison. It is an accident of history, rather than the application of rational distinctions, that determines whether an IV drug user will be in prison or in the community. The care needs are continuous.

Since 17.4 percent of the male (and 18.8 percent of the female) New York State prison population entering from the New York City area (and tested in a blinded anonymous survey in December 1987 and January 1988) was HIV positive, and since 60 percent of the inmates tested acknowledge drug use, we can reasonably assume that the seroprevalence in the population will rise over time (Truman et al. 1989). As overall prevalence of the disease increases over time, the prevalence of symptomatic individuals will also rise. When persons with HIV infection are incarcerated they may be studied in the aggregate, treated for escalating infection or symptomatic disease, and educated to be more responsible citizens both inside and outside the prison so as to prevent further HIV transmission. Furthermore, as treatments for asymptomatic disease emerge, the Eighth Amendment guarantees of care will certainly be triggered.

Given the nature of AIDS and the status of research on it, there are other arguments. Rumors and anecdotes all indicate that the vast majority of subjects enrolled in double-blind studies on the effectiveness of AZT in asymptomatic disease had assayed the substance assigned, determined if it is an active ingredient or placebo, and opted out of

the drug trial if the random assignment was not the desired arm. Prisoners cannot manipulate their participation in a trial in the same way and may, therefore, provide the only valid data for some trials. The argument that prisoners are not representative of a population does not obtain in this case, as they may be the only population of IV drug users in whom the study can be performed appropriately.

Standard for Review

If IRB approval is required in all studies involving prisoners, what should be the standard for judging acceptability of any particular research design? The general guideline for IRBs is that there must be a positive benefit/risk ratio to support approval, i.e., the risk of the research to the individual human subject must be outweighed by the sum of the possible benefit to the subject and the possible benefit to society. Section 46.111(2) states that an IRB must find that "risks to subjects are reasonable in relation to anticipated benefits, if any, to subjects, and the importance of the knowledge that may reasonably be expected to result."

The Prisoners' Rights Project of the New York City Legal Aid Society has argued strongly in opposition to the use of prisoners for epidemiological research (William J. Rold and John A. Beck, personal communication 1988). They oppose singling out inmates for epidemiological studies of HIV infection. Inmates, they argue, present no particular characteristics that cannot be found in the general population, except for their convenience as a study group, and this factor is an inappropriate consideration under the federal regulations. Moreover, the labeling of inmates as a result of such studies will inevitably lead to increased stigma.

In the view of this advocacy group, the risks of such research may substantially outweigh the benefits. Foremost among the risks, even assuming that confidentiality can be maintained, is the public perception that will be created that inmates are a high-risk group for transmission to others of HIV infection. This will lead to increased difficulties in an already strained criminal process. Issues of security, transportation, and even fair trial will be made more complex and pressure will increase to keep inmates in custody. Postincarceration discrimination in employment, insurance, and housing will be increased and an already-growing reluctance on the part of noncorrectional hospitals and health care

providers to treat inmates will be exacerbated. There have been repeated instances of refusal to treat inmate-patients and of the imposition of mandatory testing for HIV as a condition for elective medical care. In analyzing proposals to test inmates' blood for HIV, the advocates claim it might be instructive to consider whether the IRB's answers to questions regarding potential harm would be the same if the study, however well-intentioned, were not of prison inmates but of some other group—for example, Haitians, Jews, or people on welfare.

