Abstract

The emergence of crack cocaine use in the United States during the mid-1980s was one of the most significant public health problems of that era. Crack use contributed to a series of sexually transmitted disease epidemics, to epidemic increases in violent injuries and homicides, and to significant increases in the incidence and prevalence of cocaine addiction. Despite these threats to health and safety, a national public health campaign to counter crack-related morbidity and mortality was never mounted. To the contrary, the strongest response to the crack epidemic has come from the police and the courts. As a result, crack-related crimes have accounted for dramatic increases in the numbers of adolescents and adults imprisoned in the United States. Scarce attention to the public health dimensions of these policies, let alone the human rights implications, has been catastrophic for affected individuals and communities.

Le développement de l'usage de crack-cocaïne aux Etats-Unis au milieu des années 1980 a été l'un des principaux problèmes de santé publique à cette époque. L'usage du crack a contribué à la propagation de multiples épidémies de maladies sexuellement transmissibles, ainsi qu'à une forte croissance du nombre de blessures violentes et d'homicides, et à une augmentation significative de l'incidence comme de la prévalence de l'usage de la cocaïne. Malgré ces menaces pour la santé et la sécurité, aucun programme national de santé publique n'a été lancé pour contrer la morbidité et la mortalité liées à l'usage du crack. Au contraire, la réaction la plus significative à l'épidémie de crack a été le fait de la police et de la Justice. En conséquence, le nombre d'adolescents et d'adultes emprisonnés aux Etats-Unis a augmenté très fortement en raison des crimes liés au crack. Le peu d'intérêt porté aux aspects de santé publique de ces politiques, sans parler des implications en terme de droits de la personne, a eu des conséquences catastrophiques pour les inidividus concernés comme pour les communautés.

El inicio de consumo de cocaína crack en Estados Unidos a mediados de los años ochenta fue uno de los problemas de salud pública más significativos de aquella época. El consumo de crack contribuyó a toda una serie de epidemias de enfermedades de transmisión sexual, a niveles epidémicos de heridas violentas y homicidios, y a aumentos significativos en la incidencia y prevalencia de adicción a la cocaína. A pesar de estas amenazas para la salud y la seguridad, nunca se organizó una campaña nacional de salud pública para hacer frente a la morbilidad y la mortalidad asociadas con el crack. Al contrario, la mayor respuesta contra la epidemia de crack surgió de la policía y de los juzgados. En consecuencia los crímenes relacionados con el crack han causado aumentos dramáticos en el número de adolescentes y adultos/as encarcelados en los Estados Unidos. La escasa atención a las dimensiones de salud pública de estas políticas, y todavía menor a las implicaciones en materia de derechos humanos, ha sido catastrófico para los individuos y las comunidades afectadas.

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Arms Against Illness: Crack Cocaine and Drug Policy in the United States

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> Ultimately, the War on Drugs has created a much bigger problem than the one it was designed to solve. It is entirely possible that out of a desire to provide a cost-effective, morally acceptable, criminal justice response to the nation's substance use and abuse, an effective engine for expanding and disseminating the devastation of the HIV epidemic has been created instead.[1]

This paper argues that the crack cocaine epidemic in the United States is a public health disaster. Commentators on the decade of the 1980s called "crack"—the smokeable form of cocaine—an unparalleled destructive force, undermining safety, stability and health in inner city communities.[2] Its impact on rates of violence, sexually transmitted disease, and HIV/AIDS are well known and well documented. Clearly, this was a massive epidemic that could only be contained by a broad public health intervention that identified the natural history of the disease, developed effective treatment, and instituted appropriate prevention. Public health efforts were needed, designed to complement the efforts of law enforcement initiatives to stem the growth of illegal activity. However, despite the recognition that this drug is as-

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sociated with elevated levels of morbidity and mortality, particularly in poor communities of color, the national policy response has not been commensurate with the nature of the problem. As we hope to argue, the principal responsibility for managing this crisis has been assigned to the police, the courts, and the prisons. We also hope to demonstrate that this response, far from being a solution, aggravated rather than alleviated the enormous burden that this drug epidemic has imposed on the communities that it has affected.

