Homeless Shelter Use and Reincarceration Following Prison Release:

Assessing the Risk[1]

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Abstract:

In the past two decades both the homeless and the prison populations have grown
substantially. These two phenomena may be interrelated insofar as the difficulties in
reintegrating into the community may increase the risk of homelessness for released
prisoners, and homelessness may in turn increase the risk for subsequent reincarceration.
This study examines the incidence of shelter use and reincarceration among a cohort of
48,424 persons who were released, either outright or on parole, from New York State
prisons to New York City in 1995-1998, and the extent to which various factors related to
demographics, homelessness and criminal history contribute to the risk of experiencing
either of these events. Results show that, within two years of release, 11.4% of the study
group entered a NYC homeless shelter and 32.8% of this group was again imprisoned.
Using survival analysis methods, time since prison release and history of residential
stability were the most salient risk factors related to shelter use, and shelter use increased
the risk of subsequent reincarceration. These findings support the view that
homelessness is a substantial problem among released prisoners and is indicative of more
general hardships faced upon reentry into the community. Policy implications of these
findings are then discussed.

Introduction

There has been explosive growth over the past two decades in both the prison and the homeless populations in the US. The prison population has grown from 400,000 persons in 1982 (Gifford 2002) to over 1.3 million in 1999 (Beck 2001). Just as dramatic has been the reemergence of homelessness as one of the most visible social problems in the US. Where at the end of the 1970s homelessness was considered to have been eliminated from the pantheon of urban problems (Lee 1980; Bahr 1967), there are now 40,000 US providers of homeless services that serve an estimated 444,000 homeless on a given day (Burt et al. 2001). In this study, we examine interrelationships between these two burgeoning systems, and specifically the incidence of shelter use and reincarceration for a cohort of 48,424 persons who were released, either outright or on parole, from New York State prisons to New York City in 1995-1998.

Background

Escalating imprisonment rates have led to increasing numbers of released prisoners and fewer available resources for facilitating their reintegration into mainstream society (Petersilia 2001). This contributes to a variety of social and economic problems for both society and the released prisoner, including rates of recidivism such that 67% of prisoners released in 1994 committed a new crime within three years of release (Langan and Levin 2002). Release from prison, due to the difficulties related to community reentry, also represents a common entry point into homelessness (Gowan in press).

Just as released prisoners are seen to be at a heightened risk for homelessness, homelessness can also be seen to increase the risk for imprisonment. Many aspects of homeless life have effectively been "criminalized" (Fisher 1992), and homeless people

may resort to illegal activities as a means of survival (Eberle et al. 2000; Snow, Baker and Anderson 1995). Homeless persons also have a greater propensity to be considered as stigmatized, deviant, or anti-social, (Eberle et al. 2000) either by virtue of their being homeless or through such attributes as mental illness, drug use, and minority status. Much of the criminally deviant behavior among the homeless falls under "rabble management" (Irwin 1985) and is more likely to lead to misdemeanor and summary offenses such as panhandling, trespassing, or disturbing the peace (Fischer 1992; Snow, Baker and Anderson 1995) that do not typically lead to prison sentences. However this may understate the risk for imprisonment. On one hand Solomon and Draine (1995) demonstrate how arrests of homeless persons for "lifestyle" offenses such as trespassing get elevated to felony charges such as burglary. On the other hand, Irwin and Austin (1994) present evidence that a large proportion of prison sentences are for "petty" or non-violent crimes, casting a wider net which may include more homeless persons.

Another link between imprisonment and homelessness is that shelters and prisons share functional attributes. Wacquant's (2000) argument that prisons serve the "extra-penological" function of containing and controlling a socially marginalized and stigmatized population is consistent with Hopper and Baumohl's (1996; 1994) assessment of homeless shelters as "abeyance" mechanisms (Mizruchi 1983) that temporarily absorb surplus populations that carry perceived threats to the status quo. In this framework, shelters function as short-term stand-ins for more suitable housing. Crossing over between prisons and shelters facilitates the transformation of this abeyance process into a more long-term pattern of social exclusion (Gowan, in press). Hopper et al. (1997) demonstrate the large proportion of time spent by 36 severely mentally ill

homeless persons in a variety of residential institutions such as shelters, prisons, jails, hospitals and psychiatric facilities to where these facilities take on a latent residential function in an "institutional circuit." Here "shelters and other custodial institutions have acquired hybrid functions that effectively substitute for more stable and appropriate housing for some persons with severe mental illness" (659). In the same manner as with mentally ill persons, released prisoners, in the absence of more suitable alternatives, could make use of an institutional circuit to compensate somewhat for the lack of effective community integration mechanisms.

