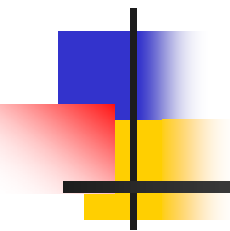


Service Models for Assisting Homeless People with Mental Health Problems: Cost-Effectiveness and Policy Relevance



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Homelessness and Mental Illness

- National Co-morbidity Survey: 5,000 adults surveyed in 2002
- 5% had been homeless
- 6x more likely to have alcohol or drug diagnosis
- 3x more likely to have psychiatric diagnosis
- Is treatment of mental illness central to exiting from homelessness?



Medical treatment vs. Social Rehabilitation

- Interventions do not emphasize acute psychiatric treatment
- Tacitly assume
 - chronic impairments in judgment and in social skills;
 - need for active assistance coping—case management.
- moral support (therapeutic alliance)
- active assistance negotiating or procuring
 - Housing from landlords
 - Income supports or housing subsidies from public bureaucracies;
 - Medical or mental health services



Three policy questions

- Have effective ways to end homelessness and improve QOL among people with mental health problems been demonstrated by controlled research?
- Are they cost-effective? i.e. do benefits and savings exceed costs?
- Are they generalizable? Are they capable of dissemination through policy initiative.



Five Intervention Models

- 1. System Integration.
- 2. Supported housing.
- 3. Case management alone.
- 4. Benefits outreach.
- 5. Supported Employment.



Four caveats for cost-effectiveness evaluation

- Research equipoise limits acceptable comparitors;
- Limited sample generalizability vs. optimal targeting;
- Provider generalizability: inspired innovator vs. bureaucratic policy dissemination
- Experimental vs. pre-post designs



Conclusions (1)

- Diverse intervention models are effective in reducing homelessness and improving QOL among people with mental illness.
- Effect sizes are typically modest in magnitude and primarily center in one outcome domain (i.e. housing, symptoms, income, or employment).



Conclusions (2)

- Program costs can be substantial (\$2,000-\$9,000/client/year) and are entirely offset by savings only when high-cost, high-risk populations are targeted, or when the duration of treatment is limited. i.e. there is a cost-effectiveness generalizability tradeoff
- Progress is incremental: Cost-effective, generalizable ways to end homelessness among people with mental health problems have yet to emerge.



System Integration: The ACCESS Program

- “System fragmentation is the problem”
- 18 site demonstration of efforts to integrate homeless service systems
- 7,000 homeless people with serious mental illness in 4 annual cohorts followed for 12 months.
- 9 sites received \$150,00 and technical assistance to improve system integration
- Other 9 sites did not

Figure 1. Implementation of Systems Integration Strategies in ACCESS: Experimental vs. Comparison Sites, Years 4 and 5.

