To: Charles Barber, THE CONNECTION INSTITUTE

RE: Eddy Shelter Data

Date: July 12, 2011

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The Sample

We received data that included 5,653 admissions to the Eddy Shelter (an emergency homeless shelter for residents of Middlesex County) between January 1, 2000 and December 31, 2010. This represents single and multiple admissions for 2,493 unique clients. For detailed information regarding the variables referred to below, see Appendix A.

A total of 25.5% of the 2,493 clients were female. In terms of ethnicity, 64.5% were Caucasian, 25.5% were African American, 7.2% were Hispanic, and 2.8% were self-identified as American Indian, Asian, or Other. Fully 89.3% of clients were U.S. citizens. Among U.S. citizens, 7.7% held veterans status. The average age of clients at their first admission (between 2000 and 2010) was 39 years (range, age 17 to 85). Only 5% of admissions were married or in a civil union; 95.0% were single. Among those who were single, 21.7% were divorced or legally separated, and 78.3% were never married.

At first admission, clients' average level of education was 11.5 years (SD=2.92), including 70.8% with 12 or more years of education and 29.2% with less than 12 years. The average household income was $2,581.83 (SD=$5,176.59, range 0 to $84,090), with 89.9% reporting income below the national poverty level (for an individual) for their respective year of admission. Of the 2,493 clients, 59.6% made only one visit to the shelter. The mean number of visits was 2.3 (SD=2.8) with a maximum of 31 visits.

Across the 5,653 admissions, the median length of stay was 8 days (M=22.7 days, SD=33.43) ranging from 0 to 731 days.[1] Additionally, the total number of days a client spent in the shelter (i.e. the sum of each episode) had a median of 22.3 (M=51.5 days, SD=79.6).

Chronic use of the homeless shelter was also investigated. In accordance with the Department of Housing and Urban Development (HUD) guidelines, a "chronic user" was defined as someone who had visited the shelter at least 3 times in one year, or someone

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[1] 55 clients (1.0%) had the value 0 for number of days in program. Because it is possible that these clients signed in, received resources, and left without spending the full day, those with the value 0 were included in the median length of stay estimates, as well as subsequent analyses.

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who had visited the shelter at least 4 times in 3 years. Of the 2,493 clients, 11.6% visited the shelter 4 or more times in a 3 year interval. Additionally, 8.0% had visited 3 or more times in a one year period, with a mean of 3.9 visits (SD=1.52) per year and a maximum of 13 visits in one year. Because several clients met criteria based on both definitions, in total, 14.4% (n=359) clients were defined as chronic users.

Fully 87.7% of the 5171 admissions with valid data for housing status were homeless when entering the shelter; 9.4% were in the social services system and 2.9% entered the shelter from permanent housing. Among those admissions with information on housing status at both admission and discharge (n=4,452), the largest group (77.5%) were homeless at both admission and discharge. Another 7.3% were homeless at admission, but left the shelter with housing; and 7.0% were homeless at admission, but exited into another facility within the social service system.

Table 1. Housing at Admission by Housing at Discharge

Housing at Admission	Housing at Discharge			
	In System	**Housed**	**Homeless**	**Total**
In System	178	82	11	**271**
	4.0%	1.8%	0.2%	
Housed	25	66	2	**93**
	0.6%	1.5 %	0.04%	
Homeless	310	327	3451	**4088**
	7.0%	7.3%	77.5%	
Total	**513**	**475**	**3464**	**4452**

A total of 16.1% of the 5653 admissions were employed at least part-time when entering the shelter; 72.5% were unemployed and 11.4% entered the shelter on government aid. Among those admissions with information on employment status at both admission and discharge (n=4,753), 65.4% were unemployed at both admission and discharge, 15.8% were employed at both admission and discharge, and 11.0% received government aid at both admission and discharge. Only 4.8% of those who were unemployed at admission were employed at discharge.

