NYC FUSE II Program Evaluation

A Housing Intervention for Adults with Complex Histories of Incarceration and Homelessness

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Introduction

- The politics of mass incarceration intensifies the interactive effects of multiple axes of inequality: race, gender, poverty, neighborhood disadvantage, physical and/or mental disability
- Single axis focus of most re-entry initiatives limits effectiveness
- Growing policy awareness: Recidivism higher among persons with social disadvantage. . .
- Poor persons of color more likely to be incarcerated; come from poor neighborhoods
- High rates of chronic illness, physical or mental disability
- Multiple mechanisms of social exclusion manifest in the dynamic relationship between incarceration and homelessness

Incarceration and Homelessness

- **Incarceration increases risk for homelessness**
  - --Disrupts family and community contacts
  - --Decreases employment prospects
  - --Interrupts benefits
  - --Policies limit public housing assistance
  - --Communities resist, landlords discriminate

- **Housing instability/homelessness increases risk for incarceration**
  - -- Increased social control of ‘unruly’ populations
  - -- Criminalization of homelessness
  - -- Homeless existence visible to authorities, ‘respectable’ citizens
  - --Escalation of minor arrest
  - --Extreme poverty – cant make bail or pay fines

Frequent Users

- **While many persons experience homelessness/housing instability after prison or jail recent research has identified a subset of individuals with multiple and repeated jail stays**
- **Also high likelihood of using other services at a high level suggesting multiple vulnerabilities**
  - Substance abuse services (esp. crisis/detox)
  - Inpatient mental health services
  - Hospital emergency departments
  - Homeless shelters
- **Not served well by any system of care, but use them all in an uncoordinated, chaotic, and costly fashion**

Frequent Users Services Enhancement

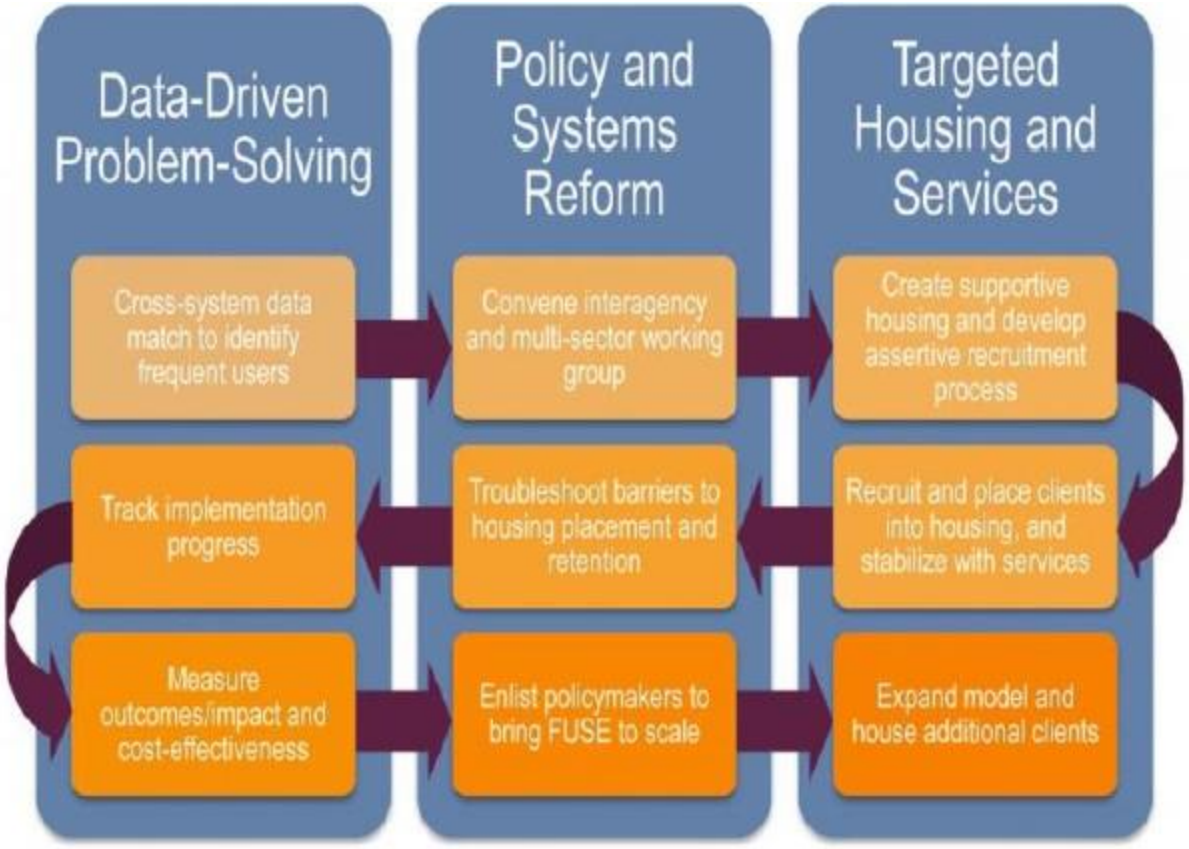
- The Frequent Users Initiative (FUSE) emerged through ongoing DOC/DHS collaboration to improve discharge planning services in City jails
- In NYC approximately 1,100 individuals at any point in time with at least 4 jail stays and 4 shelter stays over the past five years
- Decision to focus a housing intervention on shared population that represents high needs and high cost, "revolving door clients"

CSH
supportive housing it works

- Housing seen as key barrier
- CSH initiated demonstration program to determine whether supportive housing with enhanced services can break the cycle of homelessness and incarceration

CSH - Returning Home Initiative

Blueprint for FUSE



NYC FUSE Initiative

FUSE houses people with jail and homeless shelter histories and substance use and/or mental health problems

- **Population for program**
  - Core criteria: People with at least 4 incarcerations and 4 shelter stays in 5 years prior to program admission indicated by administrative data match DOC & DHS
  - Average # jail admissions =11.60 (sd 7.2) past 5 years
  - Criteria can be relaxed while retaining same programmatic intent
  - Depending on service agency, people with mental health problems or with substance use problems for which they're being or were recently treated
- **Program provides**
  - Permanent housing in congregate, scatter-site or SRO settings
  - On-site & off-site supportive services through case worker model

In-reach, recruitment, and engagement

- **Participating providers responsible for conducting in-reach and recruitment of frequent user clients**
- **Client recruitment at homeless shelters**
  - In-reach into shelters where frequent users are found in large numbers
  - DHS facilitates coordination with shelter operator/staff
- **Providers conduct or arrange for psychosocial assessment and completion of housing applications**
- **Providers assist clients with benefits connections and resolution of eligibility restrictions**