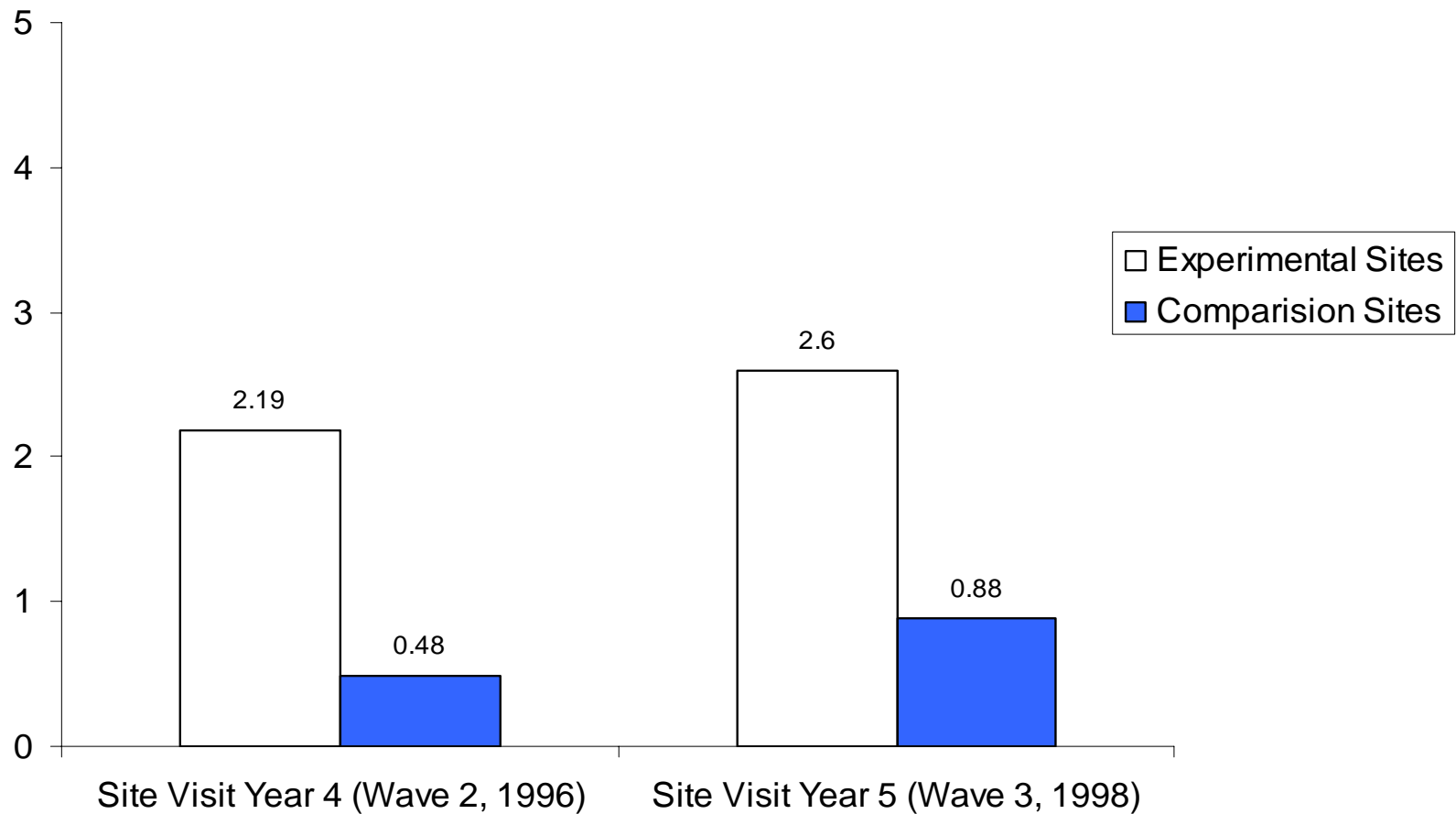


Figure 2. Changes in Integration In ACCESS: Experimental vs. Control Sites

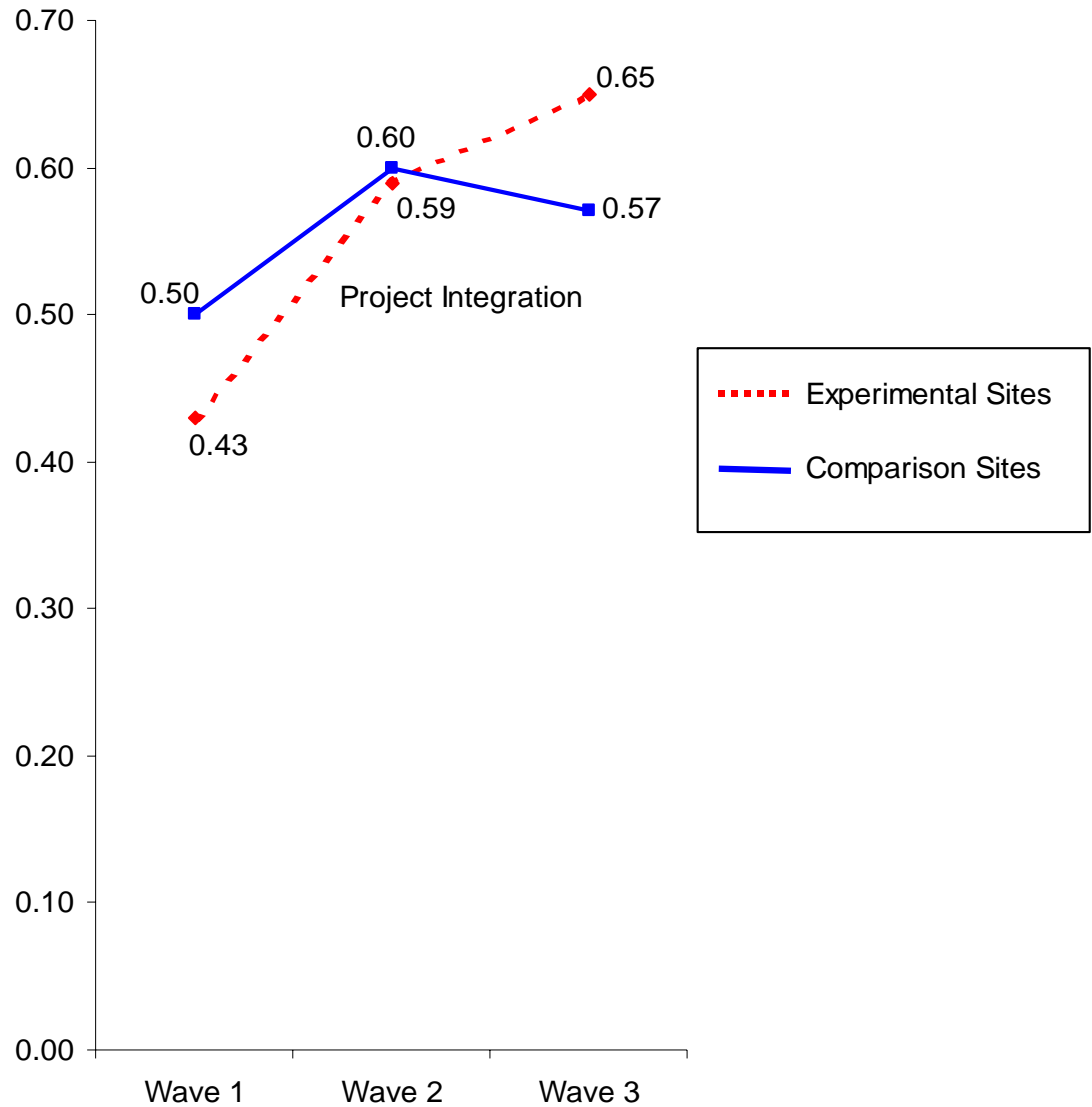
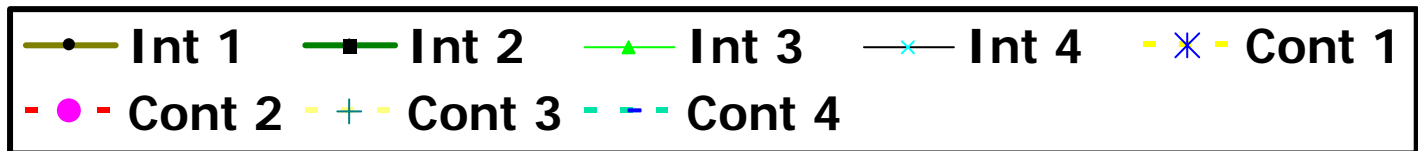
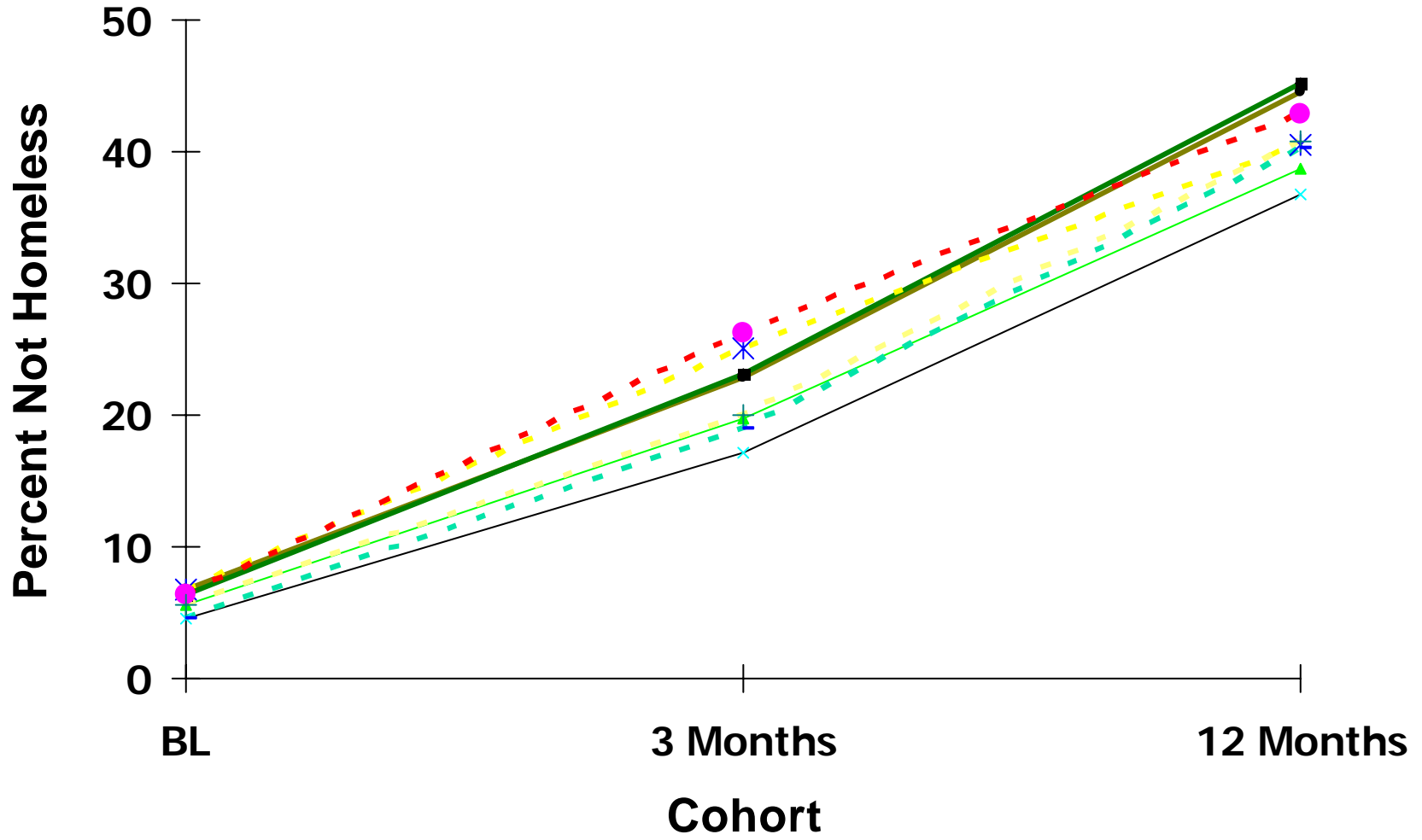
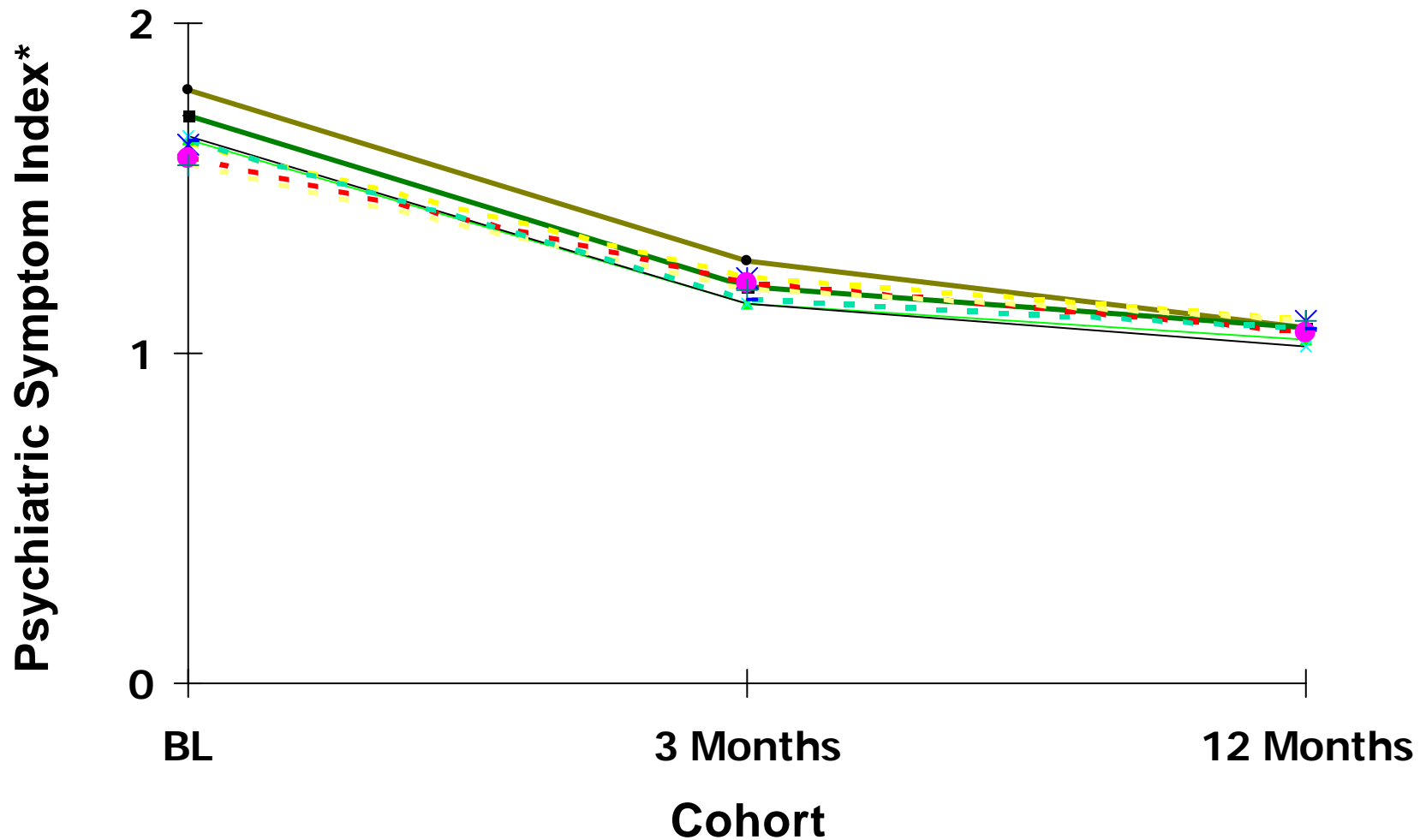


