



## COMMENTARY

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### Population Impact of Mass Incarceration under New York's Rockefeller Drug Laws: an Analysis of Years of Life Lost.

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#### BACKGROUND

Now nearing the 30th year since their passage by the State's legislature, New York's "Rockefeller drug laws" (RDL) mandate long prison sentences for drug offenders – most commonly for possession or sale of small quantities of illicit drugs.<sup>1</sup> The length of the sentences under RDL are based on the type and quantity of drugs involved and on the defendants prior offenses. Penalties are applied regardless of the circumstances of arrest, but most are "buy and bust" entrapments of drug users by undercover narcotic police operating in targeted communities.

Facing long mandatory sentences if found guilty in a jury trial and less than adequate legal representation from poorly compensated public defenders, most drug defendants agree to plead guilty to lesser offenses than those in the original charges. Over 90% of drug cases are plea bargained directly with the prosecutors and do not involve jury trials to determine guilt or innocence.<sup>1</sup> Thus, once the amount of drugs and prior record have been determined, the sentencing rules do not permit judicial discretion that would allow judges to take extenuating circumstances into account in determining the length of sentences on a case by case basis.

#### Historic Growth of the NYS Prison Population and Effects of RDL

Since the inception of RDL in May of 1973, over 150,000 New Yorkers have been imprisoned for non-violent drug offenses<sup>1,2</sup> helping to fuel an unprecedented rise in the state's prison population. Figure 1 shows this rise in historic perspective. The recency and abruptness of this increase is noteworthy. In the period between 1974 and 2002, the NY State prison population rose by almost 500% - from 14,400 to 70,700 inmates, reaching a rate of 375 / 100,000 population – the highest incarceration rate in the state's history.<sup>3,4</sup>

The effect of RDL incarcerations on the overall prison census was most apparent in the 1990s when, despite a steady drop in crime rates, high arrest rates and prison commitments for drug offenses continued to fill prison cells. Over this period an increasingly large proportion of commitments (40–45%) were for drug offenses. (see figure 2) These new commitments combined with longer mandatory sentences to maintain historically high prison census levels in New York State throughout the 1990s.

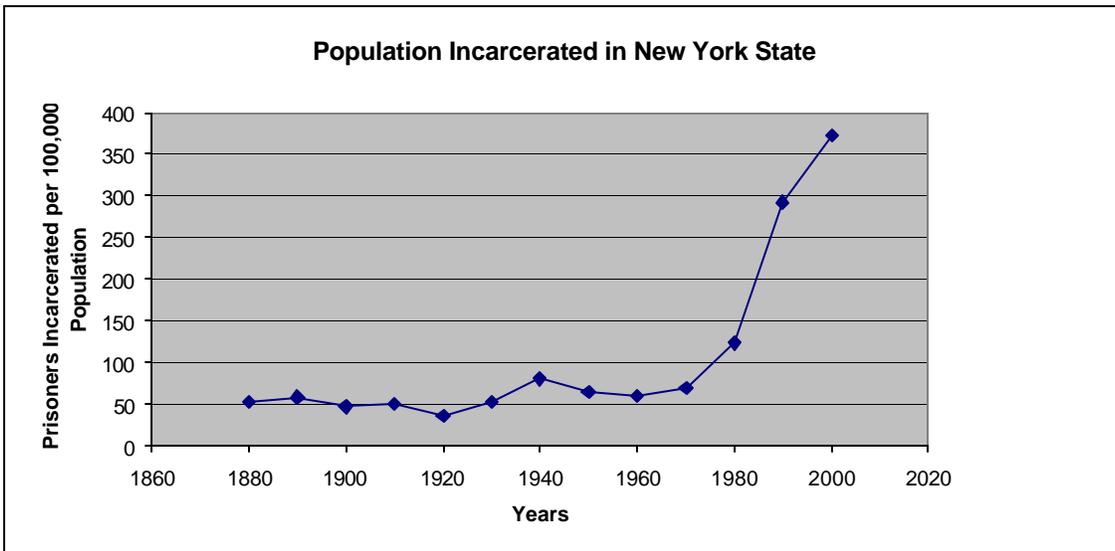
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**FIGURE 1. History of Growth of NY State Prison Population: 1880 – 2000.**