Permanent Housing with Front-Loaded Intensive Services

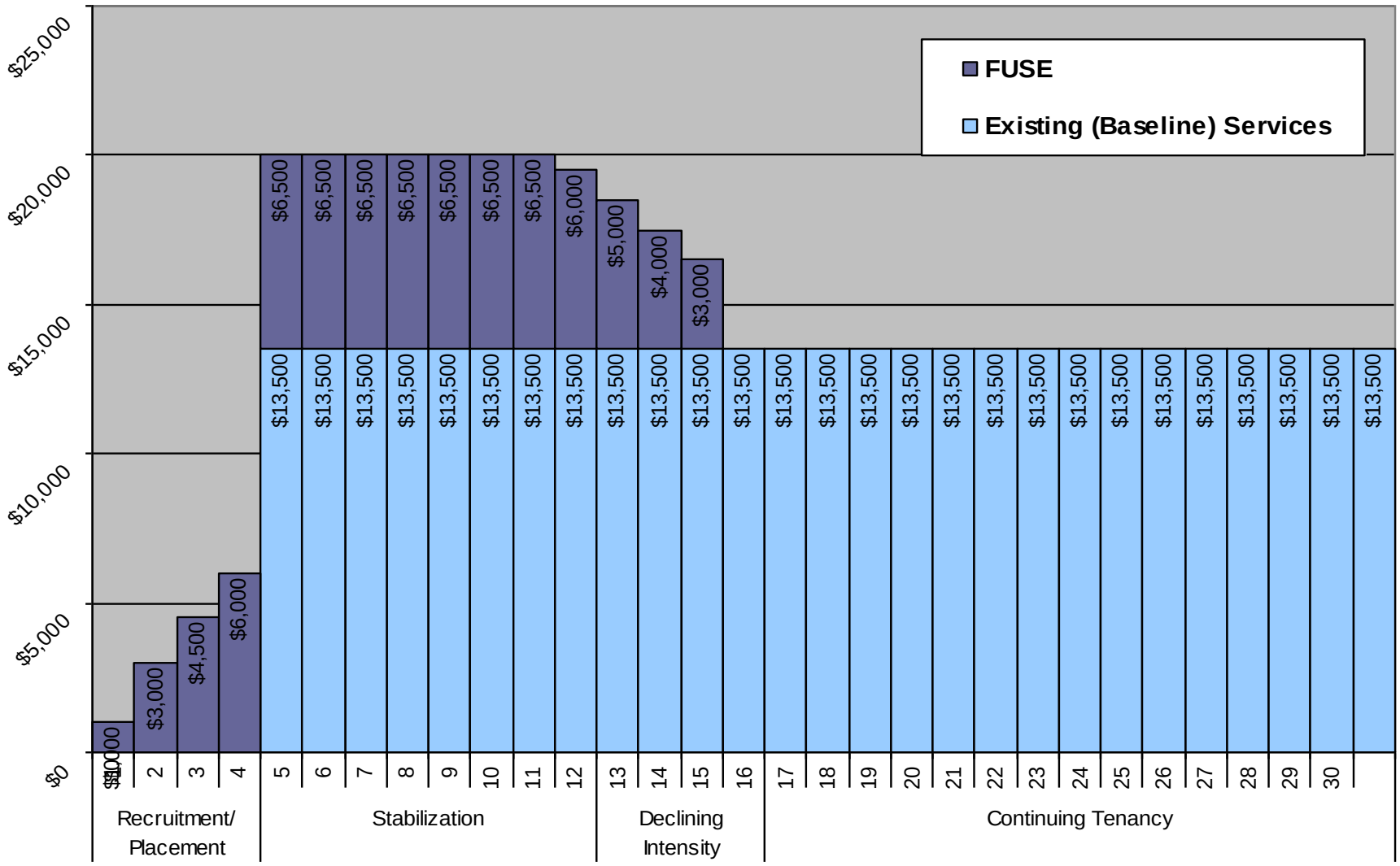
- Scatter-site market-rate apartments subsidized with rental assistance (NYNYIII, OMH, DHS, Section 8 etc)
- Services are provided through mobile case management teams or staff
- Single-site buildings operated by non-profits as special needs housing, typically with mixed tenancy
- On-site services include case management, mental health services, independent living skills, and benefits coordination

Frequent User Services Enhancements

- **Providers awarded $6,500 service enhancement per FUSE tenant**
- **Uses could include:**
  - client engagement/recruitment (in-reach to shelters and jails)
  - intensive case management
  - clinical supervision
  - lower client-to-case manager ratios
  - FUSE service staff to provide intensive support during first year of housing
  - additional specialty services as needed
  - 'housing first' and 'client centered' models

Sample FUSE Funding Phase Chart

(12 unit program)



Who are the Frequent Users?

Demographic Characteristics	
	%
Gender	
Male	88%
Age	
mean (sd)	45 (9) yrs
Race	
African American	65%
Hispanic	23
White / Other	12
Education	
< HS/ GED	37%
Work history	
Ever full-time job 1+ years	72%
Marital status	
Never married/single	77%

N= 161

Human Capital

Education and Employment Characteristics	%
Highest educational degree received	
No degree	29%
Technical certificate (no high school diploma)	8
High school diploma or G.E.D.	44
Technical certificate (post high school)	8
Two-year college degree	7
Four-year college degree	3
Work history	
Ever had a full-time job for a year or more	72%
Current employment	
Currently working fulltime or part-time	9%
Not currently working	91
Current Income Source[1]	
Any wages	36%
Benefits income (SSI, SSDI, PA, VA)	79%
No regular income source	7%

1. Multiple responses possible

Social Capital

Social Connections, Family, Social Support	
	%
Marital status	
Never married/single	77%
Married and not living with spouse	5
Legally separated, divorced, or widowed	18
Has biological children	
Males (*n*= 134)	56%
Females (*n*= 17)	88%
Religious participation	
Member of church, mosque, religious organization	30%
Attend services monthly or more often	41%
Current Social Support	
No friends or family members in touch with	9%
# family members in touch with (median)	2.00
# close friends (non-kin)	2.50
# social service providers who help	3.00

Early Negative Life Events

	%
Traumatic or stressful experience	
Physical assault or abuse as child or teenager	29%
Sexual assault or rape as child or teenager	14%
Witnessing physical abuse among family members	50%
Death of a parent or parent figure before age 18	36%
Any traumatic experience as child or teenager	68%
Out-of-family placement	
Ever in foster care	12%
Ever in group home	17%
Ever in either foster care or group home	22%

Physical and Mental Health

Physical and Mental Health Conditions	
	%
Physical health conditions	
Any early onset chronic condition	32%
asthma, epilepsy, type 1 diabetes, sickle cell anemia	
Any chronic health condition	70%
incl CVD, hypertension, type 2 diabetes, HCV, HIV, cancer	
Mental health conditions	
Bipolar disorder	25%
Schizophrenia	19%
Major Depression	32%
Posttraumatic stress disorder	7%
Any mental health diagnosis	66%