How extensive is the crossover between incarceration and homelessness? In the only study located which specifically examined prison to shelter crossover, the Massachusetts Housing and Shelter Alliance (Hombs 2002) reported, using state corrections data, that 9.3%, 10.5%, and 6.3% of all state prison releases in Massachusetts directly preceded a shelter stay in 1997, 1998, and 1999, respectively. In a related population, Michaels et al. (1992) found that between 24% and 34% of jailed inmates they interviewed had been homeless at some time during the two months prior to arrest, and that 22% of the primary sample reported being homeless the night before arrest.

Looking at the homeless population, Schlay and Rossi (1992) summarize twenty studies that have data on prison use and report that, depending on the study, 4% to 49% of the homeless population report serving time in prison with a mean across the studies at 18%. A review by Eberle et al. (2000) reports that surveys showed prior rates of arrest and incarceration (including prisons and jails) among the homeless as ranging from 20% to 67%. Gelberg, Linn and Leake (1988) in their survey of 529 homeless persons report that 24% of the sample had been convicted of a felony.

A related body of research has focused on homelessness and criminal history among persons with mental illness. Findings here indicate that incarcerated persons with mental illness are at higher risk for subsequent homelessness and had higher numbers of prior arrests and arrests for violent offenses than did other inmates (Richman, Convit and Martell 1992; Michaels et al. 1992; Vitelli 1993; Martell, Rosner and Harmon 1995). Alternately, homeless mentally ill persons had higher rates of arrest and incarceration than did comparison groups consisting of both other homeless persons and domiciled mentally ill persons (Belcher 1988; Gelberg, Linn and Leake 1988).

Underscoring these interrelationships between imprisoned and homeless populations are similarities in characteristics among the homeless and prison populations. Demographically, compared to the US adult population, both the homeless and prison populations are disproportionately male, young and black, as shown by findings from Burt et al's (2001) 1996 national survey of the service-using homeless population and Langan and Levin's (2002) study of all prisoners released in 1994. Males comprised 61% of all homeless adults and 80% of single homeless adults (i.e., those unaccompanied by families), as compared to 91% of released prisoners. Both populations were younger than the overall US population, although the homeless population was somewhat older than the released prisoner population. Specifically, 36% of Burt et al.'s homeless sample was younger than 35 and 38% were between ages 35 and 44, as compared to 66% of Langan and Levin's group of released prisoners who were under age 35 and 26% who were between ages 35 and 44. Finally, among the homeless population 40% were black (non-Hispanic), while among the released prisoners 49% were black. This is compared to 11% of the overall US adult population who was black in 1996.

Race is a particularly salient factor in both the prison and homeless populations. Mauer (1999) offers evidence that the racial disparities in incarceration are a manifestation of systematic racial bias throughout the criminal justice system. The impact of this disproportionality has been particularly felt in low-income urban black communities, where as many as two thirds of black men in their twenties are either incarcerated, on probation or on parole (Wacquant 2000). Links also exist between homelessness and the ghetto. Not only is shelter use among poor blacks in New York City and Philadelphia a relatively common occurrence (Culhane and Metraux 1999) affecting over 20% of poor adult black males aged in their 30's and 40's, but a majority of families entering shelters in each of these cities come from a handful of poor, predominantly black neighborhoods (Culhane, Lee and Wachter 1996). The impact of homelessness upon blacks, while severe, has drawn little attention from researchers, policymakers, and the media (Blasi 1994).