The Crack Era

Historical overview of smokeable cocaine

The distinctions among various forms of cocaine are an essential part of the history of cocaine. Cocaine powder is either snorted or injected. Coca paste, free-base and crack are smoked. Coca paste is made from ground coca plant leaves. Free-base is the base state form of cocaine without adulterants. Crack is the crystal form that contains impurities and filler. While the use of powdered cocaine poses a considerable health threat, smokeable cocaine use has proven to be much more problematic. This paper will emphasize the switch from snorted or injected cocaine to smokeable cocaine.

The earliest documented use of smokeable cocaine occurred in Peru in the early 1970s. Dr. F. Raul Jeri and his research team reported that, among Peruvians, the smoking of an impure form of cocaine known as coca paste had reached epidemic proportions.[3] The most striking feature of the epidemic was the highly addictive nature of smokeable cocaine. Although some form of cocaine had been available in Peru for over 3,000 years, none had produced the social and health consequences of smokeable cocaine. Cocaine-related admissions to psychiatric hospitals, illicit activity, ill health, and mortality rates sharply surged upward. Jeri noted that the rapid onset of "anguista," an intense pain and anguish experienced as the level of cocaine in the blood began to drop after the initial coca paste high, compelled users to immediately seek more cocaine.[4] In their relentless pursuit of the drug, users quickly became impoverished and malnourished.[5] Peruvian health officials were ill-equipped to handle the steadily increasing numbers of coca paste-related cases. The use of smokeable cocaine would require further study.

Dr. Robert Byck and colleagues conducted the first scientific studies of cocaine plasma levels after coca paste smoking.[6] At the 1979 annual meeting of the American Psychiatric Association, they reported, as had Jeri, that the practice of smoking cocaine was highly addictive and thereby potentially disastrous. Within one year, the coca paste epidemic had spread from Peru to other South American countries, prompting Peruvian scientists to organize the 1980 Inter-American conference on coca and cocaine.[7]

In the United States, the House of Representatives Select Committee on Narcotics Abuse and Control held cocaine hearings that July, October, and November. Byck testified at the hearings that the heavy use of smokeable cocaine in free-base form—a form of cocaine use popular in the late 1970s and employed by an estimated 10 percent of cocaine users—was about to change.[8] He warned Congress that the United States was about to experience the worst epidemic of drug abuse this country had ever seen. Byck projected that the use of free-base cocaine in the 1980s would match the widespread use of "speed" (methamphetamine) in the 1960s. He urged Congress and the National Institute on Drug Abuse to mount an education and prevention campaign to avert this impending epidemic.[9] Unfortunately no such campaign was undertaken.

In 1983, free-base cocaine smoking reached the Bahamas. As in Peru, the number of hospital admissions for cocaine began to rise at alarming rates.[10] By 1984, 98 percent of all psychiatric hospital admissions for cocaine abuse in the Bahamas were related to the use of smokeable free-base cocaine.[11] Once again, a pattern of compulsive use was reported.[12] Drs. David Allen and James Jekel found that in pursuit of the drug, "[a]ddicts forgo such normal pleasures as sex, eating and drinking."[13] As a consequence, illicit activity and ill health quickly follow. The attendant social and health effects overwhelmed the Bahamas health care system. At the 1985 International Symposium on Cocaine, Allen and Jekel, based upon their epidemiological studies in the Bahamas, predicted that the free-base cocaine epidemic would sweep across other Western nations, including the United States.[14] Once again, U.S. health officials ignored the warning.

Crack enters the United States

Few people in the United States, other than those involved in the drug underground, recognized the emergence of a smokeable form of cocaine. The first mention of crystallized cocaine occurred in an early 1970s guide to illegal drug use, entitled *The Gourmet Cokebook.*[15] It next appeared in 1981, as a footnote in another underground publication, *Cocaine Handbook.*[16] That same year, the near-death experience of comedian-actor Richard Pryor introduced the practice of smoking cocaine, in this case "freebasing," to the general public.[17] However, the process of reconstituting cocaine for smoking was not fully understood.[18] Free-base, the base state form of cocaine without adulterants, was not clearly distinguished from crystal cocaine, the form that contains the impurities and filler from the hydrochloride as well as from the processing products. Even among many users, particularly at the street-level, the two were considered equivalents.[19] In the mid-1980s, the unadulterated smokeable cocaine rock form became known as "crack" because of the crackling sound made during heating and drying once the cocaine hydrochloride is dissolved in water and sodium bicarbonate (baking soda).[20]