The Prisoners' Rights Project also has questioned the argument that information from anonymous testing of inmates is needed (1) to enhance delivery of health care in prisons; (2) for planning for care (including funding); (3) as a means of evaluating the success of education efforts; or (4) in order to study the IV-drug-using population, which is disproportionately represented in correctional institutions. The Project comments:

> None of these reasons in our view survives scrutiny and, even if entitled to some weight, they do not justify the subjection of inmates to the risks posited above. Indeed, many of the justifications seem particularly inapplicable to jails, given the short duration of incarceration and the rapid turnover of inmates. Jail populations are influenced by the law enforcement priorities of the moment, such as a "sweep" of certain types of offenders in a given period.
>
> We have seen no evidence that health care has been improved by the publication of data concerning disease rates among prisoners, even though there already exist prevalence data on prisoners from a variety of sources at both the state and federal levels. On the contrary, the current studies noted . . . show that 25% of all inmates in New York with AIDS are not diagnosed until autopsy, and suggest that the data already available are being ignored when patients present for treatment.
>
> Saturation education efforts are needed regardless of the numbers shown in any study and it is difficult to understand how ascertaining that a particular level of infection exists should affect educational policy. Finally, studies of prisoners are an unreliable measure of the IV-drug-using population, since inmates with an IV-drug history are a subset both of all inmates and of IV-drug users. Prisoners who happen to have an IV-drug abuse history are only those IV-drug users who are arrested and who do not make bail (in the case of jails) or who are convicted (in the case of prisons). The factor most common among inmates is not IV-drug abuse but poverty (William J. Rold and John A. Beck, personal communication 1988).

These considerations, which may affect prisoners as a class, are challenged by Section 46.111 which sets forth criteria for IRB approval of research. Section 46.11(a)(2) states that "the IRB *should not* [emphasis added] consider possible long-range effects of applying knowledge gained in research (for example, the possible effects of the research on public policy) as among those research risks that fall within the purview of its responsibility." It is not clear what would happen if an IRB included such factors in its analysis. Could it be challenged by the investigator? Could it be censored by the DHHS?

Appeals to this section seek to disqualify calculations of risk to a class. While the language of the section prohibits the IRBs from considering long-range effects of applying knowledge gained in research, it may not prohibit it from considering what may be the short-range, rather immediate effects of the research, its results on the functioning of the criminal justice system and the likely impact on the relation of inmates to corrections officers and inmates to each other. These considerations might be given additonal weight in view of continuing news reports of violence and discrimination against HIV positive people in prisons, jails, and courts.

One commentator argues that the regulations "require IRB's to consider a substantially larger class of benefits than risks. . . . In other words, it appears that IRB's must weigh potential benefits to the subjects and society against risks to the subjects alone, and not against any potential risks to society at large" (Schwartz 1983). But even this restrictive formula for the assessment of risk does not preclude weighing risks to a defined class of subjects, assuming the IRB has established the appropriateness of its jurisdiction over these matters. One could assert, however, that the risk to inmates of perception in the community that prisons are rife with AIDS represents not a "long-range" but rather a "short-range" risk to prisoners who are about to be discharged. Since most short-range risks that are considered by IRBs involve individual subjects rather than a class of subjects, it is not clear that this use of "short-range" risk is applicable in this case.

The contours of the counter-argument are clear:

1. The general federal regulations prohibit an IRB from considering long-range effects.
2. The possible effects on prisoners are speculative and affect the class rather than an identifiable individual.

3. Inmates as a class are sufficiently large (over one million in the United States) to preclude adverse effects on individuals from the results of any broad-based anonymous studies.

4. The utility of the knowledge gained in our understanding of the disease may have a beneficial impact on prisoners and nonprisoners alike.

Thus, under this more limited view of risk/benefit analysis, an IRB could approve anonymous epidemiological studies in populations large enough to ensure that data could not be referenced back to individuals. So, for example, a hypothetical IRB might approve such research in New York State with 50,000 inmates and refuse to approve a study in North Dakota which has fewer than 1,000 inmates.

Were an IRB to conclude that it possessed jurisdiction and could consider risks to the class of prisoners, its next calculation would involve the appropriateness of the remedy it could fashion. Consider, for example, the possible range of IRB responses in the usual clinical setting. In a very risk-laden protocol with a vulnerable and severely ill patient population an IRB might require that someone other than the principal investigator obtain consent if the principal investigator were both clinician and researcher. This action would not affect the structure of the protocol and would provide added protection for a subject who might be dependent on the clinician and feel unable to refuse participation in the research study. Requiring a stranger to supervise the consent process helps to counteract dependence, gratitude, and fear of rejection which alone or in combination may underlie a patient's consent rather than an assessment of individual risk and benefit. IRBs take such action regularly.