Table 2. Employment at Admission by Employment at Discharge

Employment at Admission	Employment at Discharge			
	Employed	**Gov't Aid**	**Unemployed**	**Total**
Employed	751	4	15	**770**
	15.8%	0.1%	0.3%	
Gov't Aid	6	522	19	**547**
	0.1%	11.0%	0.4%	
Unemployed	229	100	3107	**3436**
	4.8%	2.1%	65.4%	
Total	**986**	**626**	**3141**	**4753**

Finally, 80.6% of the 5,624 admissions with valid data for discharge status had successfully completed the program.

Predicting Housing at Discharge

Individual logistic regression analyses were performed to evaluate whether demographic and/or admission characteristics were associated with **housing status at discharge** (i.e. clients who left the shelter for housing vs. those who did not). As expected, housing at admission significantly predicted **housing at discharge**. That is, those clients who entered the shelter with housing were 23.6 (CI 14.9-37.4) times more likely to have housing at discharge compared to those who entered the shelter without permanent housing (i.e. either homeless or placed somewhere in the social service system), 71.0% vs. 9.4%, respectively.

After controlling for housing status at admission, no differences were found in **housing status at discharge** by gender, citizenship status, veteran status, marital status, discharge status (successful vs. unsuccessful), or employment status at admission.[2] However, after controlling for housing status at admission, older clients (OR=1.03, CI=1.02 – 1.04), those who were employed at discharge (OR=27.2; CI 16.7 – 44.49) and those who were in the program for a larger number of days (OR=1.02, CI=1.01 – 1.02) were more likely to have housing at discharge. After controlling for housing at admission, education was also found to be a significant predictor of housing at discharge. Clients admitted with 12 or more years of education were 1.3 (CI=1.02 – 1.61) times more likely to be housed at discharge than those with less than 12 years of education. In contrast, after controlling for housing status at admission, African-Americans were less likely to have housing at discharge (OR=0.47, CI=0.27 – 0.80) compared to those representing other ethnic groups.[3]

When significant client characteristics were included in a single model, housing at admission, age at admission, number of days in the program, employment at discharge, and African American ethnicity were each found to independently predict housing at discharge. Clients with housing at admission, older clients, those in the program for a longer time, those with employment at discharge, and those who were *not* African-American all remained more likely to have housing at discharge.

Predicting Employment at Discharge

When evaluating whether demographic and/or admission characteristics were associated with **employment status at discharge** (i.e. clients who left the shelter with some form of employment vs. those who did not), employment at admission was the strongest predictor of employment at discharge. Those clients who entered the shelter with some form of employment were more likely to be employed at discharge (97.5%) compared to those who entered the shelter without employment (5.9%) Because transition from employment at admission to unemployment at discharge was a rare event (n=19), a stable odds ratio and confidence interval could not be calculated for this association.

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[2] Household income was not recorded when an individual had housing at admission. Therefore, income was not included as a predictor in models examining housing status.

[3] For the year 2000, 466 of the 653 admissions had missing information regarding housing. Those with valid vs. missing data on this variable did not however differ in terms of demographic characteristics, suggesting that this pattern of missingness did not introduce any obvious bias.

After controlling for employment status at admission, no differences were found in **employment status at discharge** according to citizenship status, veteran status, marital status, age, education, discharge status, income below the poverty line or housing at admission. However, after controlling for employment status at admission, males (OR=1.50, CI=1.06 – 2.13) clients who were housed at discharge (OR=6.67, CI=4.98 – 8.93) and those staying longer in the program (OR=1.011, CI=1.009 – 1.014) were more likely to be employed at discharge. Similar to the finding for housing status at discharge, after controlling for employment at admission, African-Americans were less likely to have employment at discharge from the shelter (OR=0.46, CI=0.24 – 0.90) compared to those admissions representing other ethnic groups.

When significant client characteristics were included in a single model, employment at admission, days in program, gender, and housing at discharge, were each found to independently predict employment at discharge. Clients that were male, employed at admission, spent a greater number of days in the program, and those who had housing at discharge, were more likely to be employed at discharge.