Comparison to General Jail Population

- **Greater proportion Black**
- **More self-identified LGBT**
- **Considerably older**
- **Fewer social supports**
- **Same high rates of history of drug use**
  85% FUSE 70-80% NYC Jail pop
- **Lower rates of current/recent drug use**
  28% FUSE 38% NYC Jails
- **Lower rates current drug charges**
  33% FUSE 75% NYC Jails
- **Higher rates mental health needs**
  57% FUSE Schizophrenia or bipolar diagnosis
  <25% "SPMI" NYC Jails

Criminal Justice Profile

Charges for which had ever been Arrested

	%
Drug charges	76%
Vagrancy or trespassing	57%
Shoplifting, vandalism, jumping turnstiles	55%
Disorderly conduct, public intoxication, or public urination	49%
Assault	40%
Parole or probation violations	40%
Weapons offense	25%
Robbery	23%
Burglary, larceny, or breaking and entering	20%
Driving while intoxicated or other driving violations	11%
Contempt of court	11%
Forgery	9%
Prostitution or pimping	5%
Homicide/manslaughter or attempted homicide/manslaughter	5%
Arson or attempted arson	2%
Rape or attempted rape	1%

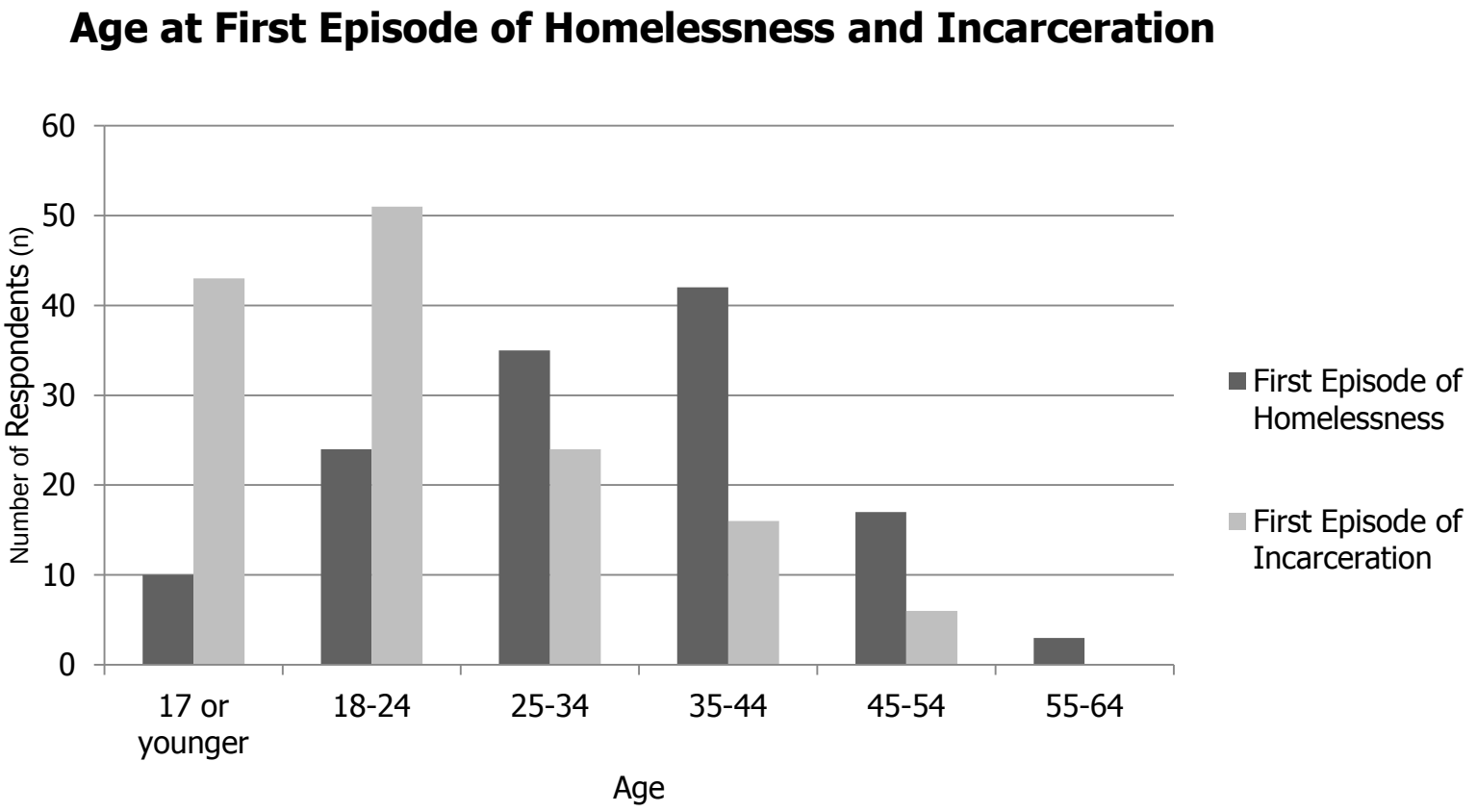
Most recent incarceration: 8.9% drug sales 23.6% possession

Trespass, loitering, theft services, petit larceny, disorderly, procedural violation 47.8%

First Episode of Homelessness

Trigger of First Episode of Homelessness	
Involvement with the criminal justice system	17%
Interpersonal problems, lacked resources for other housing	16%
Employment or economic problems affecting ability to pay rent	14%
Change in household composition affecting ability to remain in housing	13%
Kicked out of or asked to leave, lacked resources for other housing	12%
Personal drug use, no further information	7%
Eviction or other landlord behaviors	6%
Problems with foster care or group home	4%
Released from residential treatment (for mental health, alcohol, drugs)	3%
Desire to establish separate household	2%
Other or unspecified	5%

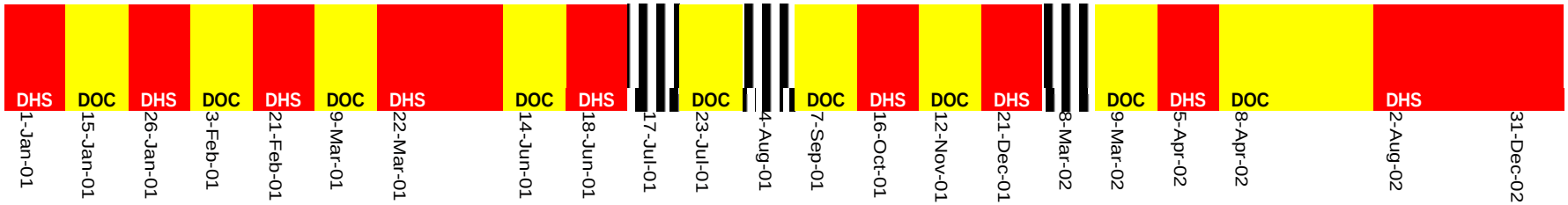
First Episode of Homelessness and Incarceration