**FIGURE 2. Rockefeller Drug Commitments as Percentage of Total Commitments**

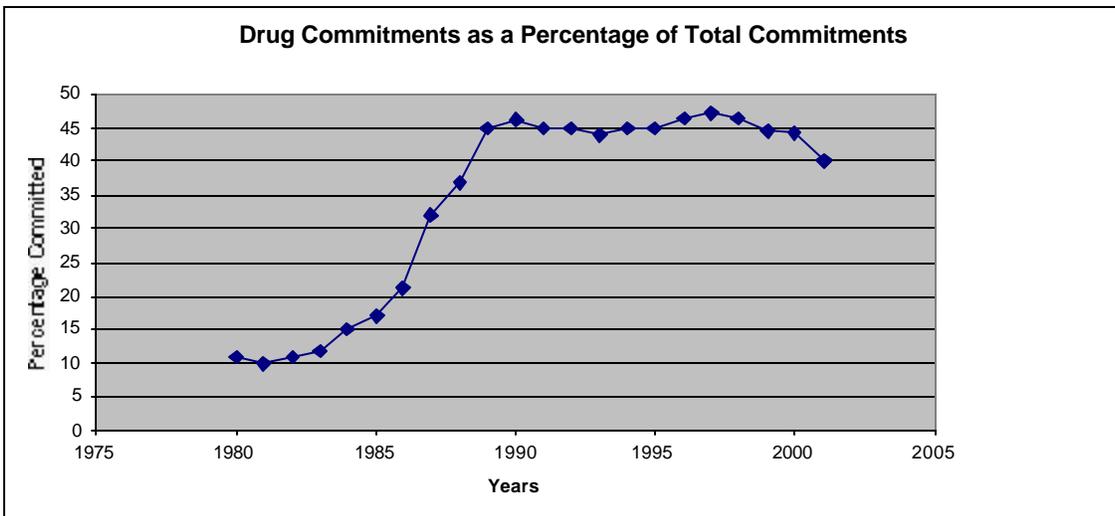
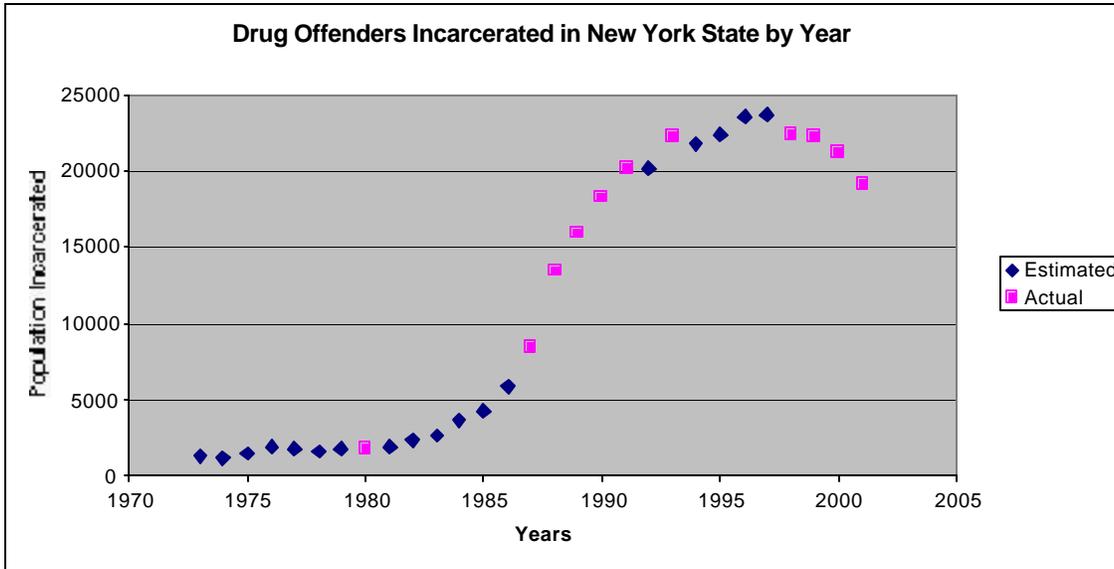