According to a 1988 U.S. Drug Enforcement Agency (DEA) report, the availability of crack was first reported in Los Angeles, San Diego, and Houston in 1981. Crack was localized in those areas until 1985 when crack use became a serious problem in New York City. According to the DEA, "[c]rack cocaine literally exploded on the drug scene during 1986 and was reported available in 28 states and the District of Columbia."[21] The presence of crack was attested to by street surveillance, emergency room visits, and arrest records. For example, crack arrests accounted for 72 percent of all New York City Police Department, Narcotics Division cocaine arrests during the first seven months of 1987.[22] By 1989 lifetime prevalence reached 1.9 percent.[23]

Social consequences

As the epidemic progressed, it became clear that compulsive crack use would have a tremendous impact on the user, his/her family and the larger communities within which the epidemic was embedded. A San Francisco community

leader, Shirley Gross, wrote in 1988, "[n]othing in the history of substance abuse has prepared us for the devastation that is caused by the use of cocaine 'crack'... Crack has destroyed entire communities by engulfing families in the web of crack sales or use."[24] Largely African-American sections of Oakland, San Francisco and Los Angeles were "taken over" by drug dealers. Addiction and drug-related violence created a massive alteration in the social conditions of these communities. Ben Bowser, an ethnographer, described marked changes in the Bayview-Hunter's Point community in San Francisco.[25] In particular, he signaled that drug traffickers were forming their own social systems, complete with common expectations, beliefs, values and rules; and that women, drawn into crack-related prostitution, might be far more likely to transmit HIV infection than were women addicted to heroin.

The social effects of crack were related to three factors: the growth of the drug culture; the growth of drug-related prostitution; and the collapse of family and community functioning. The importance of these effects could be measured in the rapid escalation of the number of children in foster care, the spread of sexually transmitted diseases (STDs), including HIV, and the escalation in violence.

Crack and risk for STDs/HIV

In 1988, the United States Centers for Disease Control and Prevention (CDC) cited crack use, coupled with the practice of bartering sexual services in exchange for the drug, as a factor in the increase in STDs.[26] An association between crack use and HIV infection, noted among women with pelvic inflammatory disease in New York City, spurred the concern that crack use might become an important factor in the spread of HIV infection.[27] This report first alerted the medical profession that crack use was linked to the spread of important STDs.[28] Several lines of evidence have since substantiated that levels of risk behavior and infection with STDs, including HIV, are high among crack users. Survey reports have linked crack use with high rates of risky sexual behavior and a history of STDs. In 1990, Fullilove and colleagues reported on high levels of sexual risk taking reported by black teenage crack users living in the San Francisco Bay Area. Among the 222 adolescents interviewed, 41 percent reported a history of

an STD. A history of an STD was more likely to be reported by girls (55 percent) than boys (34 percent) and by those who combined crack use with sexual relations (51 percent) than those who did not (32 percent).[29]

Similar findings were reported by Booth and colleagues. They interviewed adult drug users who smoked and/or injected drugs. They found that those who smoked crack, whether drug injectors or not, were more likely than nonsmokers to report risky sexual behaviors, including more sexual partners, exchanging sex for drugs, and unprotected sexual intercourse. Smokers were also more likely than nonsmokers to report a history of gonorrhea (62 percent of smokers, 36 percent of injectors), and/or syphilis (19 percent of smokers, 12 percent of injectors).[30]

Studies of patients with confirmed STDs have also reported an association between crack use and sex-for-drugs exchanges. Rolfs and colleagues conducted a study of risk factors for syphilis among adults attending an STD clinic and found that cocaine use and prostitution increased the risk for infection.[31] Schwarcz and her team interviewed black adolescents diagnosed with gonorrhea and compared them to community controls who reported they did not have a recent history, diagnosis or symptoms of STD. They found that 32 percent of the female gonorrhea patients had received money or drugs in exchange for sex, while none of the control patients had done so. Participation in these exchanges was closely associated with crack use. Among boys in the study, crack use and participation in sex-for-drugs exchanges were not risk factors for gonorrhea infection.[32]

Chiasson and colleagues at the New York City Department of Health examined the link between HIV infection and crack use. They conducted a study of HIV infection among patients seen at a STD clinic in New York City. They found that, among women with no other identified risk (i.e., no injection drug use), crack use, prostitution, crack-using prostitution and history of syphilis were all found to be risk factors for HIV infection. Among men with no other risk behavior, crack use, contact with a crack-using prostitute, and a history of syphilis were all significant risk factors. The overall seroprevalence rate among the 201 crack users, who denied traditional HIV-associated risk behaviors, was 12 percent.[33]