Figure 3. ACCESS Outcomes By Systems Integration Site Assignment and by Annual Cohort: Exited From Homelessness for 30 Days



OUTCOMES BY SYSTEMS INTEGRATION ASSIGNMENT AND BY COHORT:PSYCHIATRIC SYMPTOMS*

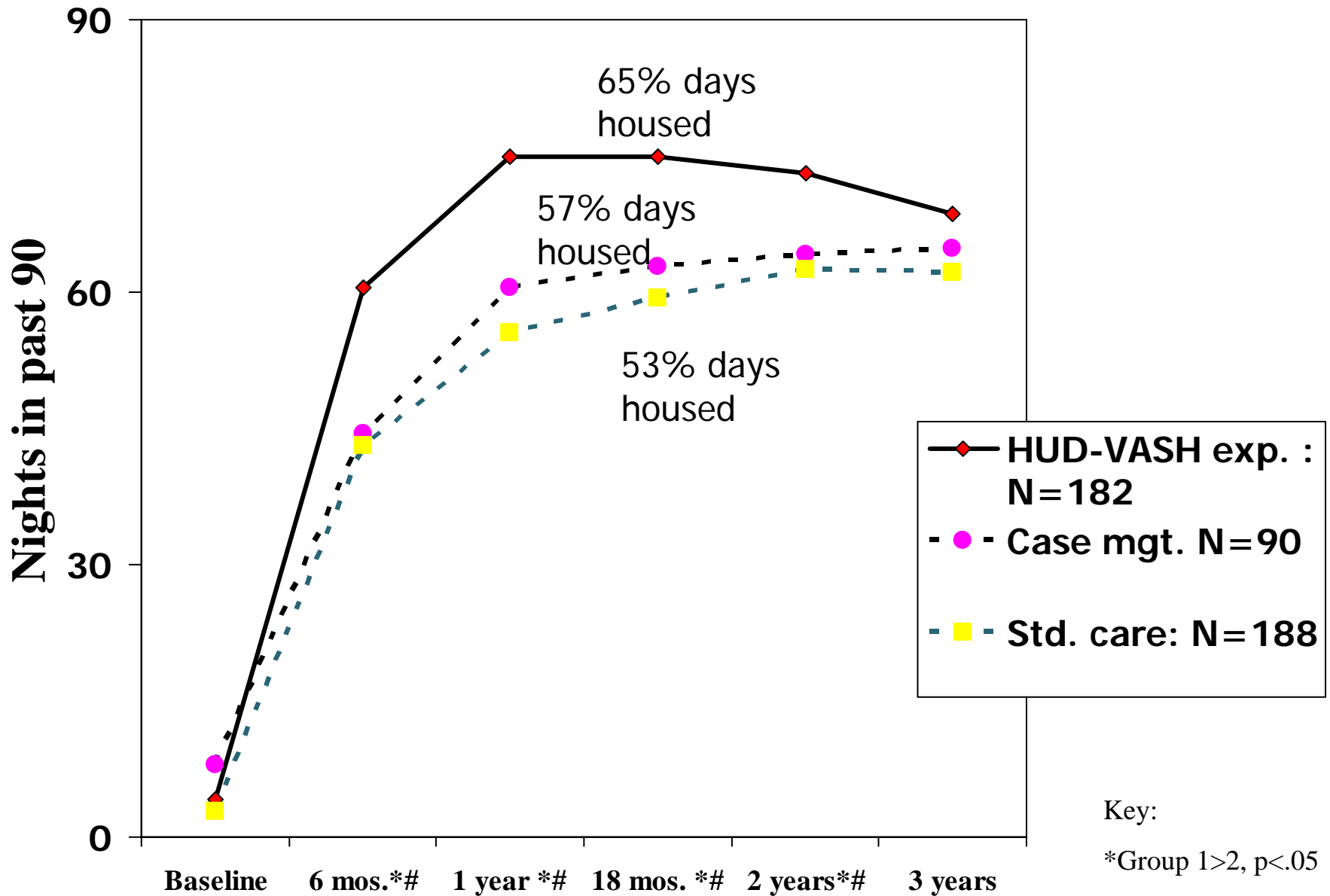




Supported Housing: HUD-VA Supported Housing

- Combines case management and Section 8 vouchers
- Experimental study of three groups:
 - HUD-VASH
 - Case management only
 - Standard VA care