Consider an analogous action by an IRB in an epidemiologic study. Rather than reject the study, could the IRB fashion additional protections to counter-balance what it perceived as risk to the class of subjects? If the risk to be counteracted is stigma and possible abuse or rejection by correction officers, could the risk/benefit analysis be affected positively by an IRB requirement that the researchers provide education for inmates and officers on transmission of HIV infection, for example? Whether the IRB has the authority to weigh these speculative secondary effects on a class of subjects is, as previously acknowledged, unclear. Whether the IRB has the power to require design changes or specific interventions to minimize hypothetical social consequences is

even more unclear. Requiring the presence of research programs, already approved and operating, to direct efforts to minimizing social harm may be inappropriate, especially if the research administration is separate from the operational structure. Requiring the expenditure of new funds in pursuit of a social good may also, unfortunately, be an inappropriate action for an IRB to take.

Issues of Informed Consent

Section 46.302 in the Special Prison Regulations states clearly that the purpose of the subpart is to provide additional safeguards for prisoners because their incarceration could "affect their ability to make a truly voluntary and uncoerced decision." In contrast to the questions about the permitted reach of the federal protections in epidemiological studies, there is no doubt that research with possible therapeutic benefit that includes risk of potential harm must be preceded by the voluntary, uncoerced choice of the inmate subject. This choice must balance individual risks against possible individual benefits and may include concern for others and altruism.

Were this a review of the traditional research activities that had historically been carried on in prisons, discussion would be unnecessary. The literature well covers the salient points and, although some disagreement on the proper policy remains, a general consensus exists that conditions in most prisons are so inadequate as to eliminate the possibility of uncoerced consent by prisoners to research.

The major barriers to gaining a true informed consent from incarcerated persons are deprivations so systemic that any incentives for research constitute not so much bribery as coercion. Most research, especially Phase I drug testing, constitutes taking unfair advantage of these conditions of deprivation. The changes that would be required to eliminate these coercive aspects (ranging from single cells available to prisoners who want them to conditions that satisfy standards of environmental health and nutrition) were considered over a decade ago by the National Commission and are clearly beyond realization in most prisons and jails today.

The arguments for reversing current policy on the ability of prisoners to give uncoerced and informed consent in the special case of therapeutic research on inmates with AIDS are: there is every reason to assume that prisoners with AIDS are, or could be, educated to be as fully

capable to make the decision whether or not to enroll in an AIDS treatment trial in terms of understanding the risks and benefits of the drug regimen itself as are nonincarcerated persons; given the high mortality of the disease and skepticism about vaccine development, one of the few prospects for cure is the chance that experimental drugs will prove efficacious. The first subjects to take AZT have been helped at least for some period; perhaps future drug trials will also prove effective. If prisoners with AIDS or HIV infection are denied the right to participate in drug trials for AIDS, they are being denied the opportunity to benefit in the ways that those outside of correctional settings may benefit from the trials. Here, considerations of justice and respect for persons (as per the National Commission's recommendations) might demand opportunities for inmate participation rather than their exclusion. Section 46.111(a)(3) of the regulations requires that an IRB find that the "selection of subjects be equitable." Exclusion of the vast numbers of HIV-infected inmates from clinical trials for which unincarcerated HIV-infected people are eligible certainly raises issues of equity. But these considerations do not fully resolve the problem, since a number of other concerns raise the issue whether in the prison setting inmates can give truly informed and uncoerced consent.