The CDC, which had first signaled the crack-STD connection, took the leadership in organizing a multi-year, multisite study designed to assess HIV seroprevalence among crack users interviewed at three sites in the United States: New York, Miami and San Francisco. The study recruited 1,967 young adults, of whom 1,137 reported a history of crack use and 830 did not. The subjects were interviewed about HIV risk behaviors and were tested for antibody to HIV. Overall, sexual risk-taking was more common among crack users than non-users. Users reported more sexual partners. Crack-using women were more likely than non-using women to have engaged in exchanges of sex for money or drugs. Crack-using men were more likely than non-using men to report anal sex with a male partner and to have had 50 or more such partners. Among men who had sex with another man, the crack-using men were more likely than non-users to have participated in exchanges of sex for drugs or money.[34]

Women with a history of engaging in sex work associated with crack cocaine use were found to be particularly at risk in this study. For example, the prevalence of HIV infection among crack-smoking women in the sample was reported to be almost 30 percent in New York City and 23 percent in Miami. Engaging in sex for drugs or money was the principal risk factor in both samples, but sexually transmitted diseases including syphilis (reported by 80 percent of the crack smokers in this study) and herpes were also independently associated with HIV infection. The study's authors concluded: "[t]hus, our data support the possibility that the spread of sexually transmitted diseases among crack smokers facilitates the spread of HIV."[35,36]

Crack and Family/Social Dysfunction

The nature of crack use has important implications for the communities that it has affected. Crack use typically occurs during binges which may last for days at a time, that is, until the user is forced to stop because of exhaustion or lack of the financial wherewithal to continue. During the binge, the need to procure and use crack overwhelms all other demands that might face the user. By necessity, kinship, work, and social duties are neglected. As one woman told an interviewer in describing the ways in which she had failed her

children, "It hurts, it really hurts because you really want to do it. You really want to take care of your children and everything, but the drug is just constantly it's like a monkey on your back. I want it, I want it, I want it, I want it."[37]

An article in *The San Francisco Chronicle*, detailing the costs of crack to the city in 1988, pointed out that social services increased by close to 150 percent over two years.[38] In a report issued by the New York State Supreme Court in 1990, it was noted that family court filings in New York City had increased so dramatically that a doubling of cases was predicted by 1993, from 113,607 in 1985, to 225,994 in 1993. The report labeled the period 1985-1990 "The Crack Years."[39]

Crack and Violence

Violence was closely associated with crack, and violent incidents grew dramatically as the epidemic spread. A March 1989 issue of *The Crisis*, the official organ of the National Association for the Advancement of Colored People, focused on the crack epidemic.[40] In an article entitled, "Cocaine and Violence: A Marriage Made in Hell," Patricia A. Jones noted that in New York City, young children were murdered because they were in the crossfire of drug-related violence.[41] She called this violence "drug terrorism" and noted, "innocents killed in drug terrorism incidents are basically byproducts of fights for market share in the drug business."[42] This phenomenon was acknowledged by criminologists and other researchers throughout the country. For example, a monograph published by the National Institute on Drug Abuse (NIDA) pointed out that "structural violence," that is, violence related to the control of markets, was a major cause of all violence linked to drug use.[43] However, Fagan and Chin, in a study reported in that volume, pointed out that crack sellers did not limit violence to drug sales, but were "deeply immersed in generic social processes of drug use, violence, and other crimes."[44]

An increase in the use of guns appears to follow the emergence of crack in selected U.S. cities.[45] As demonstrated in a number of studies, the presence of guns leads to an increase in the risk for firearm-related homicide.[46] Guns played a critical role in the rise in the number of homicides in the United States. Although firearm-related homicide had been the lead-

ing cause of death among African-American male teenagers since 1969, a marked increase was noted beginning in 1987. Fingerhut and colleagues reported that, "[f]rom 1987 through 1989, the firearm homicide rate among black males 15 to 19 years of age increased 71 percent to 85.3 deaths per 100,000 population, while the death rate from motor vehicle crashes (the second leading cause of death among black teenage males) fell 3 percent to 26.5 per 100,000."[47] It was also found that firearm-related deaths were concentrated in core metropolitan areas. They pointed out, "[t]he firearm homicide rate for all teenagers in the core county stratum in 1989 was 10 times the rate in the non-metropolitan strata, 27.7 vs. 2.9 deaths per 100,000 population."[48] Fingerhut went on to say, "it is easy to speculate about the reasons for the recent and rapid increases in firearm homicide among teenagers. Factors are likely to include increased use of crack cocaine, changes in the types and lethality of firearms, urban poverty, and myriad sociologic factors."[49]