The geographic areas that are linked with prison and homeless populations typically feature high rates of unemployment and poverty, characteristics that are also common to both the homeless and imprisoned populations. Findings that 36% of prisoners were unemployed at the time of their arrest (Western and Beckett 1999) and that 68% earned under $15,000 per year (Lichtenstein and Kroll 1996) is telling of the individual economic conditions faced by prisoners at the time of their arrest. Among the homeless Burt et al.'s (2001) results paint an even bleaker picture. Here median income for homeless households in the month prior to the survey was less than 50% of the poverty income guidelines; less than half had any income from employment in that month, and less than 20% had any type of job that could be considered permanent.

Incarceration in the US impacts unemployed persons to such an extent that Western and Beckett estimate prisons to have lowered the unemployment rate by as much as 1.9 points, while simultaneously reducing job prospects among prisoners upon their release to society. Such an economic disadvantage would put released prisoners at higher risk for homelessness, where efforts at accessing employment are further exacerbated (Snow and Anderson 1993).

In summary, the high degree of interaction between the criminal justice system and homelessness suggests that there is likely to be significant overlap between imprisoned and sheltered populations. On one hand, the difficulties that released prisoners face with reentry into society creates heightened risks for homelessness; on the other hand, high levels of criminal justice system involvement in the homelessness population suggests that the risk for imprisonment will be high.

The findings reported in this study examine this overlapping use of shelters and prisons. Matching data on 48,424 persons released to New York City from New York State prisons between 1995 and 1998 with data on users of New York City's municipal shelter system shows rates by which persons released from prison spend time in homeless shelters. Of particular interest is whether factors related to prior utilization of shelters and prisons will influence use of these facilities subsequent to release from prison, but the effects of other factors such as demographics and prior criminal history on the risk for subsequent homelessness and reincarceration will also be examined. If the results bear out such associations, it would lend support to the proposition that there is a subgroup of persons released from prison who are at increased risk for residential instability and/or reincarceration.

Data

The data used in this study came from administrative databases that are maintained by the New York City Department of Homeless Services (DHS) and the New York State Department of Correctional Services (DOCS). Administrative datasets – computerized records of individuals and their services use – are capable of providing longitudinal data on large numbers of subjects. Given sufficient individual identifying information, two or more administrative datasets may be merged to provide a record of individuals' service use across systems. This permits assessments of crossover between different service systems (Hotz et al. 1998; Culhane and Metraux 1997).

DHS administers the largest shelter network of any American city, providing emergency and long term housing for an average, in 1998, of 21,500 homeless persons per night, two thirds of whom were part of families (Metraux et al. 2001). DHS has been tracking shelter usage since 1986 for this system through two separate databases: one for families and the other for individuals. Only the latter database was used for this study. It provides a comprehensive record, for single adults, of New York City public shelter usage and basic demographic data on its users for the years 1987 through 2001, and represents one of the few large, longitudinal databases on homelessness in the United States (Culhane and Metraux 1999).

DOCS administers the third-largest state prison system in the US with a census of 72,658 persons at the end of 1998. This reflected a 3.5% increase from 1997 and a 31.7% increase from 1990. As part of managing this system, it maintains databases on State prison utilization and criminal history for all persons who are incarcerated in New York State. This study used data from these two datasets on all persons released from

state prisons from 1995 through 1998 who were either paroled to a New York City county (i.e., borough), or, if they were released without supervision, whose instant offense occurred in one of the New York City counties. For each person in the study group, data was available on all prison episodes and criminal convictions from 1980 to 2001. The study group was followed for a two-year period following their first prison release in the years 1995 through 1998, which will be referred to as the index stay.

The DOCS database used for this study was a combination of elements from the prison utilization and criminal history datasets, and contained information on each individual's demographic characteristics (age, race/ethnicity, sex), data pertaining to the index prison episode (dates of arrest, entry into and release from prison; charges related to prison episode; type of release); and data on previous and/or subsequent prison episodes and arrests. Matches of DOCS observations to observations from the DHS data were based on common name, date of birth, sex, social security number. When a match was determined, data on shelter use, both before and after the release date, was appended to the individual's DOCS record.