Figure 4 . Days housed in past 90: HUD VASH Experimental Evaluation

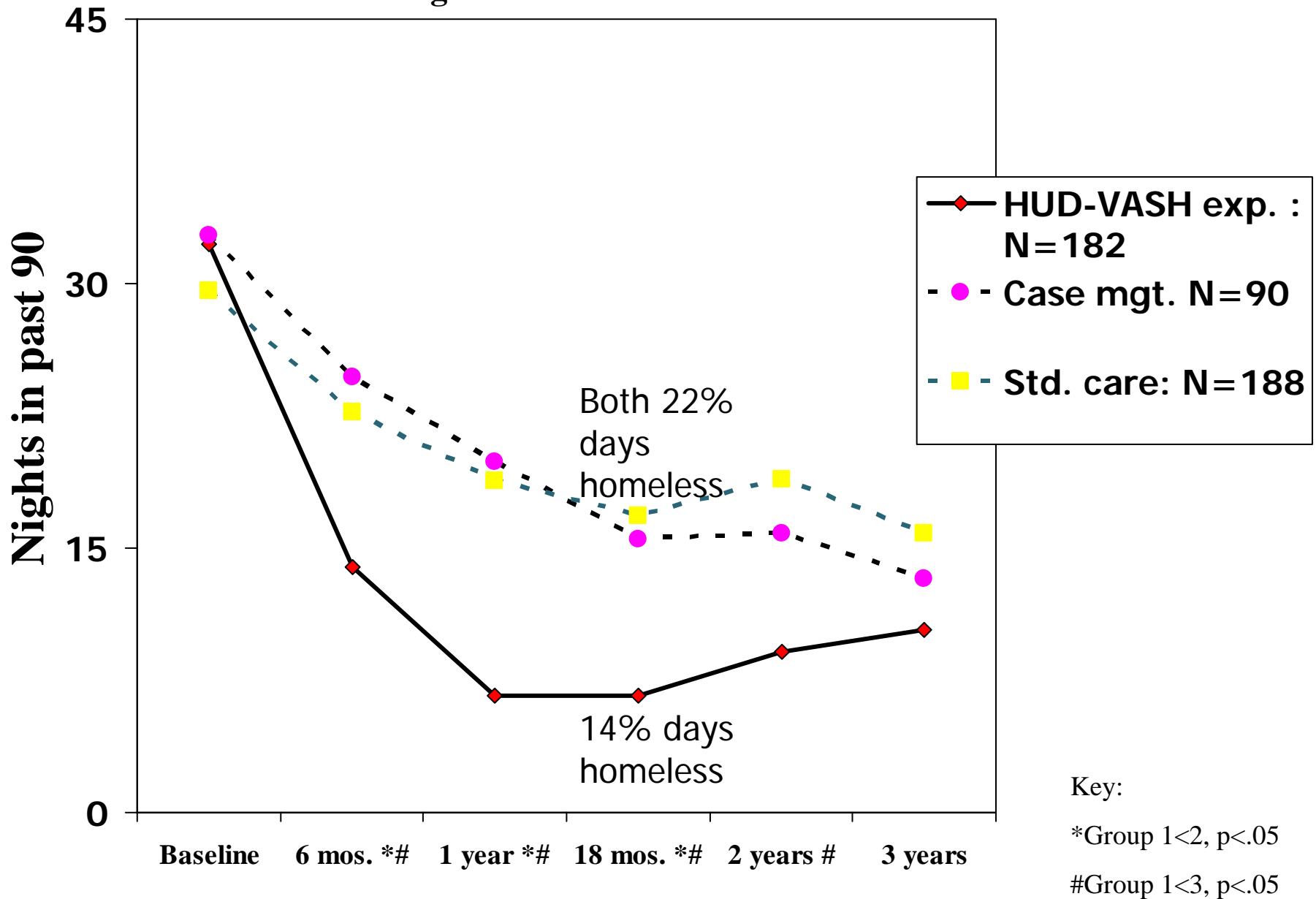


Key:

*Group 1>2, p<.05

#Group 1>3, p<.05

**Figure 5. Outcomes in the HUD-VA Supported Housing Program:
Nights Homeless in Past 90**





Other HUD-VASH Benefits

- Superior therapeutic alliance
- More social support
- Reduced alcohol and drug use

Outcomes in the HUD-VA Supported Housing Program: Days of Alcohol Use in past 30 days

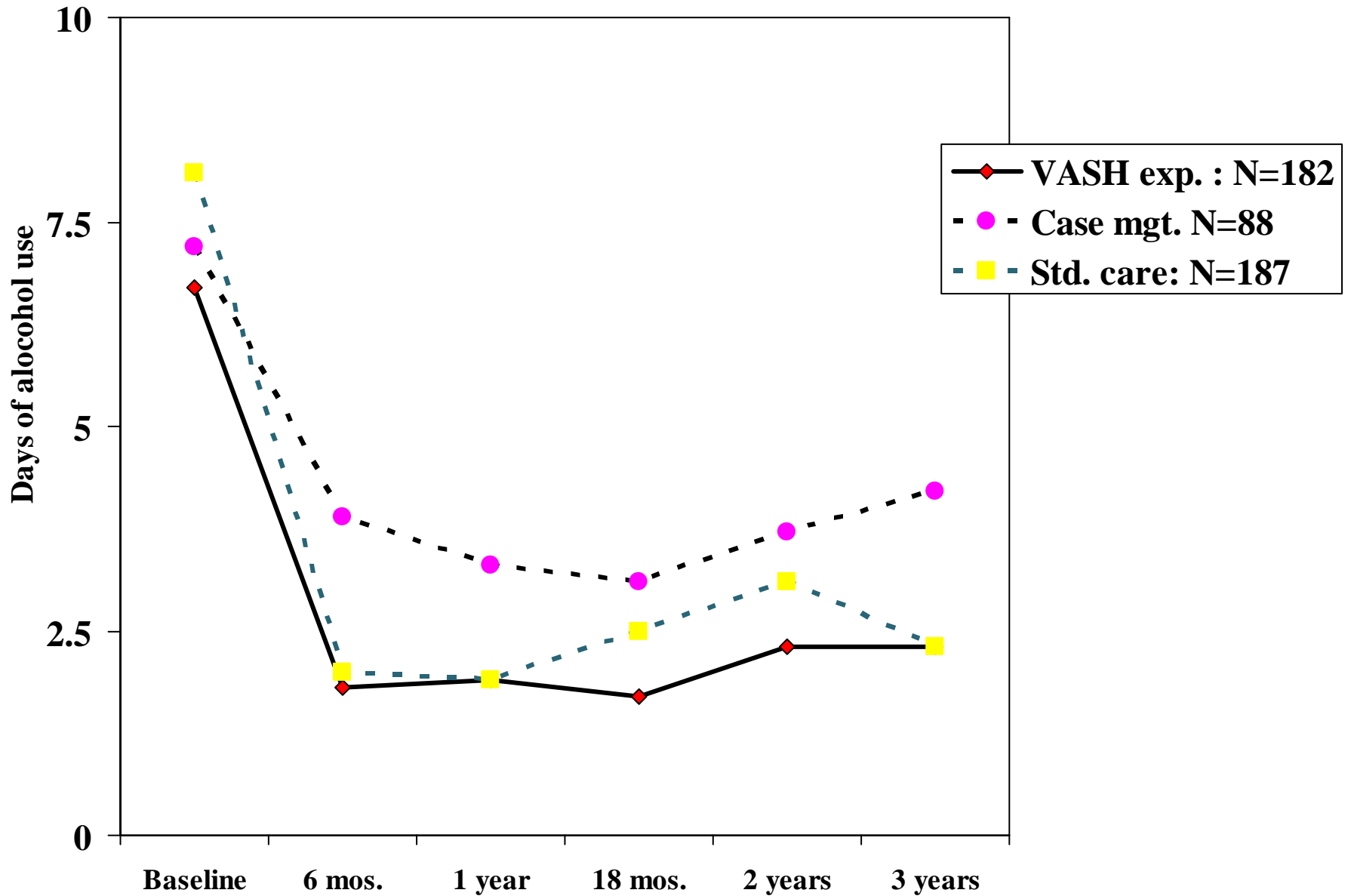


Figure 6. Three-year health care and other costs in HUD VASH Experimental study.