Predicting Discharge Status
When evaluating whether demographic and/or admission characteristics were associated with **discharge status** (i.e. successful completion of the Eddy Shelter's program versus failure to complete the program) no differences were found in terms of successful discharge by gender, time in program, marital status, race, education, or housing at discharge. Clients who were United States citizens were less likely to successfully complete the program (OR=0.62 CI=0.47-0.81) compared to non-United States citizens. Admissions who were veterans were 1.6 times more likely to successfully complete the program (CI=1.16-2.08) compared to non-veterans. Those admissions with income above the poverty line were 1.4 (CI=1.02 – 1.96) times more likely to be successfully discharged. In addition, younger clients (OR=0.99, CI=0.98-1.0), those employed at admission (OR=1.67, CI=1.29-2.16), those employed at discharge (OR=1.50, CI=1.19-1.87), and those without housing at admission (OR=0.26, CI=0.18-0.37) were also more likely to successfully complete the program.

When significant client characteristics were included in a single model, citizenship status, veteran status, and housing at admission were the only characteristics that independently predicted successful discharge. Clients who were not U.S. citizens, clients who were veterans, and clients who had housing at admission were all more likely to successfully complete the program.

Predicting Number of Days in Program
Multiple regression analyses were performed on the 5,652 admissions to the shelter (with valid data on number of days in the program) to evaluate whether demographic and/or admission characteristics were associated with **number of days in program** (i.e. episode length in the shelter).

No differences were found when predicting **number of days in program** according to citizenship status, gender, marital status, employment at admission, education, income, or discharge status. However, being a U.S. veteran (β=3.85, p=0.03), being younger (β=0.44,

p=0.00), being Caucasian (β=3.29, p=0.000), being housed at admission (β=6.20, p=0.03), and being employed at discharge (β=5.65, p=0.000) were all significant predictors of a longer length of stay for a given admission.

When significant client characteristics were included in a single model, age, housing at admission, race, and employment at discharge were the only characteristics that independently predicted number of days in program. Those who were younger, had housing at admission, were Caucasian, or were employed at discharge were all more likely to be at the shelter for a longer period of time.

Predicting Chronic Use of the Shelter
Individual logistic regression analyses were performed to evaluate whether demographic and/or admission characteristics were associated with **chronic use** (i.e. clients who entered the shelter at least 3 times in one year and/or entered the shelter at least 4 times in the past 3 years).

No differences were found when predicting **chronic use** according to age at first admission, citizenship status, level of education, housing at discharge, marital status, race, or veterans status. However, chronic use was more common among those successfully discharged following first admission (OR=1.97, CI=1.37 – 2.85), males (OR=2.39, CI=1.74 – 3.28), and those employed at first admission (OR=1.51, CI=1.12 – 2.04) and first discharge (OR=1.32, CI=1.01 – 1.76). Because only 3.7% (n=82) of the clients had housing at first admission, there was not enough statistical power to conclusively determine whether there was a relationship between housing at first admission and chronic use of the shelter.

When significant characteristics were included in a single model, only gender remained significant. Those who were male were more likely to be chronically using the shelter.

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Appendix A

This appendix contains tables on client demographics on the basis of each of the outcome variables as well as additional information regarding data management. It should be noted that the tables in this appendix simply associations to the outcome and do not control for status at admission.

Table A. Client Demographics by Housing Status at Discharge, n (%)