Methods

The analyses here seek to establish both baseline rates of shelter use and prison readmission as well as to examine the association of various factors to the risk of experiencing a shelter episode or a prison readmission following release from the index prison episode. The effect of a previous shelter episode on the risk for experiencing the latter event is of particular interest. Thus, in addition to providing descriptive statistics and survival curves related to the occurrence of each of these two events among persons in the study group, multivariate event history models are presented that estimate the

association between various factors and the risk for experiencing each of the two events of interest. Specifically, Cox proportional hazards models are used to assess the impact of the covariates of interest over time on the events in question while accommodating time dependent covariates and the temporary removal of persons from the risk set.

The Cox proportional hazard model is perhaps the most widely used survival analysis technique. In a Cox model, the hazard of an event by individual i at time t is represented by $h_i(t)$ in the equation:

$$h_i(t) = \lambda_0(t)\exp\{\beta x_i\},$$

where $\lambda_0(t)$ is an unspecified baseline hazard function and βx_i is an exponentiated vector of coefficients for individual i (Allison 1995). Two models, one for shelter entry and the other for prison re-entry, are presented. In the former model, the hazard is for experiencing a shelter stay for the two-year risk period following release, with the subjects being temporarily censored for the duration of any subsequent returns to prison. In the latter model, any subsequent prison re-entries in the two-year risk period are considered as events, and the occurrence of a post-release shelter episode is treated as a time-dependent covariate to assess whether the hazard of prison reentry is higher in the time period following the onset of an episode of shelter use. If the event of interest does not occur to an individual observation after two years, the observation is considered to be censored from the risk set.

The tables containing the results of the Cox models are read in a fashion similar to other types of regression models. Each covariate has a p-value whose significance is interpreted in the same manner as the covariates for other types of regression models. The coefficients for the Cox model covariates are best interpreted by taking the their

exponential value (e^β) to get each covariate's risk ratio. The risk ratio offers a gauge of the magnitude of the covariate effect that is more intuitive than the coefficient value. For dichotomous variables, the risk ratio can be interpreted as the percent change, all other things being equal, in the estimated hazard for a value of one to a value of zero. For interval level variables, subtracting one from the risk ratio and multiplying by 100 gives the percentage change in the estimated hazard, all other things being equal, for each one unit increase of the variable in question (Allison 1995).

Results

Figure 1 presents survival curves for the 48,424 persons in the study group who exited prison to a New York City destination. Overall, 11.4% of the study group experienced a post-release shelter stay and 32.8% returned to prison in the two-year risk period subsequent to the indexed prison release. Among the shelter events, over half (6.2% of overall group) occurred within the first month after release, with rate of new events slowing considerably for the remainder of the risk period. In contrast, the number of reincarcerations is low at the beginning of the risk period and then increases steadily. As a result, the number of prison returns lags behind that of shelter stays until month 13, and it is not until month 17 that half of all prison returns have occurred. Figure 2, with hazard curves for entering a shelter and reentering prison, shows a similar pattern to Figure 1, where the hazard (i.e., risk) for entering a shelter is high in the first two months and is then overtaken by the increasing hazard of reentering prison.

Tables 1 through 3 provide descriptive statistics on the overall study group and the proportions that experienced a shelter stay or a prison episode, broken down by subgroup, during the risk period. Table 1 shows that the proportions of persons

experiencing shelter stays in each age group became progressively higher as the groups

got older, while the proportion of reincarcerations became progressively lower in the

older two age-groups.[2] Blacks, who comprised a little more than half of the study group,

were the only racial/ethnic subgroup to have proportions of persons with subsequent

shelter stays (12.9%) and reincarcerations (34.6%) that were higher than the overall

group proportions. Finally, the study group is overwhelmingly male (90.7%), with

considerably smaller proportions of women experiencing subsequent shelter stays (8.7%)

and reincarcerations (21.0%).

Table 2 displays characteristics directly related to each person's index prison

episode. Among the findings, almost the whole group (96.2%) was released on parole,

but the unsupervised group had lower proportions of persons experiencing subsequent

shelter stays (7.5%) and prison episodes (25.8%). Those with links to the mental health

system, while comprising only 1.1% of the study group, have considerably higher

proportions of shelter stays (18.1%) and reincarcerations (53.6%). Looking at the

severity of the charges related to the index prison stay, the highest proportions of shelter

stayers were among persons who served time on lower level felonies. Higher proportions

of prison return were also found in this group. However the highest proportion of

returnees, 43.2%, was among the 2.1% of the study group that were imprisoned on

misdemeanor charges. Higher proportions of shelter stays (13.5%) and reincarcerations

(39.8%) were found among persons serving their index stay for a parole violation.