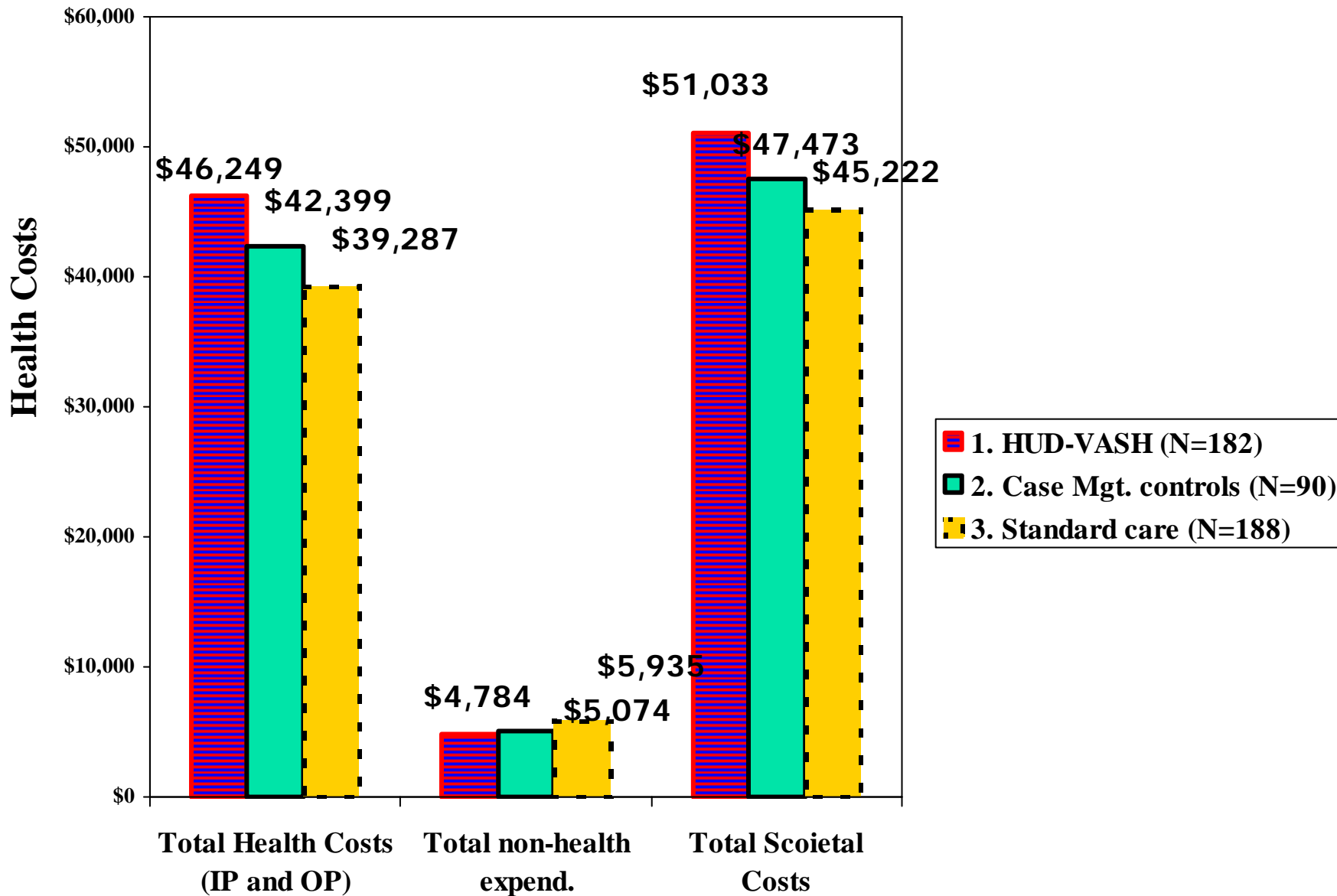
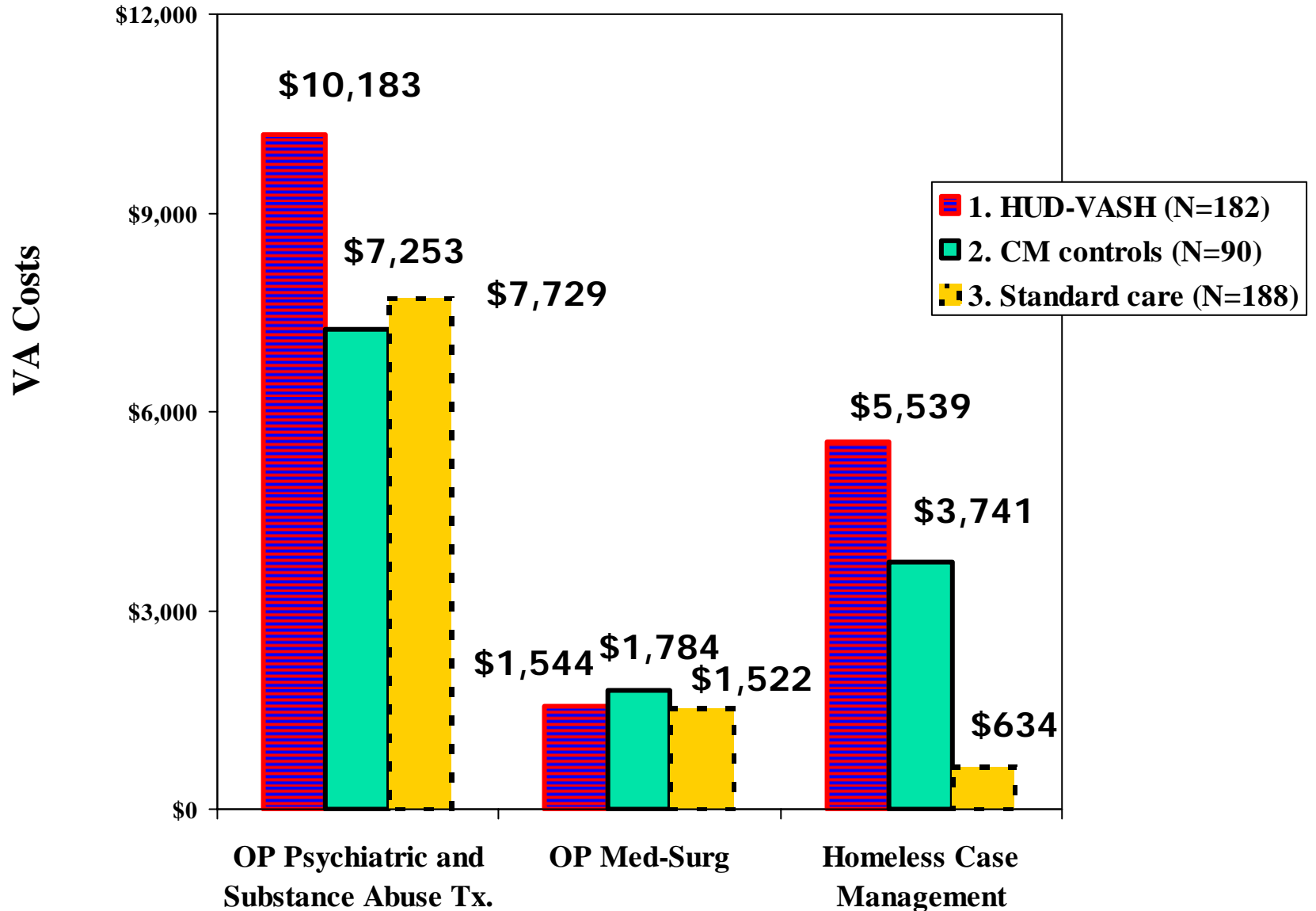


Figure 7. Three-year VA and non-VA outpatient costs by treatment group in HUD-VASH Experimental Study.