Figure 3 shows the growth in the prison population of NY State incarcerated for drug offenses throughout the period of RDL (1974- 2001). On 1/1/2002 there were 19,164 drug offense inmates in NY State prisons out of a total of 69,000.<sup>5</sup> For those years in which annual prison census data for drug offenses are not available, estimates are based on the number of drug commitments each year (NYS/DOCS) as an adjusted proportion of total commitments applied to the year end prison census.<sup>6</sup>

**FIGURE 3. Number of Drug Offenders in NYS Prisons: 1975 – 2000**



**Population characteristics of RDL inmates**

The demographic characteristics of the RDL population are distinctive and significantly different from those of the general population of NY State as a whole, or even those of the rest of the NYS prison system. (see Table 1) The drug offense population incarcerated under RDL are overwhelmingly composed of young minority males from New York City.<sup>7,8</sup>

**TABLE 1. Demographic characteristics of New York State adult population vs. RDL inmates and total New York State inmates (2000)**

	NYS Population	RDL inmates	Other inmates
Median Age	40	33	38
NYC proportion	44%	80%	70%
Black and Hispanic Proportion	33%	94%	77%
Male %	48%	92%	96 %

**Rates of imprisonment under RDL**

Because the demographic characteristics of the RDL population are skewed relative to the State population as a whole, the impact of RDL incarcerations is not evenly distributed over the general population of NY State. Table 2 shows the rates of drug imprisonment rates per 100,000 population of NY State by race, age, and gender (as of Jan. 1, 2002.)<sup>7,8</sup>

The highest rates are seen in the age 21-44 for all groups, which constitute > 80% of the total RDL prison population. Within this age range, Black males have the highest rates (1516/100,000 vs. 34 /100,000 for White males) and White females the lowest (6 /100,000 vs. 109 /100,000 for White females). The racial disparities are seen at every age and for males and females – most strikingly the ratio of Black to white males (age 21-44) is 40:1, for male Hispanics to Whites the ratio is 30:1. While Blacks and Hispanics represent only 33 % of the NYS population, over 94% of the RDL inmates are from these minorities and (based on arrest data) approximately 78% come from NYC.<sup>9</sup>

**TABLE 2. Rates of incarceration per 100,000 under RDL – year ending Jan. 1, 2002**

Age Group	White Male	Black Male	Hisp Males	Other Male	White Fem	Black Fem	Hisp Fem	Other Fem
Under 21	1.37	57.52	34.12	2.65	0.34	1.94	1.97	0.00
21-44	34.50	1516.45	1033.07	53.04	6.18	109.61	68.22	1.07
Above 44	9.65	329.32	434.69	9.92	1.14	19.60	23.38	0.00
Total	16.03	659.89	532.40	23.51	2.60	47.26	33.81	0.38

As the numbers of prisoners rose under RDL over the last three decades, the racial mix of those incarcerated for drug offense has grown progressively more disparate relative to the state population. In 1980, one third of the 886 new commitments for drug offenses were white. By 2000, of 8227 new drug commitments, only 6% were white. And as this balance shifted, the average time served by drug offenders almost doubled - from 18 to 32 months for those released in 1980 and 2000 respectively.<sup>10</sup>

### **Assessing the impact of mass incarceration under RDL**

The relatively rapid onset and massive scale of RDL incarcerations in New York combines with their distinctive demographic characteristics to call attention to the potential effect that such high rates of incarceration may have on the specific sub- populations and communities from which drug offenders are most heavily drawn: i.e. young minority males from the inner city minority neighborhoods of New York. If, instead of prison inmates, these figures represented the progress of a new epidemic disease or the effects of a natural or manmade disaster (e.g. the AIDS epidemic or the attack on the World Trade Center), we would employ a set of standard methods to assess their impact – e.g. number of lives lost, injuries, number of people displaced, households affected, and economic losses.

