

# Homelessness Among the Incarcerated Population in Charlotte-Mecklenburg

## Methodology Brief

Released May 2023

This document summarizes research methods used for the Homelessness Among the Incarcerated Population in Charlotte-Mecklenburg Integrated Data Report. This study used integrated data from the Charlotte Regional Data Trust (Data Trust). The Data Trust is a community-university partnership that links administrative data across service and organizational systems in order to provide the community with actionable information. The term “integrated data” is used to describe how individual-level data can be linked across these sources of knowledge. Integrated data can be used to illuminate service gaps as well as highlight connections across disparate groups, organizations, and/or systems.

## Research Questions

This study examined the following research questions:

1. What was the rate of homelessness prior to MCSO incarceration?
2. What was the rate of homelessness after MCSO incarceration?
3. What are the characteristics of people who experience homelessness after MCSO incarceration?

## Data Sources and Criteria

For the current study, administrative data from the Mecklenburg County Sheriff’s Office (MCSO) and the Homeless Management Information System (HMIS) were analyzed to answer the study research questions. HMIS is a federally-mandated local information technology database managed by Mecklenburg County Community Support Services. HMIS contains client-level and service-level data from over twenty-five local homeless services organizations regarding the provision of shelter, housing and services to individuals and families experiencing housing instability and homelessness.

Administrative data from MCSO included records of individuals who were both arrested and booked in a Charlotte-Mecklenburg County detention center. The research team identified the study population for the analysis using a two-part process.

Incarceration in this study refers to being arrested and booked in a Mecklenburg County detention center.

First, the research team used MCSO data to identify individuals who were incarcerated during the study period. The team used the following criteria:

- incarcerated in Charlotte-Mecklenburg County Detention Center North or Detention Center Central (the two detention centers included within the MCSO database) at least once between January 1, 2016 and December 31, 2018;
- 18 years or older; and
- living in Charlotte, North Carolina at the time of booking (according to administrative MCSO records).

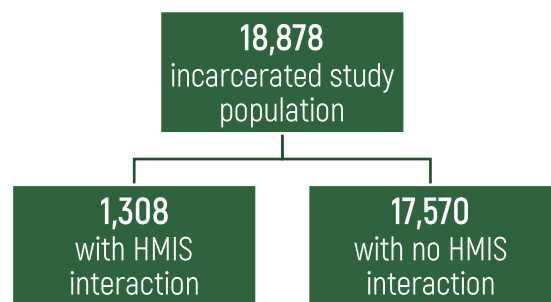
These criteria yielded a study population of 18,878 individuals who experienced incarceration during the study period. When an individual had more than one record of incarceration, the first record within the study period was used. In addition to an individual's name and date of birth (used to create a de-identified, unique study ID) and incarceration date, the dataset included data on participant race, ethnicity, age, gender, and charge description.

Second, the research team created a matched data set by integrating the 18,878 person MCSO dataset with the HMIS dataset. A match occurred if individuals in the MCSO dataset appeared in the HMIS dataset with the same name and date of birth.

Matched individuals were included in the study if they also met the following criteria:

- the individual had an HMIS service record that occurred in the two years prior and/or two years after their incarceration; and
- the HMIS service record was for one of the following: emergency shelter, transitional housing, or street outreach services.

These criteria revealed a sample of 1,308 individuals who were identified in both HMIS and MCSO databases. Of these 1,308 individuals, 925 had an HMIS record in the two years prior to incarceration, and 769 after incarceration. 386 individuals had records during both time periods. There were 17,570 individuals identified in MCSO only during the study period.



## Analysis

The research team used descriptive statistics to answer research questions 1 and 2. The team used descriptive statistics and logistic regression to answer research question 3. Appendix A includes the results of the descriptive statistics, and Appendix B includes the results of the regression analysis.

One noteworthy adjustment to the data pertains to charge type. To assess the potential relationship between charge type and homelessness, charges were re-categorized by researchers into the following

categories: drug, personal, property, prostitution, quality of life, traffic, weapons, and other. It should be noted that re-categorization was based on best available data at the time of analysis, and differs in some ways from law enforcement classifications. See Table 1 for a description of each category.