**Figure 8. Cost Effectiveness Acceptability Curve:
HUD-VASH vs Standard Care**

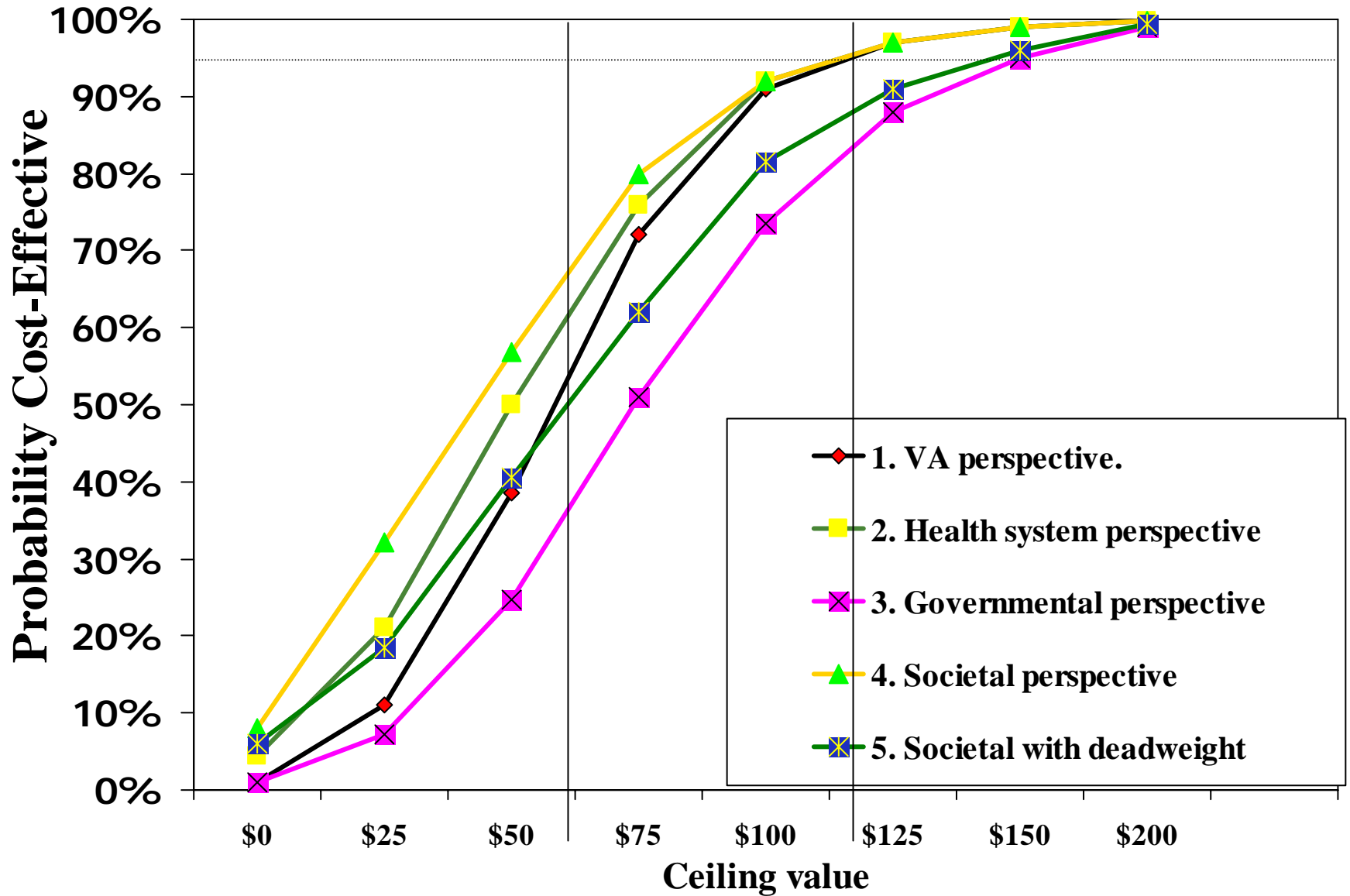
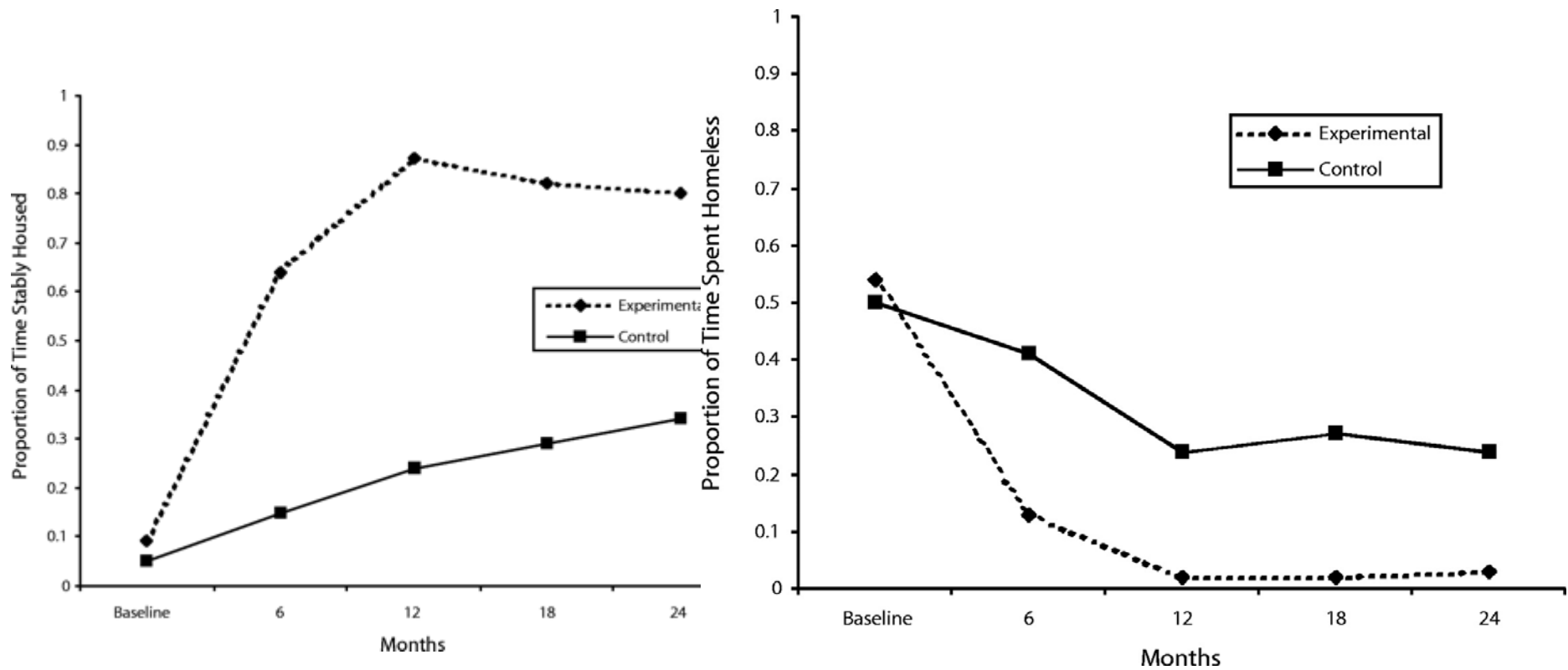


Figure 9. Housing First: Proportion of time homeless and stably housed: baseline-24 months