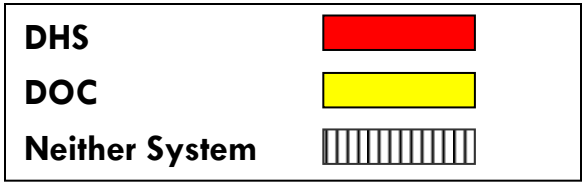


Source: Bozack, A (2010). Antecedent Factors, Life Experiences, and Triggers Associated with Cycles of Homelessness and Incarceration

Evaluation Methodology

Frequent User Case Study





To gauge FUSE effects, study design compares program participants with comparison group

Study uses administrative & extensive survey data with long follow-up

- **Basic design is two-group pre/post**
  - Intent-to-treat (program group) and non-treated (comparison group)
- **Comparison group formed**
  - Follow selection process used by FUSE housing programs to identify clients
  - Use propensity score matching
  - Include relevant baseline covars in outcome analyses
- **Program and comparison group are followed for 2 years at 6 month intervals**
- **Data collected through**
  - Extensive survey at baseline and at each follow-up point
  - Administrative data from NYC agencies

In-Person Interviews

- **Domain areas:**
  - Demographics, housing status and housing histories, health, mental health, and substance use histories, life events, social networks, service need and service utilization, attitudinal measures: mastery, readiness for change
- **Standardized assessments**
  - Physical health functioning, mental health, addiction, criminal justice involvement (CDQ, MOS, ASI)
- **Residential follow-back:**
  - Captures R's living situation over past 5 years.
  - Assesses the stability/instability of each living situation through a series of questions that tap into the major aspects of housing status: (1) type of place; (2) permanency/tenure; (3) quality; (4) control; (5) supportive services; (6) sense of home

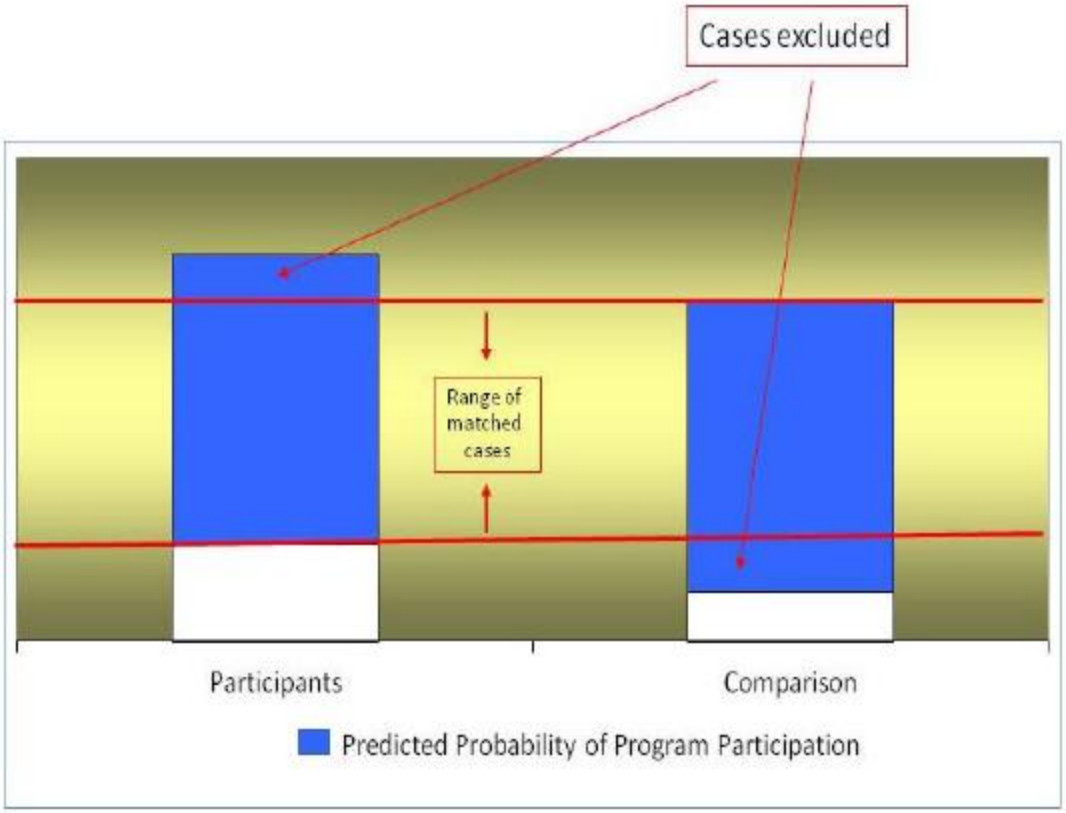
FUSE program and study enrollment

- Program enrolled 72 people
- Study followed these 72 and 89 comparison group members
- Study used propensity score matching to eliminate intervention and comparison group members who couldn't be match on propensity score
- For administrative data, study had 60 intervention group and 70 comparison group members
- For survey data, study had 57 intervention group and 50 comparison group members
- All groups balanced on all but two model-relevant covars

Propensity Score Analysis

- Used propensity score analysis to improve comparability of intervention and comparison groups
- Estimated a 'score' based on many pre-intervention demographic, clinical, experiential, service use variables thought to affect chances of being selected for program and/or outcomes.
- Study used propensity score to select people for comparison group with scores comparable to intervention group members
- Analyses comparing outcomes used 'trimmed' sample of closely matched 60 intervention group and 70 comparison group members
- Strong balance - criminal justice and homeless history, demographics, education, employment, substance use, mental health, physical health, treatment experience, religion, coping skills, social support etc.