	Housed at Discharge n=475	Homeless at Discharge n=3,977	Statistics
Gender (% Male)	374 (78.9%)	3,212 (80.8%)	$X^2=0.96$, df=1, p=0.33
Veteran's Status (%Veterans)	35 (7.4%)	323 (8.1%)	$X^2=0.33$, df=1, p=0.57
Citizenship (% Citizens)	456 (96%)	3,775 (94.9%)	$X^2=1.05$, df=1, p=0.31
Marital Status (% Married)	18 (6.7%)	85 (4.25%)	$X^2=3.44$, df=1, p=0.06
Admission Housing (% Housed)	66 (13.9%)	27 (0.7%)	$X^2=362.3$, df=1, p=0.001
Admission Job (% Employed)	71 (15.8%)	576 (15.2%)	$X^2=0.08$, df=1, p=0.77
Income (% Below Poverty Line)	280 (87.8%)	3,438 (89.8%)	$X^2=1.29$, df=1, p=0.26
Education (% 12+ Years Education)	350 (74.2%)	2,755 (70.4%)	$X^2=2.94$, df=1, p=0.09
Race (% Caucasian)	313 (66.2%)	2,434 (61.6%)	$X^2=3.75$, df=1, p=0.05
Days in Program	M=46.8, SD=47.0	M=20.4, SD=31.8	F=259.80, df=(1, 4450), p=0.0
Age at Admission	M=41.7, SD=11.0	M=38.6, SD=10.3	F=39.1, df=(1, 4441), p=0.00

Table B. Client Demographics by Employment Status at Discharge, n (%)

	Employed at Discharge n=1,008	Unemployed at Discharge n=3,785	Statistics
Gender (% Male)	870 (86.3%)	2,985 (78.9%)	X^2=27.76, df=1, p=0.00
Veteran's Status (%Veterans)	76 (7.5%)	286 (7.6%)	X^2=0.00, df=1, p=0.99
Citizenship (% Citizens)	924 (91.7%)	3,455 (91.3%)	X^2=0.15, df=1, p=0.70
Marital Status (% Married)	27 (5.4%)	82 (4.4%)	X^2=1.03, df=1, p=0.31
Admission Housing (% Housed)	21 (2.4%)	82 (2.4%)	X^2=0.00, df=1, p=0.98
Admission Job (% Employed)	751 (76.2%)	19 (0.50%)	X^2=3.3e+03, df=1, p=0.00
Income (% Below Poverty Line)	625 (65.0%)	3,394 (95.9%)	X^2=756.78, df=1, p=0.00
Education (% 12+ Years Education)	735 (72.9%)	2,625 (69.4%)	X^2=4.82, df=1, p=0.03
Race (% Caucasian)	593 (59.3%)	2,369 (62.9%)	X^2=4.45, df=1, p=0.04
Days in Program	M=27.1, SD=34.9	M=21.4, SD=33.6	F=259.80, df=(1, 4450), p=0.00
Age at Admission	M=37.4, SD=9.2	M=38.9, SD=10.5	F=39.09, df=(1, 4441), p=0.00

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Table C. Client Demographics by Discharge Status, n (%)

	Successful Completion n=4,290	Failure to Complete Program n=1,033	Statistics
Gender (% Male)	3,449 (80.4%)	843 (81.6%)	X^2=0.73, df=1, p=0.39
Veteran's Status (%Veterans)	344 (8.0%)	55 (5.3%)	X^2=8.72, df=1, p=0.03
Citizenship (% Citizens)	3,881 (90.5%)	970 (93.9%)	X^2=12.16, df=1, p=0.00
Marital Status (% Married)	97 (4.7%)	36 (5.1%)	X^2=0.22, df=1, p=0.64
Admission Housing (% Housed)	68 (1.8%)	67 (6.6%)	X^2=67.73, df=1, p=0.00
Admission Job (% Employed)	694 (17.1%)	72 (11.0%)	X^2=15.41, df=1, p=0.00
Income (% Below Poverty Line)	3,598 (89.1%)	497 (92.0%)	X^2=4.29, df=1, p=0.04
Education (% 12+ Years Education)	2,929 (69.8%)	471 (68.5%)	X^2=0.52, df=1, p=0.47
Race (% Caucasian)	2,631 (61.6%)	663 (64.8%)	X^2=3.58, df=1, p=0.06
Days in Program	M=22.6, SD=33.4	M=21.5, SD=31.5	F=22.19, df=(1, 4791), p=0.00
Age at Admission	M=38.6, SD=10.2	M=39.5, SD=11.2	F=17.92, df=(1, 4781), p=0.00