But prison data are not normally viewed as collective events that warrant such an assessment. Even such a vast program of incarceration as has occurred over the 30-year history of the RDL is not generally characterized as an “event” *per se* and compared to other events. The goal of this paper is to employ a quantitative public health method for determining the magnitude of RDL incarcerations in a way that allows us to compare their scale to other events that have had a powerful impact on New York.

## **METHODS**

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To describe RDL incarcerations in a way that allows comparison of their scale to other events, this analysis employs a metric commonly used for determining the population impact of large-scale adverse events that affect entire populations - “Years of life lost” (YLL), also known as “Years of Potential” Life Lost or YPLL.<sup>11</sup> This measure gives greater weight to the loss of younger people and produces a measure of impact that can be applied to all sorts of mortality events that affect a population of mixed ages. While this method has not previously been employed to consider incarceration data, by treating person years of incarceration as years of life “lost”, we may estimate the magnitude of the impact associated with mass incarcerations of any population for any given year or period of years, and then compare that estimate to other causes of YLL for the same population.

### **Estimating YLL for prison data**

Calculating the YLL for an event normally requires detailed and complete data on the size and demographic characteristics of the population affected – both to ascertain the number of deaths and the pattern of life expectancy of the affected population. But as is often the case in wars or natural disasters (especially in developing countries) such precise data are not readily available for prison populations. This raises several methodological problems in estimating YLL for this group.

### **Population size and characteristics**

Detailed data about the actual individuals incarcerated are not identifiable in publicly available sources. And, even if they were, the length of prison sentences and the actual time served by individuals almost always differ and are available only on a case by case basis. While median sentences and some tabulations of sentencing for various classes of offense and are periodically published, no accurate longitudinal summary of such data are extant in New York State. Further, prison populations are an ever changing group, both in terms of the number behind bars on any given day and the demographic makeup of that population. Thus it is only possible to approximate the size and characteristics of the actual populations incarcerated.

However there are monthly and annual population “snapshots” available<sup>6,8,10</sup> that specify drug offenders as a separate group and provide some basic demographic data allowing us to approximate the size and characteristics of the population incarcerated during the preceding year. These figures may be used to approximate the size and demographic characteristics of the population over any time period.

### **Life expectancy**

These same problems also affect our ability to accurately ascertain the prison populations Life Expectancies (LE), which are needed to calculate YLL. In this case the distinctive demographic profile of the RDL prison population suggests a lower LE than the general population. The estimation employed here utilizes national data on median LE for black and Hispanic males age 20 –45<sup>11</sup> who constitute > 80% of the affected population.<sup>8</sup> The smaller group of older inmates are often in prison for longer sentences and their LEs are probably lower than national LEs for populations of the same age, both as a function of the health problems associated with “competing risks” (i.e. drug addiction and its role in their selection into prison populations) as well as the risks of prison life itself. This would lower the LE for the total group still further. As an approximation of these effects, a group LE of 68 has been used in this analysis.

### **Calculation of YLL**

For this preliminary estimation, a single YLL is held to be equal to a person year of incarceration. For any given year the annual census at Jan 1, is used as the measure of the size of the RDL and general

prison populations. These are added to determine the total YLL over the 30 year history of the implementation of the RDL in New York State. YLL are calculated as follows: each person - year of incarceration is considered as a YLL and this sum is divided by the life expectancy (LE) for this population (i.e.  $YLL = \text{population} \times LE - \text{mean age of RDL inmates}$ ). These values may then be compared to the YLL associated with other events that have impacted on New York.

### **Data sources**

Incarceration data for the period 1973 – 2001 are from the NY State Department of Correctional Services (DOCS) which maintains data on the state’s prison population differentiated by the nature of the offense and demographic details (refs). Data on drug offenses are recorded and analyzed separately and available (for the last 5 years) in reports to the oversight organization, the Correctional Association of NY.<sup>8</sup>

The population denominators used to calculate age, gender and race specific incarceration rates are based on US census data from past and current census reports.<sup>12</sup> Specifically, 1970 census are used for 1973-1975, 1980 census for 1976-1985, 1990 census for 1986 – 1995, 2000 census for 1996 – 2001. US vital statistics<sup>12</sup> on life expectancy for the US population (by race, age, and gender) are used to estimate the YLL of the population incarcerated under RDL between 1973– 2002 and for the comparison groups.