PSM Analysis Results



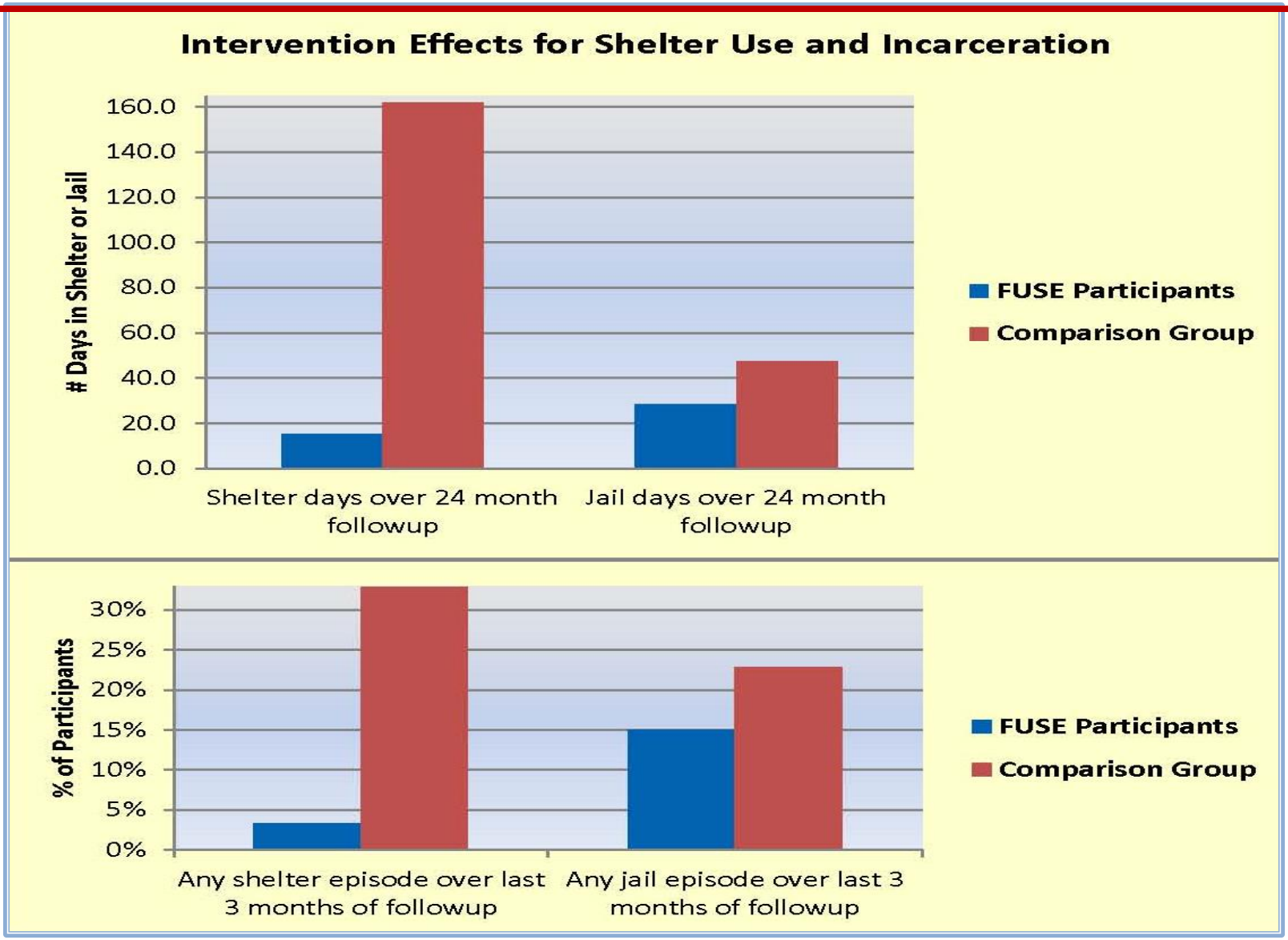
	Recruited	Included in matched analysis
FUSE	n=72	n=60
Comparison	n=89	n=70

All sets of groups balanced on all but two model-relevant covariates

Covariates in Model and Covariates with Statistically Significant Differences in Balance Test

Variables	Intervention Group Means*	Comparison Group Means*	% Bias	t-score	p	
Number shelter admissions 24m before baseline	7.23	8.13	-10.3	-0.59	0.559	
Life time homelessness ≥ 5 years	0.47	0.48	-2.3	-0.13	0.896	
Veteran	0.03	0.07	-17.4	-0.97	0.332	
Disabled	0.20	0.26	-14.4	-0.81	0.418	
Current income from job	0.23	0.30	-15.9	-0.90	0.370	
Current income public assistance	0.63	0.67	-6.9	-0.39	0.695	
Didn't graduate high school	0.40	0.38	4.7	0.27	0.789	
Graduated high school/GED	0.48	0.43	9.7	0.55	0.584	
Reported health fair or poor	0.32	0.26	12.2	0.69	0.488	
Age at first sex with opposite sex	14.45	14.00	10.1	0.57	0.571	
Never mental health diagnosis	0.37	0.19	40.3	2.30	0.023	**
Mental health services 6 mo before baseline	0.45	0.55	-20.1	-1.14	0.257	
Never used hard drugs	0.17	0.26	-23.0	-1.29	0.198	
Past use hard drugs	0.52	0.41	22.2	1.26	0.210	
No close friends or family	0.03	0.13	-35.7	-1.98	0.049	**

Shelter and Jail Outcomes



Housing and Shelter Outcomes

- **FUSE participants stayed housed**
  - At 12 months, 90% remained in FUSE housing
  - At 24 months, 81% remained in FUSE housing
  - At 24 months, 86% had permanent housing
- **Shelter use declined dramatically**
  - FUSE average 15 days in shelter 24 mos after FUSE housing
  - Comparison group average 162 days
  - Percentage of FUSE participants with any shelter episode reduced by 70%

Jail Outcomes

- **FUSE participants reduced jail involvement**
  - Over 24 months after housing, FUSE average 28 days in jail compared to 48% for matched comparison
  - 40% reduction in jail days
  - Fewer jail admissions over the 24 month study period
- **Jail involvement appears less likely the longer in housing**
  - Fewer new admissions and fewer jail days esp 18mos after FUSE housing compared to comparison group members during the same period
- **Little difference in findings measured from initial FUSE enrollment or actual placement in housing**

Drug use, mental health, physical health

My life was in turmoil. I was trying to find myself and be somebody other than me at the same time. I was fighting my addiction but running with the guys that were getting high. I was fighting the devil. My life was a revolving door.

--Program participant describing life before FUSE

Drug use, mental health, physical health

- **FUSE program had significant effect on drug abuse**
  - FUSE with any use of hard drugs (17%) past months half as high as for comparison group members (34%)
  - Screening dx of substance use disorder one-third as high
  - Similar histories of chronic, relapsing addiction and AOD treatment prior to study baseline
- **Mental health outcomes mixed results**
  - Half of both FUSE and comparison group screen positive for current psychiatric disorder
  - Significant differences on measures of stress and current family and social support - associated with improved functioning among those with mental illness
- **No differences in physical health measures**

Crisis Care Service Use

- **Reduction in most categories of service use**
  - Ambulance rides significantly fewer among FUSE participants
  - Hospitalization for psychiatric reasons significantly reduced -fewer episodes, fewer total days for FUSE participants
  - Hospitalization for medical reasons and ER visits for any reason fewer but differences not statistically significant
- **Biggest difference in residential AOD treatment**
  - Comparison group members spent average of 10 days in residential treatment compared to no days for FUSE participants
  - Other indicators of AOD treatment vary

Understanding people's housing histories matters

Better identify program effects & opportunities for service interventions

- **Identify precisely where & how FUSE alters the housing histories**
  - Differences between intervention/comparison groups in the kinds of trajectories FUSE produces
- **Generate variation in pre- & post-FUSE housing histories that have to be explained**
  - EX: Identify "turning points" in a post-FUSE history that result from program design or operation for particular people
- **Use variations in pre-FUSE housing histories to better target services**
  - EX: Better identify where in housing history FUSE should intervene
- **Analyze how different post-FUSE housing histories affect outcomes**
  - EX: Health, mental health & substance use

How can we think about housing histories to carry out such analyses?