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Table D. Client Demographics by Chronic User Status, n (%)

	Typical User n=2,134	Chronic User n=359	Statistics
Gender (% Male)	1,547 (72.6%)	310 (86.4%)	X^2=30.80, df=1, p=0.00
Veteran's Status (%Veterans)	148 (6.9%)	29 (8.1%)	X^2=0.61, df=1, p=0.44
Citizenship (% Citizens)	1,897 (88.9%)	329 (91.6%)	X^2=2.43, df=1, p=0.12
Marital Status (% Married)	75 (7.3%)	8 (4.1%)	X^2=2.71, df=1, p=0.10
Admission Housing (% Housed)	82 (4.3%)	0 (0.0%)	X^2=12.75, df=1, p=0.00
Admission Job (% Employed)	249 (14.2%)	65 (19.9%)	X^2=7.19, df=1, p=0.01
Income (% Below Poverty Line)	1,518 (90.3%)	294 (88.6%)	X^2=0.94, df=1, p=0.33
Education (% 12+ Years Education)	1,258 (70.4%)	214 (72.1%)	X^2=0.34, df=1, p=0.56
Race (% Caucasian)	1,370 (64.7%)	225 (63.0%)	X^2=0.39, df=1, p=0.53
Days in Program	M=36.5, SD=53.7	M=140.5, SD=132.8	F=664.74, df=(1, 2491), p=0.00
Age at Admission	M=38.0, SD=11.1	M=38.1, SD=10.2	F=0.02, df=(1, 2479), p=0.88

Data Management Details

13 clients with age coded as 0 were set to missing.

33 clients with undisclosed race information were set to missing.

34 clients who were described as "widowed" or "other" were set to missing.

1 client with length of stay coded as -3 was set to missing.

83 clients had income values between $1 and $21; these clients were re-coded to 0. Additionally, 4 clients had incomes greater than $100,000,; these individuals were set to missing.

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Appendix B

This appendix contains tables on how the housing, employment, and discharge status variables were binned.

Housing at Admission and Discharge Bins

Homeless	In System	Housing
Homeless (including living on the street)	Congregate residential care (24-hour supervision, MH, SA, Recovery House)	Permanent
	Incarcerated	Private Residence, community agency owns or holds lease
	Psychiatric Hospital	Private Residence, client owns or holds lease
	Shelter	
	Halfway House	Private Residence, family or friend owns or holds lease
	Housing at Risk	Private w/o Staff Support
	Residential Care	Single Room Occupancy (Hotel, YMCA, Rooming House)
	Home/Board Care	
	Skilled Nursing	Private w/ Staff Support
	Facility/Intermediate Care	
	Facility/Nursing Home	
	Temporary	
	Transitional Housing	
	Crisis/Respite Bed	

Employment at Admission and Discharge Bins

Employed	Unemployed	Government Aid
Employed - F/T Competitive (35 hrs or more)	Unemployed	NILF Disabled
Employed - P/T Competitive (35 hrs or less)		NILF Retired
Employed - P/T Semi-Skilled Position		
Employed – P/T Skilled Position		
Employed - F/T Skilled Position		
Self-Employed		

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Discharge Status Bins

Successful Completion of Program	Failure to Complete Program	Set to Missing
Completed Program or Treatment	Absconded/AWOL	Administrative Discharge
Completed Program or Treatment & Referred	Arrested – Current Charges/Case	Deceased
Inpatient Detoxification	Arrested New	Discharged to New Service
Medical	Dropped Out	Moved out of Area
Medical In-Patient Hospital Admission	Failure to Comply	Need for Higher Level of Care
Partial Completion	Incarcerated	Not Appropriate
Recovery Plan Completed	Left Against Advice	Status Change
Referred	No Show / Loss of Contact	Transferred
Residential Substance Abuse Program	Non-Compliance with Rules	
	Refused Program	
	Refused Rules	
	Staff Threat	
	Substance Abuse	
	Unsuccessful	