The first major barrier to voluntary consent is the inadequacy of most correctional health care services. Prisoners will be under coercion to join investigative trials if the only decent medical treatment available is provided through research protocols. Although inadequate medical services always appear on longer lists of institutional deficiencies that must be corrected before consent can be said to be voluntary, in the area of AIDS this point assumes overwhelming significance. If the only acceptable medical care is through the research program, then by no means can it be said that the prisoner has a genuine choice about enrolling or not. His only option is to enroll—truly he has no choice. Since these trials, like most trials, are unlikely (in statistical terms) to produce benefits and since the drugs may well be highly toxic, the prisoner is being coerced into joining the trial in order to get the medical treatment that ought to be available quite apart from the research.

The second major barrier to informed consent has much more import in therapeutic trials on AIDS than in research on most other illnesses: joining a trial can be used to penalize the prisoner. Without the protection of confidentiality, the fact of an inmate's participation

in the trial will almost certainly become the basis for discriminatory injurious action both by fellow inmates and by the prison administration. Prisoners are in a coerced situation because confidentiality does not exist in a prison and cannot be assumed, yet prisoners may still be desperate enough to want nonetheless to enroll. The trials ought to be excluded, it can be argued, on the ground that confidentiality cannot be maintained and the prisoner will inevitably suffer penalties for participation, probably including longer periods of incarceration because the parole boards will discriminate against him based on community safety concerns. (The irony here should be noted: in Phase I testing on prisoners in prior decades, the hope was that parole boards would favor participants and prisoners were thereby coerced into joining protocols; here the concern is the reverse; parole boards might use the information about HIV infection to punish inmates and, therefore, trials should be kept out of the prisons.)

Are then conditions in prisons such as to make voluntary consent to AIDS trials impossible? The two considerations just noted must be the object of ameliorative action so that prisoners do have the opportunity to make their own decisions about whether to join trials. These trials are potentially beneficial, although also potentially harmful, and denying prisoners the opportunity to participate would be to punish them beyond the declared sentence and may be challenged as a new sort of cruel and unusual punishment. Thus, given considerations of prisoners as people and of principles of justice, there are clear imperatives to:

1. Improve medical treatment for prisoners with AIDS or HIV infection and, if medical resources are inadequate, find alternative sources for them;
2. Devise ways to improve the confidentiality of the trials, although in a prison setting this is likely to prove extraordinarily difficult or impossible;
3. Ensure that no inducements extraneous to the protocol are added.

Certainly these critical improvements could balance the sacrifice prisoners as a class may make in their conscripted participation in epidemiological studies especially if the data lead to measurable improvements in medical care.

If such improvements are not forthcoming, what ought to be the

policy? We would argue that trials should be permitted recognizing that, although participation will be to a significant degree coerced (through the absence of alternative medical programs and the lack of confidentiality), to forbid the trials might make the position of the prisoner substantially worse as it would bar access to a possibly effective agent and to adequate medical care. In other words, it should belong to the prisoner to make the painful tradeoff of whether or not to join a trial. This is a case in which a coerced choice may well be better than no choice at all—and the prisoner ought to be the one to make the final decision.

Although issues involved in HIV testing of prisoners constitute a subject largely beyond the scope of this article, decisions to enroll in clinical trials for symptomatic or asymptomatic HIV infection presume individual knowledge of serological status. Some inmates will acquire this information through the counseling and testing opportunities in the community; others will seek information while incarcerated. Testing for HIV infection in correctional settings is a difficult matter. As previously discussed, voluntary informed consent is always problematic. Power alliances of guards and of inmates are an ever-present threat to individual choice. Confidentiality for general health records is nonexistent in most prison settings. All movements are monitored. No appointment is ever secret.

Given these risks, inmates may still opt to know their serological status, especially as treatments for asymptomatic infection are perfected. Counseling systems and anonymous testing models must be developed that would provide an alternative to the general medical record and would minimize the risks of testing in the prison or jail system.

Definition of Minimal Risk

Subpart A, §46.102(g) of the regulations, which applies to all research on human subjects not provided with special protections, states that "minimal risk means that the risks of harm anticipated in the proposed research are not greater, considering probability and magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests." "Minimal risk" in Subpart C, §46.303(d), which applies to prisoners, is defined as the "probability and magnitude of physical or psychological harm that is normally encountered in the daily lives, or in the routine medical, den-

tal, or psychological examination of healthy persons." The concept of minimal risk is central to certain IRB calculations.