**Table 1.** New Charge Categories

New Charge Category	Charge Category Description
Drug	Anything that includes drugs or alcohol except drinking in public for those that are of age (included in Status crimes).
Personal	Anything that includes physical harm to another person including, child abuse, assault, rape and homicide.
Property	Anything involving crimes against property including: shoplifting, vandalism, burglary, robbery, <sup>1</sup> forgery and arson.
Prostitution	Anything related to prostitution.
Quality of life	Includes trespassing, public intoxication, disorderly conduct, failure to pay transit fare, panhandling, sleeping and urinating in public, and other charges that are more likely to affect people who lack private shelter.
Traffic	Includes anything related to ownership and operation of a motor vehicle unless it included bodily harm, in which case it was included in Personal. Traffic includes missing tags, registration, license issues, reckless driving and hit & run.
Weapons	Any charge including a weapon that did not also include property or personal harm. Includes: Concealed weapon, possession, discharging a weapon and lack of permit.
Other	Anything that did not fit in the above categories. Includes resisting officer, court & probation violations, aiding & abetting (when no other information is provided), stalking, indecent exposure and financial transaction card fraud.
Charge Not Listed	No charge description listed. This category is omitted from analysis.

## Limitations

A number of limitations should be considered when reviewing the findings of this study, focused on definitions, sample, and data.

**Definition of homelessness.** For the current study, the definition of homelessness was limited to those who experienced literal homelessness, meaning sheltered (via emergency shelter, transitional housing) or unsheltered homelessness (indicated by use of street outreach services) as reported by agencies who share

<sup>1</sup> Note: This study defines robbery as a property charge, which differs from MCSO classification in which robbery is a personal charge.

their data with HMIS.<sup>2</sup> Other locations where people experience sheltered homelessness, such as shelters that do not report data to HMIS, were not included in this study. The study’s definition of homelessness does not include living in hotels or staying temporarily with friends or relatives, and may result in an undercount of the overlap between incarceration and homelessness compared to studies that use a broader definition of homeless.

**Narrow study period.** This study examined homelessness within two years of a single episode of incarceration. Due to the narrow timeframe for this study, this analysis could not assess whether individuals in the sample experienced homelessness outside of the study period. Furthermore, the short time period restricted any analysis of multiple periods of incarcerations. Future research could focus on first ever instance of incarceration—something that was beyond the scope of this study. Future research could also compare the impact of having experienced multiple periods of incarceration on homelessness.

**Narrow definition of incarceration.** The study examined detention center records from Mecklenburg County Sheriff’s Office, which is a subset of all individuals who experience incarceration. Notably, the study did not include individuals who were incarcerated in state or federal prison. These forms of incarceration typically have a longer duration and may be more disruptive to household stability. Therefore, the prevalence of homelessness after incarceration, as defined in this study, was likely an undercount compared to studies that use a broader definition of incarceration.

**Location.** The study examined detention center records of individuals whose address at time of booking was within Charlotte, North Carolina. As a result, individuals who lived in Mecklenburg County, but not Charlotte, were not included in the analysis.

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<sup>2</sup> HUD Exchange. (2022). Category 1: Literally Homeless. Accessed at: <https://www.hudexchange.info/homelessness-assistance/coc-esg-virtual-binders/coc-esg-homeless-eligibility/four-categories/category-1/>

**Appendix A: Characteristics of the total MCSO study population versus population who experienced homelessness after incarceration.**

Characteristic	Category	Total MCSO (n = 18,878)		Homeless After (n = 769)	
		Count	Valid %	Count	Valid %
<b>Race/Ethnicity</b>					
	White	3350	17.7%	121	15.7%
	Black	14334	75.9%	644	83.7%
	Hispanic/Latino	921	4.9%	NA	NA
	Other	217	1.1%	NA	NA
	Unknown	56	0.3%	NA	NA
<b>Sex</b>					
	Male	14,664	77.7%	569	74%
	Female	4,213	22.3%	200	26%
<b>Age</b>					
	18-24	4,950	26.2%	90	11.7%
	25-54	12,896	68.3%	555	72.2%
	55+	1,030	5.5%	124	16.1%
<b>Homelessness Prior</b>					
	Yes	925	4.9%	386	50.2%
	No	17953	95.1%	383	49.8%

a. Table columns omit cell sizes less than 5 ("NA"); displayed column totals may not add up to the overall sample size.

Characteristic	Category	Total MCSO (n = 18,878)		Homeless After (n = 769)	
		Count	Valid % of Cases	Count	Valid % of Cases
<b>Charge Type*</b>					
	Drug & Alcohol Related	3941	20.9%	122	15.9%
	Personal	7372	39.1%	289	37.6%
	Property	5093	27%	218	28.3%
	Prostitution	37	0.2%	NA	NA
	Quality of Life	1,374	7.3%	174	22.6%
	Traffic	2790	14.8%	45	5.9%
	Weapons	1,257	6.7%	17	2.2%
	Other	4035	21.4%	165	21.5%
	<b>Total</b>	<b>25899</b>	<b>137.4%</b>	<b>1030</b>	<b>134%</b>

- a. Individuals could have more than one charge type; there were 18,878 people in the sample, and 25,899 charges. 'Charge Not Listed' is excluded from analysis.