In general, observers of firearm-related homicides agreed that, despite the fact that such murders were probably triggered by crack-related violence, they took on a life of their own. One reason for this secondary wave of violence was that firearms sales in crack-affected communities increased. For example, because some teenage dealers started carrying guns to school, others became fearful and started to carry guns to school. Murders in schools, heretofore a very rare event, took on increasing significance. The control of the violence epidemic required, in and of itself, the initiation of epidemic control.[50] Ironically, the American Medical Association and former Surgeon General Koop joined forces to control violence, but no such alliance was initiated to control the crack epidemic that precipitated the violence.

Crack, The Criminal Justice Response, and Public Health

The social, familial, and community devastation created by the crack epidemic did generate one critically important societal response. Involvement with the criminal justice system became a fact of life for increasing numbers of men, women, and children caught up in the wake of crack's domination of a number of critical aspects of community life. One

of the most dramatic indices of this impact was reported by Mauer and Huling of The Sentencing Project, who found dramatic increases in incarceration rates for African-American men and male adolescents. They noted, for example, that in 1995 "almost one in three (32.2 percent) young black men in the age group 20-29 is under criminal justice supervision on any given day—in prison or jail, on probation or parole."[51]

The authors cite the "War on Drugs," begun under the Reagan Administration in 1986, as one of the principal factors in this increase in the adult prison population during that decade. In 1991, for example, 61 percent of the inmates in the federal prison system had been convicted of a drug-related crime.[52] The impact this increase has had on the HIV/AIDS epidemic is difficult to estimate. However, given the fact that exposure to HIV infection has increasingly been associated with drug use in the 1990s, national policies to imprison low-level users and dealers has clearly resulted in the incarceration of large numbers of HIV infected drug users. Many prisons, notably those with heavy concentrations of prisoners from HIV epicenters such as New York City, became (and remain) significant reservoirs for HIV infection.

A 1994 survey among the 50 state prison systems for adults conducted by the CDC, with the cosponsorship of the National Institute of Justice, confirmed the existence of high HIV/AIDS case rates in these facilities. The 5,270 AIDS cases reported in that survey among the national inmate population represented a case rate of 5.2 per 1,000, six times the rate reported for the adult U.S. population. Four factors contributed to these rates:

- a prison population with significant numbers of HIV-infected persons and/or those with risk factors for such infection;
- the prevalence of risky drug use and risky sexual behavior in many prisons;
- the release of the vast majority of prisoners to their communities of origin; and
- high rates of recidivism, re-incarceration, and re-confinement among this population.[53]

The cycling of men and women in and out of prison system and back to their communities seems to ensure that HIV will maintain its ecological niche in poor communities and perhaps provide the reservoir from which it can spread to more affluent communities as well.[54] HIV places an enormous burden on poor communities that lack the resources and the facilities to care for this population, and it places an equally enormous burden on prisons that are ill-equipped to handle either large numbers of inmates with a severe, fatal illness or large numbers of inmates with sex and drug use behaviors that may expose them to HIV during the course of their incarceration. Having imprisoned the casualties of our "War on Drugs" has not solved the drug problem in poor communities, nor has it resulted in the "correction" of inmates incarcerated in prisons incapable of managing the HIV/AIDS epidemic that rages within their walls. The "solution" has essentially become the problem.

Conclusions

Our objective in this paper has been to cite two distinct trends in the crack epidemic. The first is a pattern of morbidity and mortality that is directly related to crack sales and use, particularly in poor African-American communities. The second trend has been in the societal response to the epidemic, a response that has relied less on standard public health responses and more on the courts, the police, and the prisons as solutions to the problem. We have suggested, as well, that the public health burden of the epidemic has not been relieved by imprisoning users and dealers. Rather, because of the interaction of the crack epidemic with epidemics of violence, sexually transmitted diseases, and most particularly HIV/AIDS, the prisons have only hidden the crack problem behind bars. The consequences that this set of policies will have on the continued spread of HIV/AIDS in minority communities in the U.S. are potentially disastrous and would in effect, increase, not decrease, the risk to which members of affected communities are exposed.