### **YLL associated with RDL incarcerations and other events**

#### **RDL incarcerations**

As of Jan 1, 2002 there were 19,164 RDL offenders in prison, i.e. an estimated 19,164 person years of incarceration. With a median age of 35 and LE of 68 years this figure is equivalent of the YLL that would be associated with 580 deaths in a population with the same age and racial/ ethnic composition.

(see Table 3)

Between 1973 – 2002 there have been an estimated 325,000 person years of incarceration under RDL. With a median age of 35 and LE of 68 years this figure is equivalent to YLL associated with 9848 deaths in a population with the same age and racial/ ethnic composition. (see Table 3 )

**Table 3. “Years of Life Lost” for RDL Incarcerations in NY State: 1973-2002**

RDL Median Age	Life Expectancy	RDL Pop 1/1/2002	2002 RDL Mortality Equivalent	Total RDL 1973-2001 YLL	Total RDL Mortality Equivalent
35	68	19,164	580	325,000	9848

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### **Comparison of YLL to other events**

Using this method for estimating the magnitude of YLLs associated with drug incarcerations in the year 2001 and the cumulative impact of all the years of RDL (1973 – 2002), comparisons may be made to two other significant events in recent NY history – the Sept. 11 attack on the World Trade Center and the AIDS epidemic in New York City.

### **The World Trade Center attack**

In the World Trade Center (WTC) attack there were 2819 deaths recorded by the NYC / Department of Health (DOH) as of August 20, 2002.<sup>13</sup> While the age range of victims was from 2.5 years to 86, approximately 90% were aged 20 – 45 (median age 37) but with about 40% female and only 17% Black or Hispanic. Of the victims identified to date, 64 % were NYS residents and 43% were NYC residents. Calculating the YLL for the deaths among those killed at the WTC site (with a 40 year estimated LE) yields an estimated 112,760 YLL associated with the WTC attack in New York.

### **AIDS in New York City**

Despite a sharp decline in AIDS mortality from prior years,<sup>14</sup> due to lower incidence of AIDS diagnoses and the effectiveness of anti-retroviral therapies, the AIDS epidemic in NY State remains a leading cause of death for the States young adults – ranking ahead of cancer, heart disease, and stroke in many age categories.<sup>14</sup> This is especially true for the NYC young adult Black male population (age 20– 45), where AIDS has been the leading cause of death since 1990.<sup>14</sup> Since the AIDS epidemic in NYS (like the RDL incarcerations) has been most heavily concentrated among minority males, we may compare the race and gender specific AIDS mortality (in YLL) to those of a comparable RDL population – e.g. NYC black males age 20 –45 with an LE of 68 years. In 2001 there were an estimated 242 deaths due to HIV/AIDS among Black males aged 20-45 coming from NYC<sup>8</sup> – with an estimated YLL of 7986. In this same population group, the estimated YLL associated with NYS drug incarcerations in 2001 is 8085, a figure equal to 245 deaths in a population of this age.

### **DISCUSSION**

This analysis estimates the scale and potential collective impact of RDL incarcerations viewed in the same terms as disastrous events such as AIDS or the WTC attack as a version of YLL. The use of YLL to express the impact of drug related imprisonment on the communities and populations most affected establishes a new method for understanding the scale of mass incarcerations as public health events. It allows us to assess their relative magnitude and social significance as collective events that may be compared to other large scale public health or social events that are associated with large numbers of YLL. Such events may occur either in a single blow (like the WTC attack) or over decades, as in the case of the AIDS epidemic in NYC. But because of their massive scale (as measured by YLL or mortality equivalents) each of these events has the potential for significant adverse effects on entire communities and the specific population groups most affected.