## Appendix B: Logistic regression, examining odds of experiencing homelessness after incarceration

Predictor	Estimate	SE	OR	<i>p</i>
Constant	-5.31	0.21	0.01	0.00
Prior homelessness <sup>a</sup>	3.10	0.09	22.10	0.00
Age	0.04	0.00	1.04	0.00
Female <sup>b</sup>	0.24	0.10	1.27	0.01
Black <sup>c</sup>	0.30	0.11	1.34	0.01
Hispanic <sup>c</sup>	-2.21	0.72	0.11	0.00
Other <sup>c</sup>	-1.87	1.04	0.15	0.07
Unknown <sup>c</sup>	-0.10	1.02	0.90	0.92
Drug/alcohol charge <sup>a</sup>	-0.18	0.12	0.84	0.15
"Other" charge <sup>a</sup>	-0.03	0.11	0.97	0.79
Personal charge <sup>a</sup>	0.00	0.10	1.00	0.99
Property charge <sup>a</sup>	-0.02	0.10	0.98	0.84
Prostitution charge <sup>a</sup>	-0.98	1.11	0.38	0.38
Quality of life charge <sup>a</sup>	0.54	0.12	1.71	0.00
Traffic charge <sup>a</sup>	-0.72	0.17	0.49	0.00
Weapons charge <sup>a</sup>	-0.65	0.26	0.52	0.01
Number days booked	0.00	0.00	1.00	0.00

*Note.* The model found that Hispanic was a statistically significant predictor of homelessness after incarceration; however, due to the very small sample of Hispanic people who experienced homelessness after ( $n < 5$ ), these results should be interpreted with caution. Due to small sample size, the odds ratio for 'Hispanic' is not included as a key finding in Figure 4 of the main report.

Statistically, number of days in detention center (number days booked) helped predict homelessness after incarceration. However, the impact was negligible, as illustrated by the odds ratio ( $\exp(B)$ ) close to 1 in the model. As a result, the odds ratio for 'number days booked' are not included as a key finding in Figure 4 of the main report.

<sup>a</sup>reference category=no; <sup>b</sup>reference category=male; <sup>c</sup>reference category=White

## Interpretation of Appendix B statistics

### Predictor

A set of predictor variables were examined in the logistic regression to determine if there was a statistically significant relationship between the predictor (or independent variable) and the outcome (or dependent variable) of homelessness after incarceration. Categorical predictors were Prior Homelessness, Female, Black, Hispanic, Other, Unknown, Drug/alcohol charge, "Other" charge, Personal charge, Property charge, Prostitution charge, Quality of life charge, Traffic charge, and Weapons charge. Continuous variables were age and number of days booked. Categorical variables have a reference variable not shown in the table, but indicated in the superscript after the predictor's name. For example, the predictor Female indicates that Male is being used as the reference group.

### Estimate

The estimate is the slope of the line between the predictor variable and the outcome variable.

### SE=Standard Error

Standard error is an indicator of the accuracy of the regression model. Smaller values mean it is easier to make an accurate prediction about the outcome variable (homelessness).

### P

P (column *p*) indicates the probability that the predictor variable has no effect on the outcome. For this study, the p-value was set at .05. If the p-value is .06 or higher, it means that the variable (e.g., property charge) does not have a significant effect on homelessness. A p-value of .05 or less is often used as a benchmark for "statistical significance."

### OR=Odds Ratio

An odds ratio indicates the strength and direction of the relationship between the predictor and outcome. Odds close to 1 indicate a weak relationship, whereas odds further away from 1 indicate a stronger relationship. Odds greater than one indicate a positive relationship (as predictor increases, odds of outcome also increase), whereas odds less than one indicate an inverse relationship (as predictor increases, odds of outcome decrease). To calculate the percent change, the equation is: % change = (Odds Ratio - 1) \* 100. For ease of interpretation, the odds ratio is described in terms of "likelihood" rather than odds in the integrated data report.

Example interpretation: Female is a categorical predictor variable, with Male being used as the reference group. Compared to males, females were 1.27 times more likely to experience homelessness after incarceration, even when controlling for other factors included in the regression; this relationship is statistically significant based on the value in column *p* ( $p < 0.05$ ).

Example interpretation #2: Age is a continuous predictor variable. The odds ratio for age is 1.04. This would mean that older people are more likely to experience homelessness after incarceration; for every one unit (year) increase in age, the likelihood of experiencing homelessness after incarceration increases by 1.04, even when controlling for other factors included in the regression; this relationship is statistically significant based on the value in column *p* ( $p < 0.05$ ).