Whether by accident or design, the one unmistakable trend in the national response to the crack epidemic has been the failure to provide sufficient numbers of places in drug treatment programs to meet the demand and/or the need of

addicts for treatment. The U.S. Office of National Drug Control Policy, for example, estimated in 1996 that 3.6 million people had a drug problem severe enough to require treatment, but estimates of the number of people in public or private treatment facilities in the U.S. are typically far less than this number (approximately one million, according to the 1993 National Drug and Alcohol Treatment Unit Survey). This disproportionate emphasis on a criminal justice solution to the U.S. drug problem is further reflected in the Office of National Drug Control Policy budget for fiscal year 1996-97, which requested that 58 percent of its 13.5 billion dollar request go to criminal justice responses and only 19 percent to drug treatment. This investment in police, courts, and prisons comes in the face of significant evidence that, as noted in the 1996 Institute of Medicine's report *Pathways to Addiction: Opportunities in Drug Abuse Research*, "[d]rug abuse treatment is a judicious public investment and is less expensive than the alternatives" and further, that the economic treatment benefits from such treatment include "reduced crime, enhanced productivity, and lower health care utilization."[55]

The ultimate result of these policies will be the creation of a large class of men and women who will be permanently marginalized by their addiction as well as by their involvement in the criminal justice system. Moreover, the burden of this marginalization is disproportionately borne by people of color: "The U.S. Sentencing Commission reported in 1995 that whites account for 52 percent of all crack users and African-Americans, 38 percent. However, 88 percent of those sentenced for crack offenses are African-American and just 4.1 percent are white."[56]

It is difficult not to conclude that we have failed as a democracy to use our national resources wisely or justly in our response to the crack epidemic. If anything, we have dramatically increased the burdens imposed on poor communities of color and have significantly increased the public health threat that these communities must confront. While there is no mistaking the threat that crack-related crime and violence pose, there is also no mistaking our failure to pursue even-handed policies that would have, among others, emphasized drug treatment with the same vigor as incarceration as an

appropriate response to the problem of the non-violent, addicted criminal offender. More importantly, the failure of public policy makers within governments to mount a vigorous response to the obvious public health threat posed by crack remains unexplained.

Scarce attention to the public health dimensions of this response, let alone the human rights implications, has resulted in catastrophic consequences. The United States has ratified the International Covenant on Civil and Political Rights and the International Convention on the Elimination of All Forms of Racial Discrimination, both of which begin to point at the international legal obligations relevant to an adequate response to the crack epidemic in the United States—including attention to rights such as nondiscrimination, association, and information. This linkage has not been systematically explored, neither as a method for shaping policy nor as an advocacy tool. The continued failure to mount a coordinated, national response to the crack epidemic involving the joint efforts of such agencies as the National Institutes of Drug Abuse and the CDC (to cite just two)—and an effort that is consistent with the size of the problem—remains an ongoing tragedy.

One can only wonder if and when this recognition will come and what, if any, will be the response.

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References

1. R.E Fullilove. "Substance Abuse and Public Policy in the United States: A War on Drugs or Managed Care for Treatment," *Current Issues in Public Health* 2 (1996):68-73.

2. "Review of Events of the Decade of the Eighties," *Village Voice*, March 17, 1992.

3. F.R. Jeri et al., "Consumo de Drogas Peligrosas por Miembros y Familiares de la Fuerzo Policial Peruana," *Revista de la Sanidad de las Fuerzas Policiales* 37 (1976):104-112.