Common ways of analyzing history lose temporality, information & differences among people

Three ways data are often analyzed: time-aggregated, single-curve modeling and two time-point linkage

- **Time-aggregated**
  - Loses temporality and process information
  - EX: Avg # days jailed/sheltered is same: 270 days

- **Single-curve modeling**
  - Loses differences among people
  - EX: Time series analysis would identify one kind of flat curve

- **Two time-point linkage**
  - Loses process information
  - EX: Neither sheltered at t_1 to both sheltered at t_2

Need approach that retains temporal information and allows for multiple patterns.

Time-patterned approach captures more information & in the way people live their lives

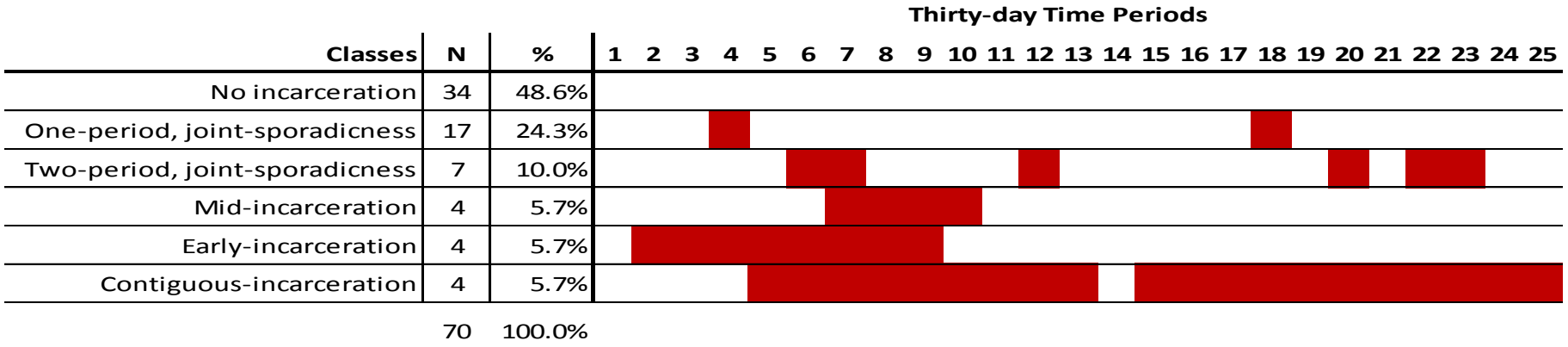
Optimal matching (OM) groups people based on timing, duration and sequencing of jail and housing events

- **OM operates in two steps**
  - Identifies differences between histories based on when in time event happened, which events preceded and followed it and how long it lasted
  - Groups people based on how small those differences are, i.e., how similar people's histories are
- **OM logic is non-parametric — akin to data mining**
  - You just want to identify patterns in the data
- **Time-patterned parametric approaches:**
  - Group-based modeling (Nagin)
  - Latent class growth modeling (Muthén)

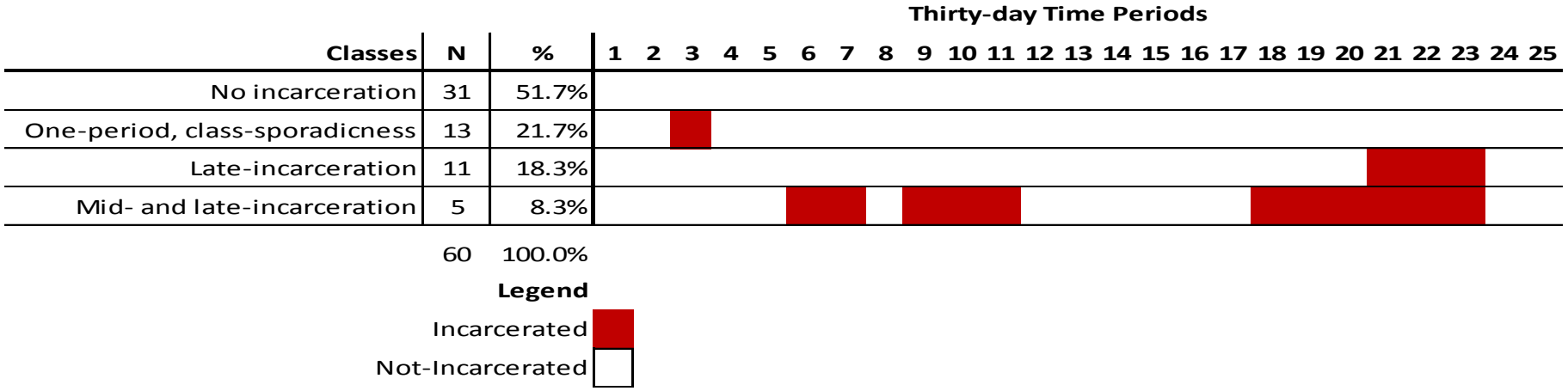
Program had pattern-specific incarceration effects over follow-up