Grouping principal charges by type of crime shows that all but 6.2% of the study group

had a charge in at least one of the seven categories on Table 2. Among these categories,

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[2] Results from tests of difference are not reported here since, due to the size of the study group, almost all differences are statistically significant.

the highest proportions of persons with shelter use and prison returns are those with burglary convictions, 16.5% and 44.8%, respectively, while the lowest proportions are for persons with weapons convictions, 6.0% and 28.4%. Over half of the group served time for drug offenses, with those serving time for possession having lower proportions experiencing shelter stays (10.0% to 11.8%) and reincarcerations (27.1% to 29.7%) compared to those who served time for distribution charges.

Table 3 shows results related to shelter, prison and conviction histories for members of the study group prior to the index incarceration. Of the 6.5% who had shelter use histories in the two-year period prior to the index incarceration (and after 1986), large proportions experienced subsequent shelter episodes (45.1%) and prison episodes (42.0%). Over one half of the study group had a prior history of imprisonment, and this subgroup subsequently had a higher proportion entering shelters (12.9%) and returning to prison (39.2%). Looking at prior conviction records, the groups with histories of misdemeanor and felony convictions both had higher proportions of persons with shelter stays and repeat imprisonments.

Table 4 contains the results from two multivariate event history models examining factors related to experiencing shelter stays and repeat prison stays. These results show that prior prison and shelter use are significantly associated with the hazard (i.e., risk) of subsequently using these institutions. The hazard ratio (HR) of experiencing a shelter stay increased by a magnitude of 4.90 with a history of prior shelter use, and increased more than fivefold (HR=5.28) upon release from a reincarceration during the risk period. However incarcerations prior to the index stays had a non-significant effect on the hazard experiencing a shelter stay during the risk period. Turning to the

reincarceration model, shelter use has significant effects both when it occurs prior to the index stay (HR=1.23) and in the risk period (HR=1.17), as does having a history of pre-index incarceration (HR=1.35).

The demographic covariates all had significant effects on the dependent variable in both models. Being of black race increased the hazard of experiencing a shelter stay (HR=1.22) and, more modestly, of being reincarcerated (HR=1.05). Being male also was associated with increased HRs: 1.47 in the shelter model and 1.53 in the prison model. Age had significant effects but in opposite directions in the two models. Thus for each year of increased age the hazard of experiencing a shelter stay increased 4% (HR=1.04) while the hazard of reincarceration was reduced by 3% (HR=0.97).

There were also numerous effects among the other covariates related to the index prison stay and prior conviction history. Being released on parole significantly increased the hazards for the shelter stay (HR=1.76) and the reincarceration (HR=1.92) models, while being admitted from or released to the mental healthcare system significantly increased the hazard only in the reincarceration model (HR=2.31). The later the year of release from the index stay, the higher was the hazard of experiencing a shelter stay and the lower was the hazard of experiencing a reincarceration. The severity of the conviction associated with the index stay was inversely related to the hazards in both models, with the only difference being that those imprisoned on misdemeanor convictions had a significantly higher hazard only in the reincarceration model (HR=1.37).

Looking at further covariates related to criminal history, being imprisoned on a parole violation increased the hazards for both a shelter stay and a reincarceration (HR=

1.22 and HR=1.23, respectively), as did imprisonment for a burglary conviction (HR= 1.16 and HR=1.12, respectively). On the other hand, a weapons-related conviction lowered both hazards (HR= 0.59 and HR=0.75, respectively). Drug-related convictions and assault convictions reduced the hazard only in the reincarceration model (HR= 0.74 for assault; HR=0.82 for drug distribution; and HR=0.76 for drug possession), while a violent felony offense increased the hazard only in the shelter model (HR=1.15). Finally, felony convictions prior to the index stay decreased the hazard in the shelter model but increased the hazard in the reincarceration model, and prior misdemeanor convictions increased the hazard in the shelter model and had significant, but mixed effects in the prison model.