4. F.R. Jeri et al., "El Sindrome de la Pasta de Coca: Observaciones en un Grupo de 158 Pacientes del Area de Lima," *Revista del Ministerio del Interior* 39 (1978):1-18. F.R. Jeri, "Coca-paste Smoking in some Latin American countries: A Severe and Unabated Form of Addiction," *Bulletin on Narcotics* 36(2) (1984):15-31.
5. B.X. Watkins, interview June 19, 1997 with Dr. Robert Byck .
6. R. Byck et al., "Cocaine: Plasma Levels after Coca Paste Smoking," New Research Abstracts of the American Psychiatric Annual Meeting, Chicago, Illinois, May 1979. Abstract#NR24.
7. F.R. Jeri (ed.), *Cocaine 1980: Proceedings of the Inter-American Seminar on Medical and Sociological Aspects of Coca and Cocaine* (Lima: Pacific Press, 1980).
8. R.K. Siegel, "History of Cocaine Smoking," *Journal of Psychoactive Drugs* 14 (1982):277-279.
9. See Byck testimony before the Select Committee on Narcotics Abuse and Control, U.S. House of Representatives. "Cocaine: A Major Issue of the 70s," Washington D.C., July 26, 1979. U.S. Government Printing Office, Washington, D.C. 1980. *Hearings of the 96th Congress*, pp. 58-69 and 88-93.
10. J.F. Jekel, D. Allen, et al., "Epidemic Free-Base Cocaine Abuse. Case Study from the Bahamas," *Lancet* 1(8479) (1986):459-462.
11. Ibid.
12. J.F. Jekel, D. Allen, *Crack: The Broken Promise* (London: Macmillan, 1991), pp. 27, 29.
13. Ibid.
14. See D. Allen (ed.), *The Cocaine Crisis* (New York: Plenum Press, 1987).
15. *The Gourmet Cokebook: A Complete Guide to Cocaine* (San Francisco: White Mountain Press, 1972).
16. David Lee provided a detailed description of the free-base process; see D. Lee, *Cocaine Handbook: An Essential Reference* (San Rafael: What If?, 1981), p.52.
17. *Time,* July 6, 1981, p. 63.
18. The type of cocaine base smoked by Richard Pryor has never been documented. It has always been discussed as free-base. Research suggests that this is true because cocaine users considered crack an inferior product. See J.A. Inciardi et al., *Women and Crack-Cocaine* (New York: Macmillan, 1993), p. 7.
19. Ibid. p. 9.
20. See P. Bourgois, *In Search Of Respect: Selling Crack in El Barrio* (Cambridge: Cambridge University Press, 1995), and P. Bourgois and E. Dunlap, "Street Status and the Sex-for-Crack Scene in San Francisco," in: *Crack Pipe as Pimp: an Ethnographic Investigation of Sex-for-Crack Exchanges,* M.S. Ratner (ed.) (New York: Lexington Books, 1993).
21. U.S. Department of Justice, DEA Cocaine Investigations Section. *Crack Cocaine Availability and Trafficking in the U.S.*, 1988, p. 1.
22. Ibid.
23. Preliminary estimates from the 1994 National Household Survey on Drug Abuse, Advance Report Number 10, September 1995, United States Department of Health and Human Services.
24. S. Gross, CEO of the Bayview's-Hunter's Point Foundation, San Fran-

cisco, quoted in *MIRA Crack Project: Preliminary Report*, 1988, p. 2.
25. B.P. Bowser, "Crack and AIDS: An Ethnographic Impression," *Journal of the National Medical Association* 81(5) (1989): p. 540. Bowser conducted his ethnographic work during 1987 and 1988 in the Bayview-Hunter's Point section of San Francisco.
26. M.F. Goldsmith, "Sex Tied to Drugs = STD spread," *Journal of the American Medical Association* 260 (1988):2009.
27. B. Hoegsberg, T. Dotson, O. Abulafia, et al., Social, Sexual and Drug Use Profile of HIV(+) and HIV(-) Women with PID. Presented at the Fifth Annual Conference on AIDS, Montreal, Canada, June 1989.
28. M.F. Goldsmith, see note 26. I have arbitrarily used this publication as to mark the beginning of the epidemic of crack.
29. R.E. Fullilove, M.T. Fullilove, B. Bowser, S. Gross, "Risk of Sexually Transmitted Disease Among Black Adolescent Crack Users in Oakland and San Francisco, CA," *Journal of the American Medical Association* 263 (1990):851-855.
30. R.E. Booth, J.K. Watter, D.D. Chitwood, "HIV Risk-Related Sex Behaviors Among Injection Drug Users, Crack Smokers, and Injection Drug Users who Smoke Crack," *American Journal of Public Health* 80 (1990):853-857.
31. R. Rolfs, M Goldberg, and R. Sharrar, "Risk Factors for Syphilis: Cocaine Use and Prostitution," *American Journal of Public Health* 83 (1993):1144-1148.
32. S.K. Schwarcz, G.A. Bolan, M. Fullilove, J. McCright, R. Fullilove, R. Kohn, R. Rolfs, "Crack Cocaine and the Exchange of Sex for Money or Drugs: Risk Factors for Gonorrhea Among Black Adolescents in San Francisco," *Sexually Transmitted Diseases* 19 (January-February 1992):7-13.
33. M.A. Chaisson, R.L. Stoneburner, D.S. Hildebrandt, et al., "Heterosexual Transmission of HIV-1 Associated with the Use of Smokable Free-Base Cocaine (Crack)," *AIDS* 5 (1991):1121-1126.
34. B.R. Edlin, K.L. Irwin, S. Faruque, et al., "Intersecting Epidemics—Crack Cocaine Use and HIV Infection Among Inner-City Young Adults," *New England Journal of Medicine* 331 (1994):1422-1427.
35. Institute of Medicine, *The Hidden Epidemic: Confronting Sexually Transmitted Diseases* (Washington, DC.: National Academy Press, 1997), and B.R. Edlin et al., see note 34.
36. B.R. Edlin et al., see note 34, p. 1426.
37. M.T. Fullilove et al., "Crack 'Hos and Skeezers: Traumatic Experiences of Women Crack Users," *Journal of Sex Research* 29(2) (1992):282.
38. "What Crack Cost San Francisco," *San Francisco Chronicle*, February 21, 1989, p. A1.
39. S. Wachtler, *The State of the Judiciary 1990*. Report from State of New York Unified Court System, pp. 3-5.
40. National Association for the Advancement of Colored People, *The Crisis*, March 1989.
41. Ibid., pp. 17-19, 32.
42. Ibid., p. 17.
43. NIDA Monograph Series No. 103. *Drugs and Violence: Causes, Correlates and Consequences*, USDHHS, 1990.
44. J. Fagan and K. Chin, "Violence as Regulation and Social Control in