Table 7-1. Intervention Effects on Trajectory Groups for Incarceration

Panel A: Comparison Group Exemplars



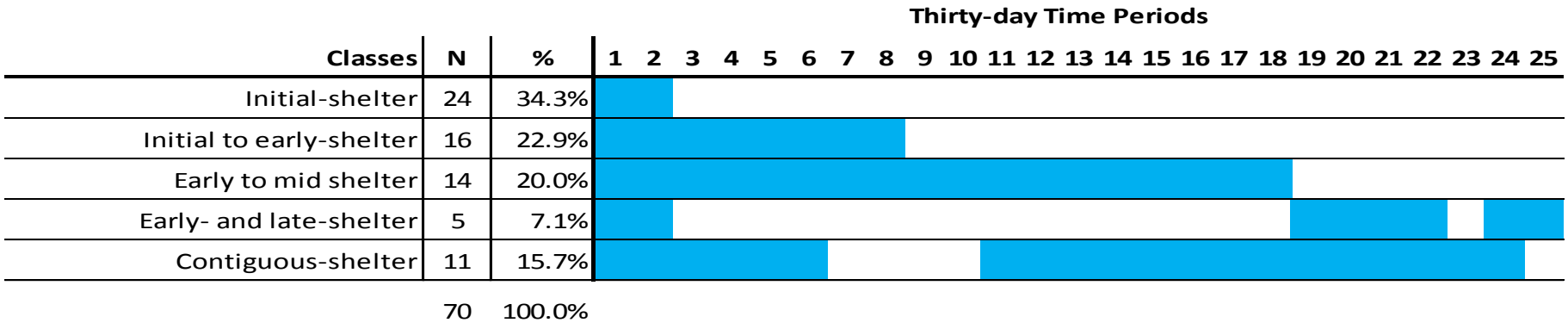
Panel B: Intervention Group Exemplars



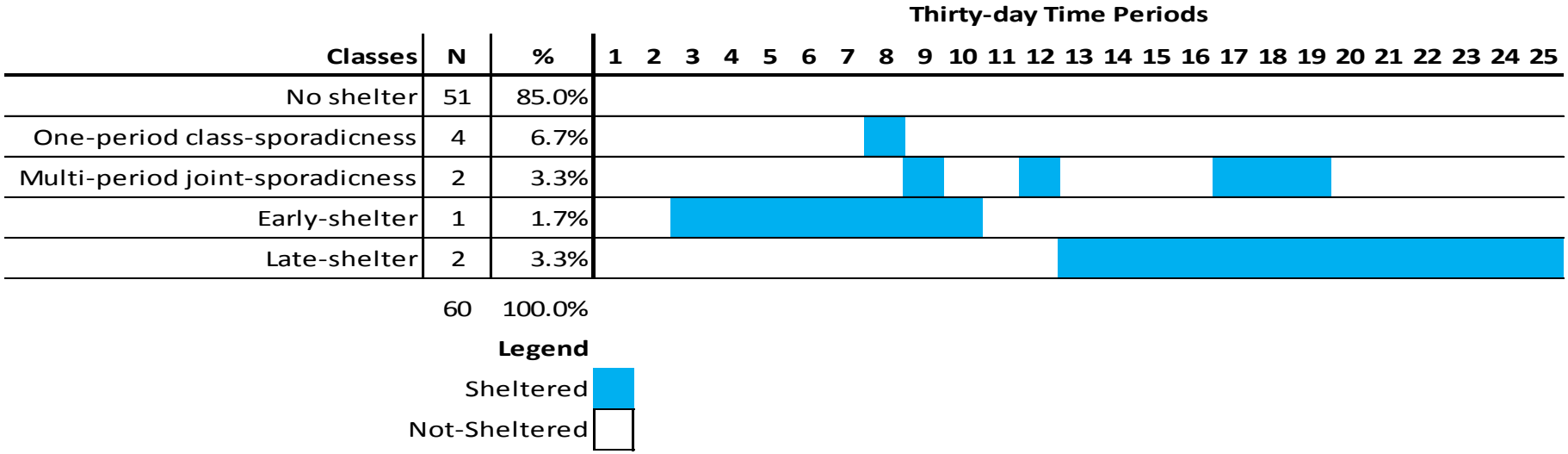
Program had pattern-specific shelter use effects over follow-up

Table 7-2. Intervention Effects on Trajectory Groups for Shelter Use

Panel A: Comparison Group Exemplars



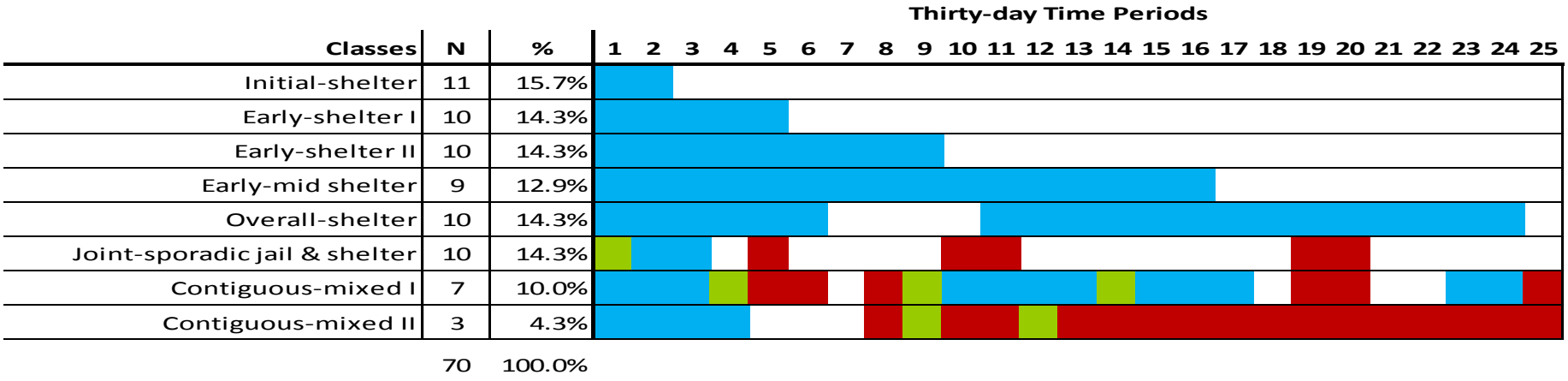
Panel B: Intervention Group Exemplars



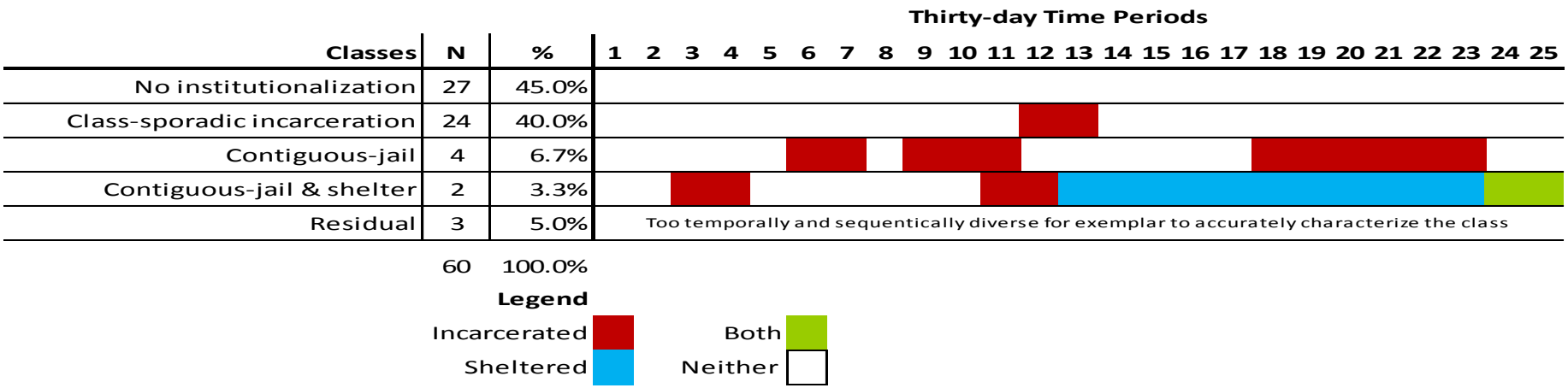
Program had joint institutionalization-specific effects over follow-up