This approach is not without controversy: how can we compare the legal punishment of people convicted of crimes to the effects of great epidemics or devastating attacks by terrorists on “innocent victims”? While, in the individual cases, years of life “lost” to imprisonment are clearly different from each other (e.g. one year of a two year sentence is not the same as one year of a 20 years sentence) and from those due to a death by AIDS, natural disaster, or terrorist attack, the collective impact of such large scale events that result in so many YLL concentrated in a particular population may have much in common.

These data suggest that thirty years of forced removal to prison of 150,000 young males from particular communities of New York represents collective losses similar in scale to the losses due to

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epidemics, wars, and terrorist attacks - with the potential for comparable effects on the survivors and the social structure of their families and communities. Such high rates of actual mortality or large scale YLL due to imprisonment, whether concentrated in a brief period (as in the WTC attack) or spread out over many years (as with AIDS deaths and RDL incarcerations), may have similarly profound effects on the populations most affected. For example, the impact of 325,000 YLL under RDL incarcerations includes “collateral damage” to its own set of “innocent victims” - e.g. more than 125,000 children have been separated from an imprisoned parent in the 30 years of RDL.<sup>2</sup>

And there are other ways in which the effects of mass incarceration have an adverse impact that extend well beyond the prison walls and long sentences. In the US, approximately 40% of young black men 20–44 are currently under criminal justice control at any given time i.e. in prison or jail, or on parole or probation.<sup>15</sup> This status includes felony disenfranchisement i.e. the loss of the right to vote. In the US an estimated 1 million Americans convicted of drug offenses have temporarily or permanently lost the right to vote.<sup>16</sup> Further, drug felony convictions mean loss of drivers license and the many job opportunities that require one, loss of eligibility for military service, and disqualification for many professional licenses (e.g. beauticians and barbers), as well as some Federal benefits e.g. home and school loans.<sup>15</sup> The cumulative impact of these extensions of incarceration therefore reach far into the lives of the most heavily affected communities and may well account for the intergenerational persistence of violence, crime, and widespread family and social dysfunction.

Further, the striking racial and ethnic disparities so apparent in RDL incarceration rates have helped sustain a bitter sense of injustice in the minority community. Illegal drug use is ubiquitous in America and there is no evidence of great differences in drug use rates between different racial and ethnic groups in this country.<sup>7</sup> While there are some indications of higher overdose rates among minorities<sup>7</sup> national and regional surveys document similar rates of lifetime and current use of most illicit drugs by race/ethnicity in the period 1980–2000 and in no way support a 30–40 fold difference in drug incarceration rates for minorities.

But, unlike deaths due to illness, natural disaster or terrorist attack, where public sympathy typically flows to the survivors and promises of community support are the norm, the “losses” associated with large scale incarceration under the drug laws are largely unrecognized – either as losses or as collective events. On an individual basis, each family affected by a drug incarceration must carry its own burden of stigma and compensate for the loss on their own. And the collective stigmatization and fear of criminalized young black men continues to be a core element of racism in American society.

Yet many would assert that these removals of drug users from the community are a net benefit and there is a common perception that drug incarcerations are actually positive events - e.g. getting “dangerous characters “ and drug dealers off the street, and that massive drug incarcerations are one reason for lowered crime rates. This view (while popular) is not sustained by the available evidence<sup>19</sup> which suggests instead that the decline in crack use and its related violence, and improvements in the economy may have had as much to do with the decline in crime as any strategies of policing or drug enforcement. And the larger body of criminological research<sup>15,20</sup> indicates that the long history and massive scale of drug imprisonment meted out under harsh sentencing rules may have disastrous social effects – disrupting the lives of the families and communities left behind,<sup>2</sup> predicting future crime rates and significantly diminishing the political and economic prospects of many minority neighborhoods.

Finally, just as NY State’s drug laws have served as a model for many other state and federal drug laws, the scale of mass drug incarcerations and their impact is evident in the US as a whole. There are now > 500,000 individuals incarcerated for non-violent drug offenses in the US<sup>15</sup> more than the number of Europeans incarcerated for all criminal offenses<sup>15,20</sup> and equal to the YLL associated

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with >15,000 deaths annually. Over the last 30 years of the US “war on drugs” the total YLL for drug incarcerations is equivalent to >200,000 deaths - double the number of US soldiers killed in the Korean and Vietnam Wars.