There is general agreement that prison life presents considerable risk, even when prison conditions are of reasonable quality. But all too frequently overcrowding, inhumane treatment, the level of intimidation, and potential for violence exacerbate barely tolerable prison conditions. All aspects of prison life are regulated, including exercise, available diet, and access to visitors. Accordingly, the IRB must carefully weigh the consequences of involving prisoners in research. Though the risks of the proposed research might seem acceptable under some circumstances, the involvement of prisoners forces other considerations.

To begin with, the definition of "minimal risk" contained in the Special Prisoners Regulations (Subpart C) involves a stricter standard than that applicable under the general requirements of the regulations. The standard in Subpart C is "the probability and magnitude of physical or psychological harm that is normally encountered in the daily life . . . of healthy persons." The standard is not risks ordinarily faced in the daily life of prisoners. Thus, one is not justified in adopting the risks of prison lives as a threshold level, below which risks to prisoners may be tolerated.

Second, research may add to the risks to prisoners and the prison setting can amplify the degree of risk. Some straightforward and relatively neutral procedures outside the prison setting can take on a different quality in the prison. For example, as noted previously, protecting confidentiality within the prison may be virtually impossible. Factors such as selection of subjects, place of interview, or the length of time an interview takes may compromise confidentiality. Prisoners may, by virtue of participating in the research, be at increased risk in comparison to nonprisoner volunteers.

Third, risks to prisoners need to be commensurate with risks to nonprisoners. Prisoners ought not to be asked to accept risks discernibly greater than those faced by individuals outside prison when both are involved in the same or similar research activities. When prisoners are involved exclusively, the IRB is expected to reach a finding that "the risks . . . are commensurate with [what] would be accepted by nonprisoner volunteers" (§46.305(a)(3)).

In summary, risk assessment in research involving prisoners requires that an IRB:

1. Ought not to use the risks that face prisoners in the prison setting as the standard for acceptable risk;
2. Ought not to judge even apparently ordinary risks at face value;
3. Ought to allow only risks that are commensurate with those accepted by nonprisoners.

The comparative element in the definition of risk means that the risks, in order to be considered "minimal," ought to be commensurate with those risks that would be accepted by nonprisoners. When the prison setting and the possible individual situation of the prisoner in the protocol are considered and the possibility of special constraints added as a factor, procedures that appear relatively neutral (and would be approvable for nonincarcerated persons) may carry the possibility of greater harm for prisoners than nonprisoners and thus not be approvable by an IRB. An understanding of "minimal risk" is critical as it must be found as the basis for two of the categories of permitted research.

Permitted Research

Before any research may proceed that involves incarcerated human subjects, the IRB must be specially constituted so that a majority of the members have no association with the prison involved and a prisoner or a prisoner representative must be added (§46.304). The IRB must then approve the research according to the previously noted additional duties set forth in Section 46.305. The institution must then certify to the DHHS secretary (through the OPRR) that a properly constituted IRB has approved the research. The secretary must determine that it involves solely one of the four categories of permitted research:

1. Study of the possible causes, effects, and processes of incarceration, and of criminal behavior, provided that the study presents no more than minimal risk and no more than inconvenience to the subjects;
2. Study of prisons as institutional structures or of prisoners as incarcerated persons, provided that the study presents no more than minimal risk and no more than inconvenience to the subjects;
3. Research on conditions particularly affecting prisoners as a class (for example, vaccine trials and other research on hepatitis which is

much more prevalent in prisons than elsewhere, and research on social and psychological problems such as alcoholism, drug addiction, and sexual assaults) provided that the study may proceed only after the secretary has consulted with appropriate experts, including experts in penology medicine and ethics, and published notice, in the *Federal Register* of his intent to approve such research;

4. Research on practices, both innovative and accepted, which have the intent and reasonable probability of improving the health or well-being of the subject. In cases in which those studies require the assignment of prisoners in a manner consistent with protocols approved by the IRB to control groups which may not benefit from the research, the study may proceed only after the secretary has consulted with appropriate experts, including experts in penology medicine and ethics, and published notice, in the *Federal Register*, of his intent to approve such research.