Table 7-4. Intervention Effects on Trajectory Groups for Incarceration, Shelter Use, Both or Neither

Panel A: Comparison Group Exemplars



Panel B: Intervention Group Exemplars



Time-patterned approach lets us think differently about possible intervention outcomes

- Approach encourages us to focus on structural conditions to explain changes in people's jail and housing histories
  - Individual characteristics remain constant (e.g. histories of mental illness and substance use) so cannot explain change
  - Structural conditions — policies, economy, organization and administration of shelter and criminal justice systems — can change
  - Makes it more possible to bring individual biography together with structural circumstances

Cost Evaluation

- **Standard methods of cost analysis to calculate average per-client, per year cost of FUSE I program**

  -- Used public-payor or taxpayer perspective

- **Data Sources**

  -- FUSE intervention costs obtained from program staff

  -- Jail and shelter use information from DOC & DHS administrative data

  -- Service use based on interview data

- **Compared intervention and comparison group members over 24 study period**

  -- Present annualized costs for service use variables, cost per person per year

- **Costs adjusted to reflect 2012 dollars**

Cost Evaluation Results

- **Annual average cost of intervention $25,157 which includes housing and services**

  -- Including one time $6500 per client enhancement

- **The FUSE Intervention reduced annual average costs**

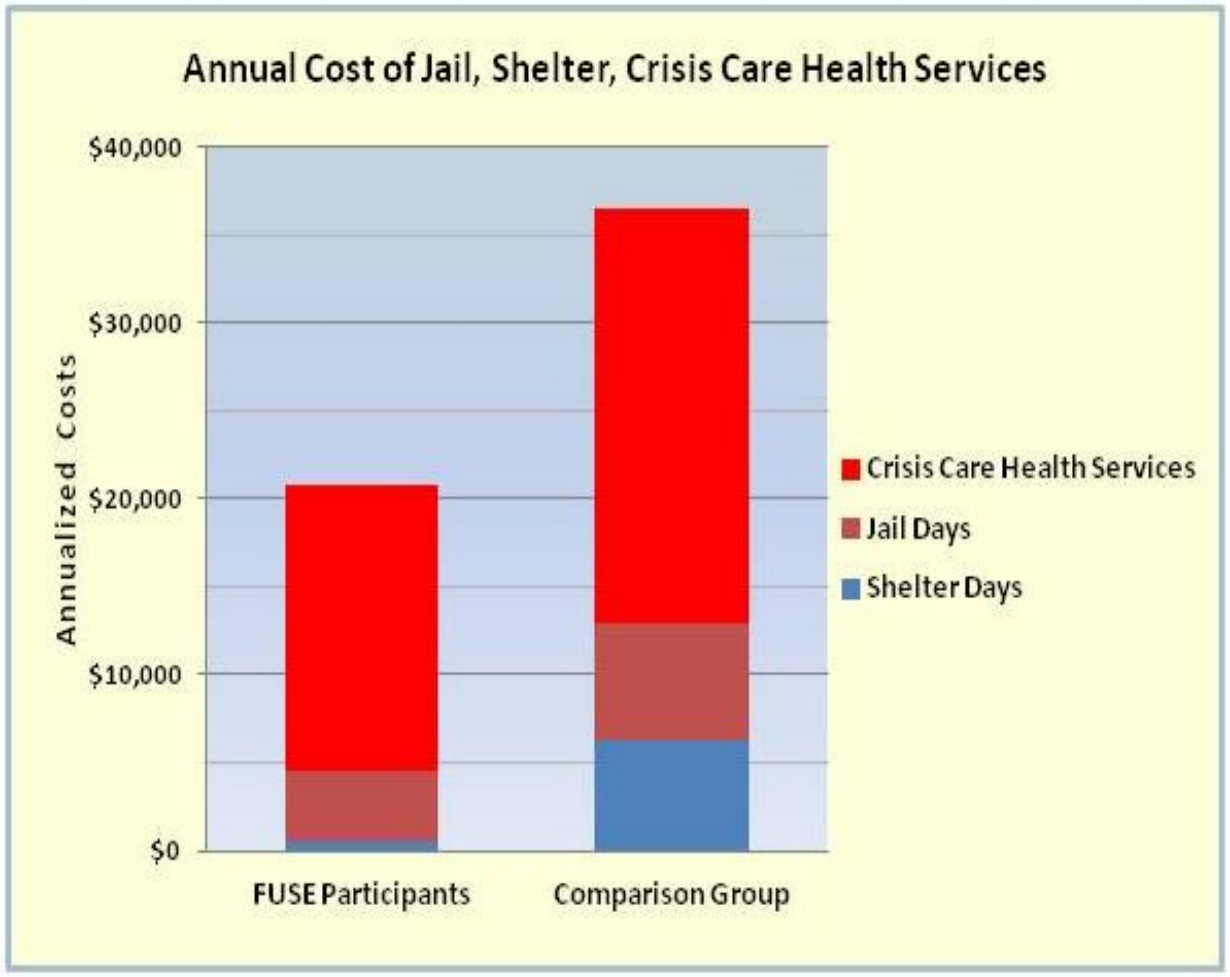
  -- $7308 per FUSE participant over 24 mo for inpatient and crisis medical and behavioral health services

  -- $8372 per FUSE participant for shelter and jail days per 12 month period.

- **Through reduced use of jails, shelters, crisis care health services, each individual housed through FUSE generated over $15,000 in avoidable public cost offsets**

- **Cost savings pay for over two-thirds of the intervention cost.**

FUSE II Cost Evaluation Results



Conclusions and implications

- **FUSE intervention had strong positive intervention effects on reducing homeless shelter and incarceration experience**

  -- Transformed people's pattern of institutional cycling to no or only extremely infrequent episodes of jail or shelter use

- **The FUSE Intervention was highly successful in securing and maintaining housing for participants**

  -- Rates higher than seen in other housing programs for persons with complex histories of homelessness and multiple behavioral health needs

- **Strong program effects seen for problem alcohol and drug use; promising effects on mental health outcomes**

- **Cost savings from reduction of avoidable crisis care services pay for over two-thirds of the intervention cost.**

Conclusions and implications

- **Results from the outcome and cost analyses indicate that removing policy and system barriers limiting access to housing assistance for formerly incarcerated persons holds great promise for persons and communities**
- **Incorporating housing into reentry services , e**xpanding existing housing resources available for homeless persons with health and behavioral health challenges, providing supportive services immediately post release will facilitate success reentry
- **Incorporating housing into reentry services** could result in substantial cost savings to corrections, homelessness and health care systems for persons who would otherwise continue their cycling between jail, homelessness and crisis care institutions
- **The FUSE II Evaluation adds to the accumulating evidence** that supportive housing reduces homelessness as well as costs

Acknowledgements

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