**Figure 10. Outcomes in the CICH Supported Housing Program:
Percent Nights Housed in Past 90**

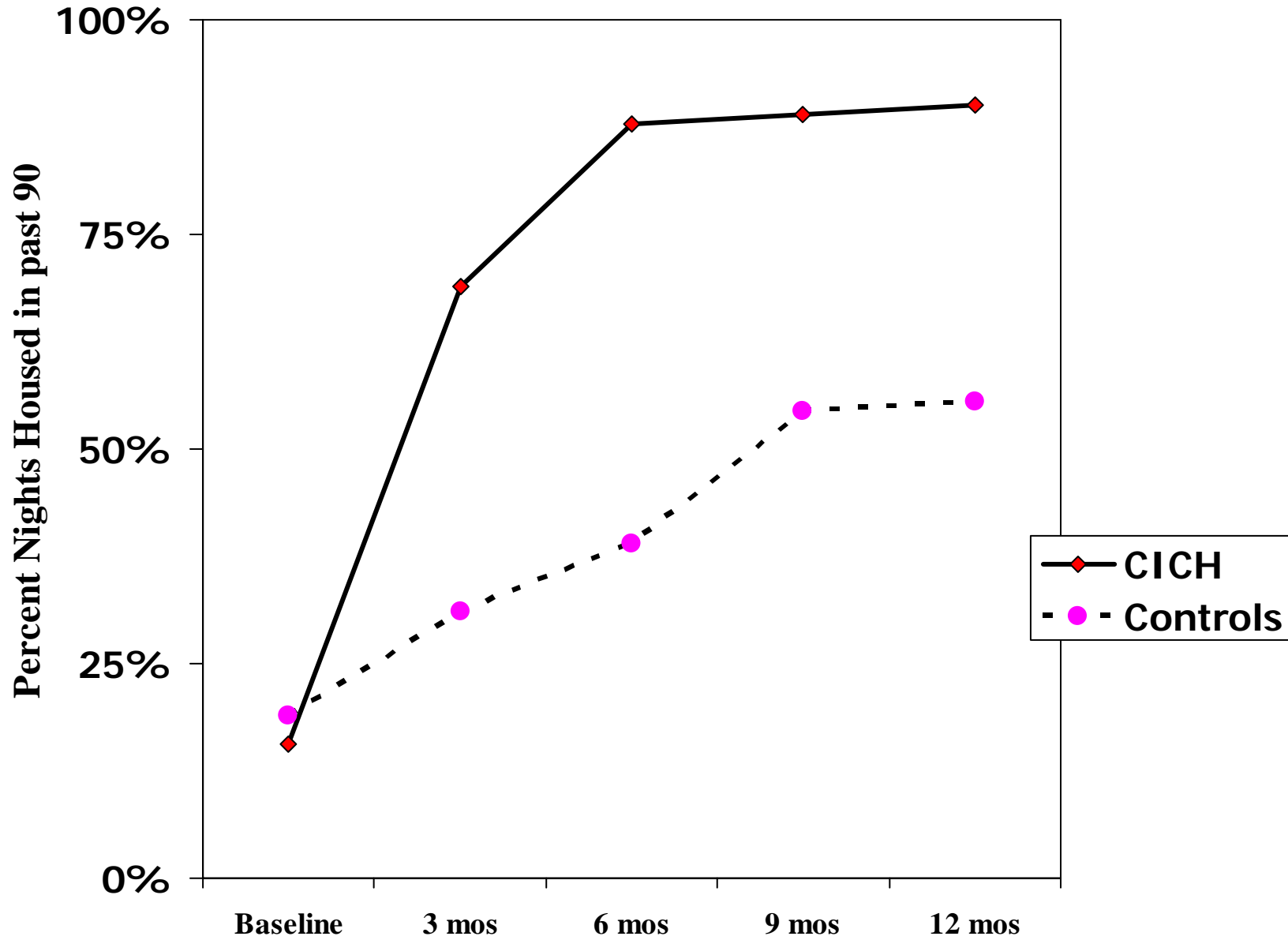
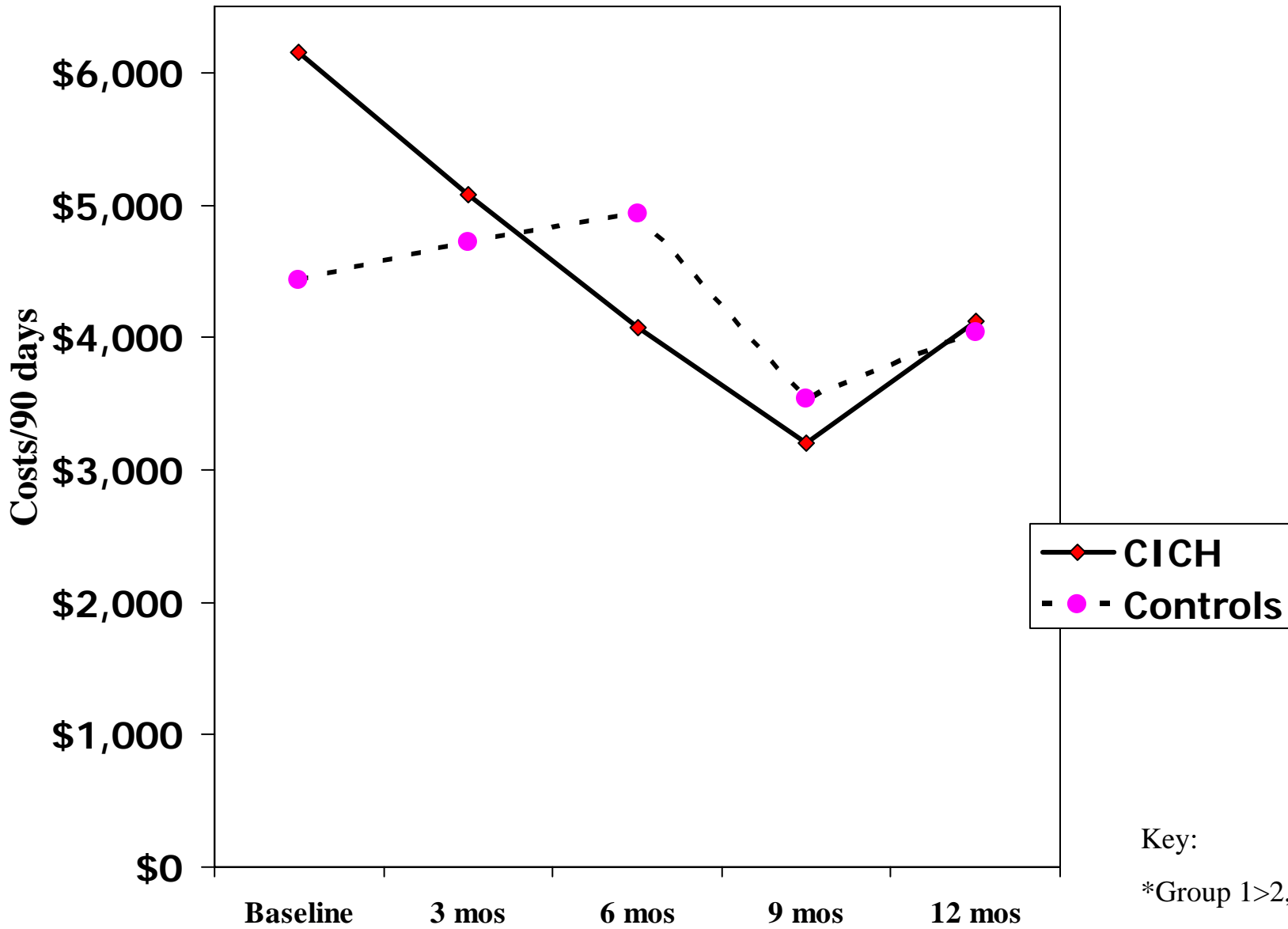


Figure 11. Health Costs for Past 90 days in the CICH Supported Housing Program



Key:

*Group 1>2, p<.05

#Group 1>3, p<.05



Supported Housing/Intensive Case Management Models

PROGRAM	Days Housed	COST
■ HUD-VASH	65% vs 53%	+ \$2,000/yr
■ San Diego	No difference	No cost data
■ St Louis CM	No difference	<u>±</u> Costs

TARGETED HIGH COST Group (30% INPATIENTS)

■ Housing First	70% vs 20%	< Hlt Svs. \$s
■ Baltimore	59% vs 43%	\$15,000 less

TIME-LIMITED 9 Month MODEL

■ CTI NYC	95% vs 79%	+\$ 725/18 mos +\$2,200 1 st 9m - \$1,613 2 nd 9m
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Supported Housing Case Management