By examining the scale of mass incarcerations and estimating their magnitude in YLL, we can see that massive drug incarcerations produce rates of impact similar to several other disastrous events. It is reasonable to inquire what effects such losses may have upon the communities that bear the heaviest burdens.

A comparison of the effects of mass drug incarcerations to war, disease and other well recognized disasters reveals the many similarities of scale and the range of impacts on the families and communities that bear the “losses” most heavily. While these other disastrous events are of external origin or (in the case of attack) malign intent, mass drug incarcerations reflect deliberate public policy – i.e. they are self imposed. But, as with individual harm, self inflicted collective wounds may be the most severe and the most difficult to heal. Not only because of the damage they cause, but also because the perception that the social intent behind them (to protect us from drugs menace) is often accompanied by a demonization of the drug user, which in turn engenders a callous disregard of the individual and collective consequences of such policies.

Finally, this analysis points to the urgency of the need to repeal many of our draconian drug laws and replace them with ones that employ judicial discretion and offer alternatives to incarceration for those with drug dependency problems.

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## REFERENCES

1. Human Rights Watch (US). Cruel and Usual: Disproportionate Sentences for New York Drug Offenders. A Human Rights Watch Report. New York: March 1997;9(2).
2. Human Rights Watch (US). Collateral Casualties: Children of Incarcerated Drug Offenders in New York. A Human Rights Watch Report. June 2002;14(3G).
3. New York State Department of Correction. Reports of the Superintendent of State Prisons. Albany (NY); 1880, 1890, 1900, 1910, 1920, 1930, 1940, 1950, 1960.
4. New York State Department of Correctional Services. Annual Reports of Inmate Population at End of Year. Albany (NY); 1970, 1980, 1990, 2000.
5. New York State Department of Correctional Services. Report of Inmate Population at End of Year; 2001.
6. Hupart J. One hundred and Twenty Years of Incarceration History in New York State: Putting Rockefeller Drug Laws into Historical Perspective. Report to Department of Epidemiology and Social Medicine, Montefiore Medical Center. New York; August 2002.
7. U.S. Department of Commerce, Bureau of the Census. Census 2000: Summary File 1. Washington, DC; 2002. Tables available from: URL: <http://www.census.gov>.
8. New York State Department of Correctional Services. Unpublished Report to Correctional Association of New York; May 2002.
9. New York State Department of Correctional Services. Unpublished Report to Correctional Association of New York; April 2001.
10. New York State Department of Correctional Services. Number of Total Drug Releases, Average Time Served in Months. Unpublished Report to Lindesmith Center; April 27, 2001.
11. Schneider MJ. Introduction to Public Health. Gaithersburg (MD): Aspen Press; 2000
12. Bureau of Vital Statistics (US). Estimated Life Expectancy at Birth by Race and Sex, National Vital Statistics Report. Feb 7, 2001;48(18): Table 12.
13. New York City Medical Examiners Office. New York Times 2002 Aug 20: A19.
14. New York State Department of Health / AIDS Institute AIDS in New York State. Albany: May 2000
15. Mauer M. Race to Incarcerate. New York. The Free Press; 1999.
16. Mauer M, Felony Disenfranchisement, Report of the Sentencing Project. Washington, DC; May 2000.
17. Drucker E. Drug Prohibition and Public Health: 25 Years of Evidence. Public Health Reports. 1999;114(1):14-30.
18. National Institute of Drug Abuse (US). Drug Abuse warning Network. Annual Reports. Washington, DC; 1990 – 2000.
19. Blumstein A, Wallman J (Eds). The Crime Drop in America, Cambridge Studies in Criminology. Cambridge: Cambridge University Press; 2000.
20. Christie N. Crime Control as Industry. 3<sup>rd</sup> Edition. London: Routledge; 2001.