the Distribution of Crack," *NIDA Monograph 103*, p. 36.
45. I. Wilkerson, "Crack's Legacy of Guns and Killing Lives On," *New York Times*, December 13, 1994, pp. A1, B12. Presents a chart showing the sharp rise in homicides following the introduction of crack in New York, Los Angeles and Chicago.
46. See L.A. Fingerhut, D.D. Ingram, and J.J. Feldman, "Firearm and Non-Firearm Homicide Among Persons 15 Through 19 Years of Age: Differences by Level of Urbanization, United States, 1979 Through 1989," *Journal of the American Medical Association* 267 (1992): 3048-3053.
47. L.A. Fingerhut, D.D. Ingram, and J.J. Feldman, "Firearm Homicide Among Black Teenage Males in Metropolitan Counties," *Journal of the American Medical Association* 267 (1992):3054-3058.
48. L.A. Fingerhut et al., see note 46, p. 3052.
49. L.A. Fingerhut et al., see note 46, p. 3053.
50. In 1991, the Journal of the American Medical Association issued a call for papers on the problem of violence. The editor of the Journal, George D. Lundberg, and the former Surgeon General, C. Everett Koop, co-authored the editorial introducing the special issue of the Journal published on June 10, 1992. They pointed out that they had received an outpouring of articles, supporting their belief that violence was a major public health problem.
51. M. Mauer and T. Huling, *Young Black Americans and the Criminal Justice System: Five Years Later* (Washington, D.C.: The Sentencing Project, 1995), p. 1.
52. W.M. DiMasco, M. Mauer, and K. DiJulia, *Seeking Justice: Crime and Punishment in America* (New York: Edna McConnell Clark Foundation, 1995).
53. Centers for Disease Control and Prevention, "HIV/AIDS Education and Prevention Programs for Adults in Prisons and Jails and Juveniles in Confinement Facilities: United States, 1994," *MMWR* 45 (1996):268-271.
54. For further discussion see R. Wallace, D. Wallace, H. Andrews, R. Fullilove, M.T. Fullilove, "The Spatiotemporal Dynamics of AIDS and TB in the New York Metropolitan Region from a Sociogeographic Perspective: Understanding the Linkages of Central City and Suburbs," *Environment and Planning A* 27 (1995):1085-1108, and R.E. Fullilove, "Substance Abuse and Public Policy in the United States: a War on Drugs or Managed Care for Treatment," *Current Issues in Public Health* 2 (1996):68-73.
55. Institute of Medicine, *Pathways of Addiction: Opportunities in Drug Abuse Research* (Washington, DC: National Academy Press, 1996), p. 198.
56. W.M. DiMasco et al., see note 52, p. 28.