Discussion

This paper finds that, of a cohort of 48,424 persons released between 1995 and 1998 from New York State prisons to New York City, within two years 5,510 (11.4%) entered a NYC homeless shelter and 15,866 (32.8%) returned to a NYS prison. These rates are comparable to those reported in Massachusetts for prison to shelter crossover (Hombs 2002) and for reincarceration both in New York State (Criminal Justice Policy Council 2001) and nationwide (Langan and Levin 2002).

While there is consensus that the rates of rearrest and reincarceration for released prisoners is problematically high (Butterfield 2002; Petersilia 2001), there is a lack of context for the prison to shelter findings. Some perspective on the relative magnitude of this institutional crossover might be gained through a comparison with the proportions of persons entering shelter following release from inpatient psychiatric care. Research by the authors has shown, using methods similar to those featured here, that 8.5% of a 1994

discharge cohort of New York State psychiatric hospital patients coming from or

discharging to a New York City zip code used New York City shelters within two years

of their discharge (Metraux 1998). In a review of the literature, Kuno et al. (2000)

reported that studies following mentally ill persons from inpatient care into the

community have variously found the proportion of those experiencing homelessness to

range from 8% to 22%. Judging from these findings, the incidence of cross-

institutionalization to shelters appears to be similar within both populations.

Based on these findings, the two most tangible risk factors for shelter use among

released prisoners was time since release and history of residential stability. The time

immediately following release from prison was the time that the released prisoners were

most vulnerable to becoming homeless. Most of the shelter stays experienced by the

study group occurred within the first month of release from the index incarceration, and

the hazard of shelter use dropped drastically after this initial month. The risk again

increased markedly upon release from any subsequent prison stay that ended during the

risk period. Having a history of shelter use prior to the index incarceration also was

associated with a substantially higher risk for subsequent homelessness. This suggests

that the hiatus spent in prison fails to alleviate, and likely exacerbates residential

instability.

The demographic measures in the model suggest further interrelationships

between the two systems. Being male and of Black race, both characteristics that are

already overrepresented in the prison and shelter populations, increased the risk of both

shelter stays and reincarcerations in the risk period. Younger age is associated with

increased risk of reincarceration, while older age is associated with increased risk for

shelter stays. This suggests that as persons "age out" of their criminal career their vulnerability for homelessness increases, possibly a result of the reduced prospects they face in the mainstream economy (Western and Beckett 1999). And finally, the year of release measures suggest a temporal interrelationship between the two systems, as the progressively increasing risk of shelter use contrasts with the progressively decreasing risk of reincarceration.

Surprisingly, neither indicators of mental health system involvement nor of being imprisoned from a conviction of either drug possession or distribution had any association with the risk for shelter use. With the mental illness indicator, this non-association comes despite an elevated proportion of shelter use in this subgroup (18.1%; as compared to the overall 11.4%), and findings that this indicator is associated with 2.3-fold increase in the risk for reincarceration. While the shelter finding supports the contention that the relationship between mental illness and homelessness is mediated by other socioeconomic factors (Draine et al. 2002), the prison finding suggests that, once incarcerated, having mental illness contributes directly to an increased risk of repeat incarcerations. In a similar fashion, despite the oft-reported connection between substance abuse and homelessness, there is no evidence that drug involvement, measured here by a drug-related conviction, increased the risk for shelter use among the study group.

These findings related to mental illness and drug convictions should be interpreted cautiously, however, as they carry inherent limitations. For the mental health measure, only 1.1% of the study was identified as mentally ill by this measure, a proportion that, according to the research on forensic mental health, vastly under-

represents the number of persons with severe mental illness among incarcerated populations (Lamb and Weinberger 1998). Regarding drugs, a conviction for possession or distribution may not be a valid proxy for abuse or dependency, and there is likely to be substantial proportions of substance abuse and dependency among the rest of the prison population. The lack of clinical measures of mental illness and substance abuse is one of the limitations of this study, and stands in contrast to the large degree of attention these issues have received in research on incarceration and homelessness.