The intent of these provisions is to define classes of research activities in which the risk/benefit relationship for prisoners is reasonable, in which there exists some demonstrable need for the research, and, in cases of unsettled ratio of risk/benefit, in which there is an opportunity for further review and public notice. In this way it is possible to prevent prisoners from being recruited into studies unrelated to their status and situation simply because they are available and easy to monitor. The protections are designed to prevent exploitation of prisoners in risky biomedical and biobehavioral research, including some forms of behavior modification.

Two of the categories of permissible research are intended to encompass behavioral and social science research broadly covered by the fields of criminology and penology. To be acceptable, in addition to other requirements of Subpart C, these studies must meet two conditions:

1. They must involve no more than minimal risk—that is, the probability and magnitude of physical or psychological harm is equivalent to that encountered in daily lives or routine examination of healthy persons;

2. They must involve no more than inconvenience to the prisoners—that is, studies ought not to be unusually arduous or lengthy, ought not impose greatly on the prisoners' free time, and ought not interfere

excessively with other pursuits, such as education or training opportunities.

Generally, these categories envision survey or interview research techniques. The content of questions or the manner in which information is obtained, however, can affect whether or not the research involves no more than minimal risk. For example, if the research seeks to obtain information about illegal behaviors even if they occurred prior to or unrelated to the basis for current incarceration, such information in the hands of the correctional authorities could have serious consequences for a prisoner. Information about the psychological status of an individual could be used to his or her disadvantage. Providing answers to certain types of information could be viewed as collaborating or colluding with correctional officials, thus resulting in danger to the respondent. Accordingly, approval of these categories by the IRB is not automatic.

There are two additional categories, one of which has an important subcategory:

Research on conditions particularly affecting prisoners as a class (§46.306(2)(c)). Studies under this category presumably present greater than minimal risk to the individual subject and may not have any or very little direct benefit. An example could be the study of drug abuse in prisons, that is presumably intended to document its causes and extent in order to design and develop programs for drug treatment or prevention. Thus, the study might not benefit the individuals studied and would place them at risk to the extent that information about drug abuse could be used to their disadvantage. Yet, it could represent a step toward improving conditions for prisoners more generally. Studies under this category call for consultation with experts and publication in the *Federal Register*.

Research on practices, both innovative and accepted, which have the intent and reasonable probability of improving the health and well being of the subject (§46.306(2)(c)). The purpose of this category is to allow access for prisoners to innovative treatment of real potential benefit that may be available only in a research setting, such as a Phase II study of an investigational drug or device. The study design in some instances may involve randomization, however, that is, assignment to an arm of the study that does not include the new treatment modality. Thus, the prisoner-subject may not be receiving the benefit of the new but still unproven therapy. Nonetheless, one or more arms of the study

may still be expected to provide benefit. For example, the accepted therapy may be what is provided under the "control" arm of the study. Alternatively, two different dosage levels, both of which are expected to benefit subjects, may be under comparison. It is only when randomization entails possible assignment to a group in which treatment is withheld or a placebo substituted that there is no reasonable expectation of benefit and that the regulations require the secretary of DHHS to consult with experts and publish notice in the *Federal Register*. This requirement recognizes that even when most individuals may benefit from a study arm using an innovative treatment modality, not all are helped and some may actually suffer harm. Similarly, some individuals will show excellent response to the standard therapy, even if many others in the control group do not respond as well as those receiving the new modality. Only if random assignment calls for "no treatment" or for a placebo which is not reasonably expected to benefit subjects, is it necessary for the secretary to consult with experts and publish notice in the *Federal Register*; if that is not the case, the IRB may approve the protocol and the institution simply must inform the secretary.