The results also show that persons incarcerated on lower level felonies, and those who have prior records of misdemeanor convictions, are at higher risk for shelter stays. Convictions for burglary and violent felony offenses are also associated with higher risks of subsequent shelter stay. This increased risk among repeat offenders with lesser felony convictions lends some support to the assertion that it is the "rabble" element among the released prisoners, those incarcerated for lesser offenses and possibly incarcerated as much due to their chronic deviant status as for the severity of their crimes are more likely to utilize shelters upon their release from prison (Irwin 1985).

These findings carry readily apparent policy implications. Homelessness takes its place among an assortment of readjustment problems faced by prisoners upon their release into the community (Petersilia 2001). It also suggests that the shelter system provides housing and related services for a substantial number of released prisoners who would be better served if more community services were administered through the criminal justice system. Instead homeless services incur costs shifted to them from the criminal justice system. Ironically, this also leads to the use of additional criminal justice

services, insofar as experiencing a shelter stay was associated with increased risk for subsequent reincarceration.

The most effective way to avoid shelter use among this population would be to provide more housing and related support services immediately upon release. These services, whether they are provided through the criminal justice system or elsewhere, can be targeted relatively specifically to persons who have an unstable residential history, who are older, and who have a history of lower-level offenses. Such an intervention initiative would also likely reduce the incidence of future reincarcerations and contribute to the amelioration of other readjustment issues commonly faced by released prisoners. In addition to the implicit humanitarian benefits, the potential cost savings associated with the prevention of shelter stays and homeless-related incarcerations, both within the criminal justice system and across other public systems, provides economic justification for pursuing such a policy.

The increased risk of reincarceration after experiencing a shelter stay provides a starting point for additional research on the nature of an "institutional circuit" in which a group of persons traverse a series of institutions in place of stable housing. The results from this study show that substantial proportions of persons with histories of residential instability and incarceration will continue to experience stays in both systems. Adding similar data from such institutions as jails, inpatient psychiatric facilities, and hospitals to the data studied here could be used to ascertain the extent to which this shelter-prison crossover is nested within a larger network of institutions. Other areas of inquiry could examine whether institutional circuits occur primarily among persons with mental illness (Hopper et al. 1997; Metraux and Tempel 2001) or whether there are other groups who

are also vulnerable to such residential instability. Furthermore, such research stands to extend the realm of homelessness beyond streets and shelters to include other service systems, and could show continued manifestations of incarceration after prisoners have returned to the community.

A related area that deserves further study is the extent to which using one institution increases the risk for using other institutions. This means investigating, for instance, whether persons released from prison face higher risks of becoming homeless compared to control populations, or whether homeless persons are at greater risk than their "housed" counterparts in becoming involved with the criminal justice system. One limitation of this study is that there was no unincarcerated control group to compare to the study group and to ascertain whether incarceration is associated with a higher subsequent risk for homelessness. Like mental illness, there appears to be an elevated proportion of persons having a history of involvement with the criminal justice system, incarceration or otherwise, in the homeless population. For the exact dynamics of this relationship to be sorted out, such control groups will be needed.

Other limitations of the study include those that are inherent to using administrative data for research applications. This includes access to a relatively limited range of variables that include demographic measures, measures of homelessness, and measures pertaining to criminal justice system involvement. As mentioned earlier, clinical measures pertaining to substance abuse and mental illness would have been of interest in such a study, as would have measures of family and social networks, and economic and vocational measures. One other limitation of this study is that it can only determine matches insofar as the identifying variables are consistent across the two data

sets. While the prison system makes a substantial effort to insure that they have correct identifying information on its prisoners, insofar as members of the study group provide different identifying information to the shelter system their records will not be matched across systems. And finally, this study is unable to determine if a person in the study group becomes homeless unless he or she does not use a NYC municipal shelter, or whether he or she is reincarcerated unless it is through the New York State prison system. Thus the rates of shelter use and reincarceration reported in this study can be assumed to be somewhat conservative.