So long as there is treatment known to be effective, it would be unethical to use a placebo alone for the control group in or out of prison. In the case of AIDS, where a known effective drug (such as AZT) exists, the issue of a placebo alone should not arise. If both control and experimental groups receive the drug known to be effective, and a second drug whose efficacy and hazards are unknown is being tested in conjunction with it, it seems reasonable that a placebo could be used in the control group to replace the secondary, in or out of a prison.

Conclusions

Prisons and jails are brutal institutions; they are designed to punish. They provide the setting for coercion and intimidation. Because of their nature and the history of abuse of prisoners in human experimentation, the federal regulations governing research on human subjects provide special protections to inmate populations. The regulations are necessary but not sufficient to protect inmates from abuse and provide them access to new promising therapies. Given the spread of HIV infection and AIDS, the high percentage of IV drug users among incarcerated populations, and the convenience of a correctional institution

for gathering data, clear guidance and encouragement for investigators will be needed to facilitate the equitable and safe involvement of prisoners.

Data on HIV infection and AIDS in prison are potentially explosive. Inmates and officers alike fear the disease and have numerous myths and misconceptions about casual transmission of the HIV virus. As with nontherapeutic medical experimentation in the 1960s and 1970s to which inmates sought access for the attendant gifts and goods, now prisoners' desires may differ from those of prisoners' advocates and civil libertarians. Some prisoners want screening, identification, and administrative segregation of HIV-positive inmates. Many will want to volunteer for research because it is probably the only way to get adequate health care or to obtain some other benefit, although some may volunteer for all of the reasons that make informed consent so complex a process in prisons: it is something to relieve boredom; it holds forth the prospect of ingratiation with the administration; it is an entrance into the power structure. Indeed, some prisoners—like some people not in prison—may want to volunteer for research not because of any tangible benefit but because of a desire to be unselfishly altruistic.

The ethical hazards of research in prisons remain constant despite some change in conditions of confinement since the mid 1970s. But the incentives for research and the medical position of individual inmates has changed markedly, given the prevalence of HIV infection in inmate populations and the fact that AIDS is presumed to be uniformly fatal. Inmates as a group need to be *protected* from research designs that can acquire the data through other routes and may present risks to inmates as a class. They need to be *provided with access* to clinical trials of new and innovative therapies that present the possibility of direct benefit to the subjects. They must be presented with the opportunity for informed choice when appropriate, despite recognition that the systematic deprivations and inherent coerciveness of the institutions and the desperate character of HIV infection compromise the consent process. As in other areas of public policy and public health, HIV infection demands a fresh examination of equity and justice.

Whether access is provided to promising investigational therapies will measure the mettle, courage, inventiveness, and flexibility of the medical research community. It will also test the humanity of correctional administrators, who must provide the setting and support services to permit the conduct and monitoring of clinical trials.

The response thus far does not leave us optimistic about the future. Based on previously stated projections, the prison system will need to evolve—at least in New York, New Jersey, and Florida to name the most immediately affected—from an ancillary to a primary focus on medical care provision. What has been accommodated as a support service and grudgingly permitted as an opposing vision of moral obligation—the obligation and ethic to comfort and care—must become an equal organizing principle.

Society does not want felons, especially those convicted of drug-related crimes, abroad in the land. Early release and medical furlough are not popular programs with the public or legislators. We wedge ever more inmates into inadequate facilities as expansion of prisons and jails cannot keep pace with more active police and law enforcement plans. Prisons and jails will increasingly confine escalating numbers of HIV-infected individuals. The prognosis for the health of incarcerated people with HIV infection and increasingly for incarcerated people with AIDS is poor. Much will depend on the willingness of the federal courts to enforce the constitutional standard and impose caring policies on systems turned even more repressive by the crowding pressures that reflect societal consensus on drug and crime control. One measure of the humanity of a society is its treatment of prisoners—a measure to monitor in relation to medical care.

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