Conclusion

This study, in examining the incidence of shelter use and reincarceration among 48,424 persons who were released from New York State prisons to New York City in 1995-1998, finds notable interrelationships between the two systems. Specifically, the study cohort was found to be at highest risk for shelter use immediately following release from prison; and history of shelter use prior to the index incarceration substantially increased the risk of a subsequent incarceration. The hazard for reincarceration increased as the risk period progressed, and spending time in shelters, both before and after the index incarceration, increased the risk of subsequent incarceration. Taken together, this suggests a vulnerability to homelessness among released prisoners. This apparent readjustment problem in turn contributes to an increased likelihood of subsequent incarceration and possibly a more general pattern of traveling an "institutional circuit" as a means of coping with long-term residential instability. The results also suggest that housing interventions upon prison release that target persons with a history of residential

instability would be an effective way to keep criminal justice issues from subsequently becoming homeless issues.

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Table 1 - Demographic Characteristics of Study Group and Proportions of Persons with Post-Release Shelter and Prison Episodes (n=48,424)

	% of Study Group	% w/ Post-Release Shelter Stay	% w/ Post-Release Prison Stay
Overall	100.0%	11.4%	32.8%
Age			
18-29	39.7%	6.4%	34.7%
30-39	41.0%	13.0%	34.2%
40-54	17.6%	17.9%	26.6%
55+	1.7%	22.6%	18.0%
Race/Ethnicity			
Black (non-hisp)	53.0%	12.9%	34.6%
Hispanic	39.8%	9.8%	30.8%
White	6.2%	9.7%	30.7%
Other	1.0%	9.1%	28.3%
Sex			
Male	90.7%	11.7%	34.0%
Female	9.3%	8.7%	21.0%

Table 2 - Characteristics Related to the Index Prison Release of Persons in the Study Group
(n=48,424)

	% of Study Group	% w/ Post-Release Shelter Stay	% w/ Post-Release Prison Stay
Overall Study Group	100.0%	11.4%	32.8%
Release Type			
Parole	96.2%	11.6%	33.0%
Unsupervised	3.8%	7.5%	25.8%
Admitted from or Released to Mental Healthcare System[1]	1.1%	18.1%	53.6%
Year of Index Prison Release			
1995	32.4%	10.3%	36.7%
1996	26.3%	11.6%	32.2%
1997	22.6%	11.7%	30.7%
1998	18.8%	12.7%	29.1%
Length of Sentence			
0 to 6 months	13.5%	11.4%	38.8%
6 mos. to 1 year	21.7%	11.1%	30.8%
1 year to 2 years	26.6%	12.2%	34.1%
2 years or longer	38.3%	11.0%	30.9%
Severity of Charge			
Class A felony	2.4%	4.2%	7.4%
Class B felony	19.4%	9.9%	27.0%
Class C felony	24.8%	11.2%	32.4%
Class D felony	35.4%	12.2%	35.0%
Class E felony	16.0%	13.1%	38.0%
Misdemeanor	2.1%	9.9%	43.2%
Parole Violation	15.7%	13.5%	39.8%
Principal Conviction			
Assault	3.5%	12.8%	30.5%
Burglary	7.2%	16.5%	44.8%
Drug-related Charges - any	51.7%	11.3%	29.2%
Distribution	39.7%	11.8%	29.7%
Possession	11.7%	10.0%	27.1%
Robbery	19.1%	10.7%	38.3%
Theft	2.9%	11.5%	44.1%
Weapons	15.0%	6.0%	28.4%
Violent Felony Offense	29.2%	10.6%	34.1%
Other Offense	6.2%	11.4%	36.6%

1 – All persons in this category were released on parole.

Table 3 – Shelter, Prison, and Criminal Histories of Study Group (n=48,424)

	% of Study Group	% w/ Post-Release Shelter Stay	% w/ Post-Release Prison Stay
Overall	100.0%	11.4%	32.8%
Prior Shelter Stay			
Yes	6.6%	45.1%	42.0%
No	93.4%	9.0%	32.1%
Prior Prison Stay			
Yes	52.3%	12.9%	39.2%
No	47.7%	9.8%	25.7%
Prior Felony Convictions			
0	35.6%	9.5%	28.0%
1	33.5%	11.8%	31.8%
2 or more	30.9%	13.2%	39.3%
Prior Misdemeanor Convictions			
0	44.7%	8.0%	26.5%
1-10	49.4%	13.4%	36.5%
11 or more	5.9%	20.7%	48.2%