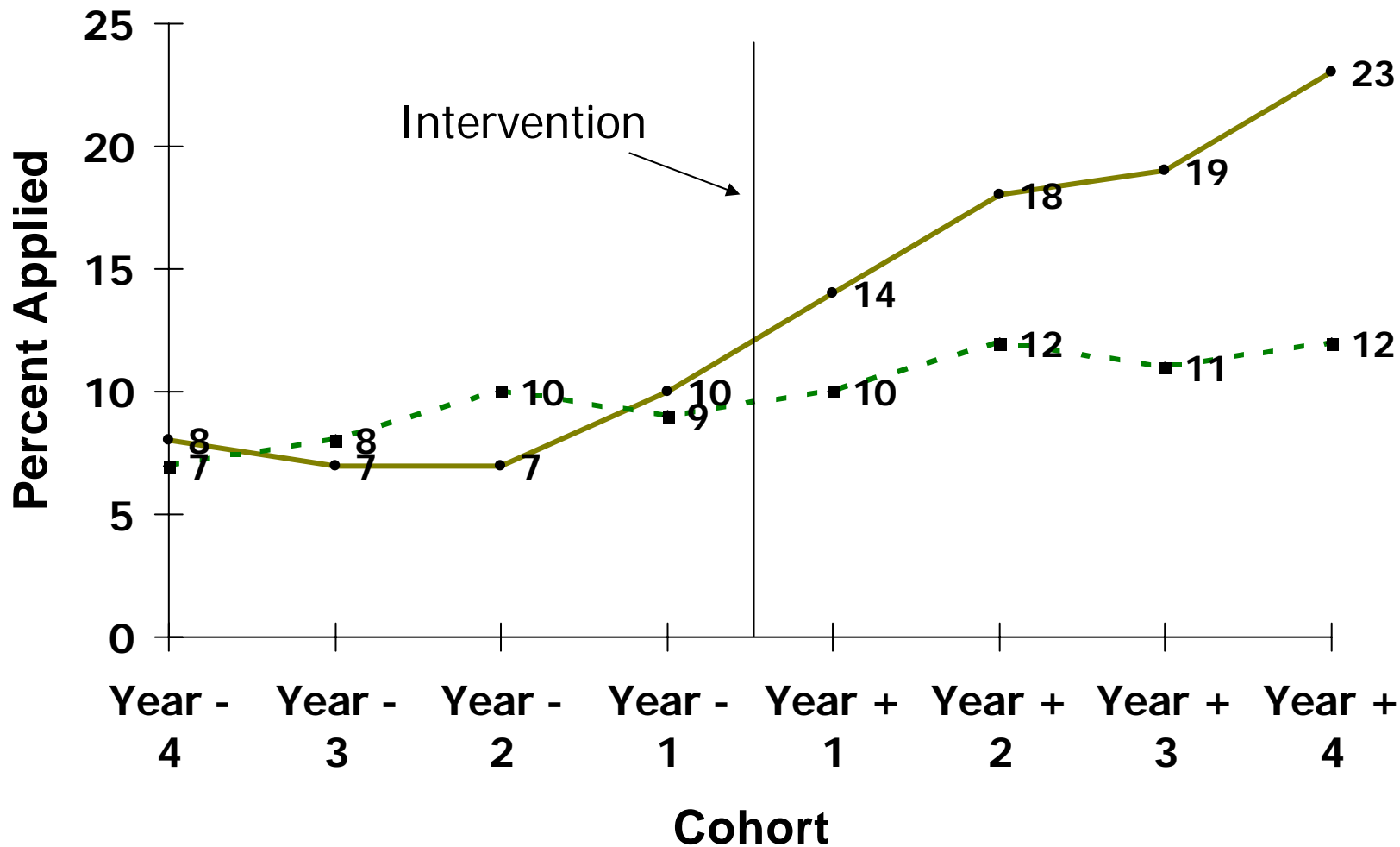
- Modest differences in days housed
- Targeting high-cost high-risk populations improves cost-effectiveness, limits generalizability
- Multi-site disseminations, less cost-effective



Benefits Outreach

- Joint VA-SSA Benefits Outreach
- Linked SSA disability specialists and VA case managers and medical evaluators
- Compared Joint outreach sites and other VA homeless programs using VA and SSA administrative data over a 4 year period before and after program implementation.
- Program Cost \$1,700-\$3,200/ additional awardee

Figure 12. SSA-VA Joint Outreach: Rates of Application for Benefits (N=34,431)



—●— Joint Outreach Sites -■- Comparison Sites

Figure 13. SSA-VA Joint Outreach: Rates of Award Among Applicants (N=3,952)

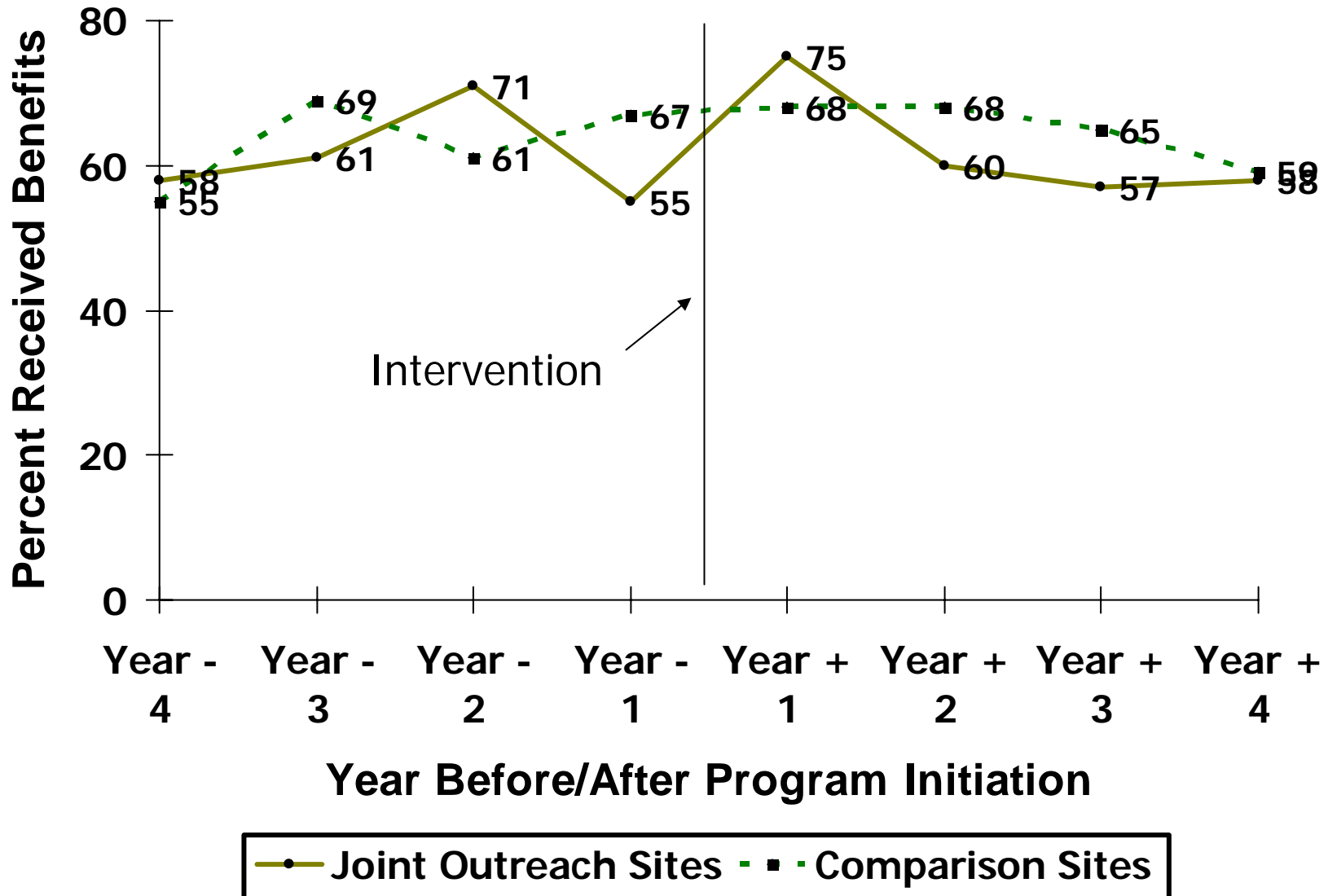
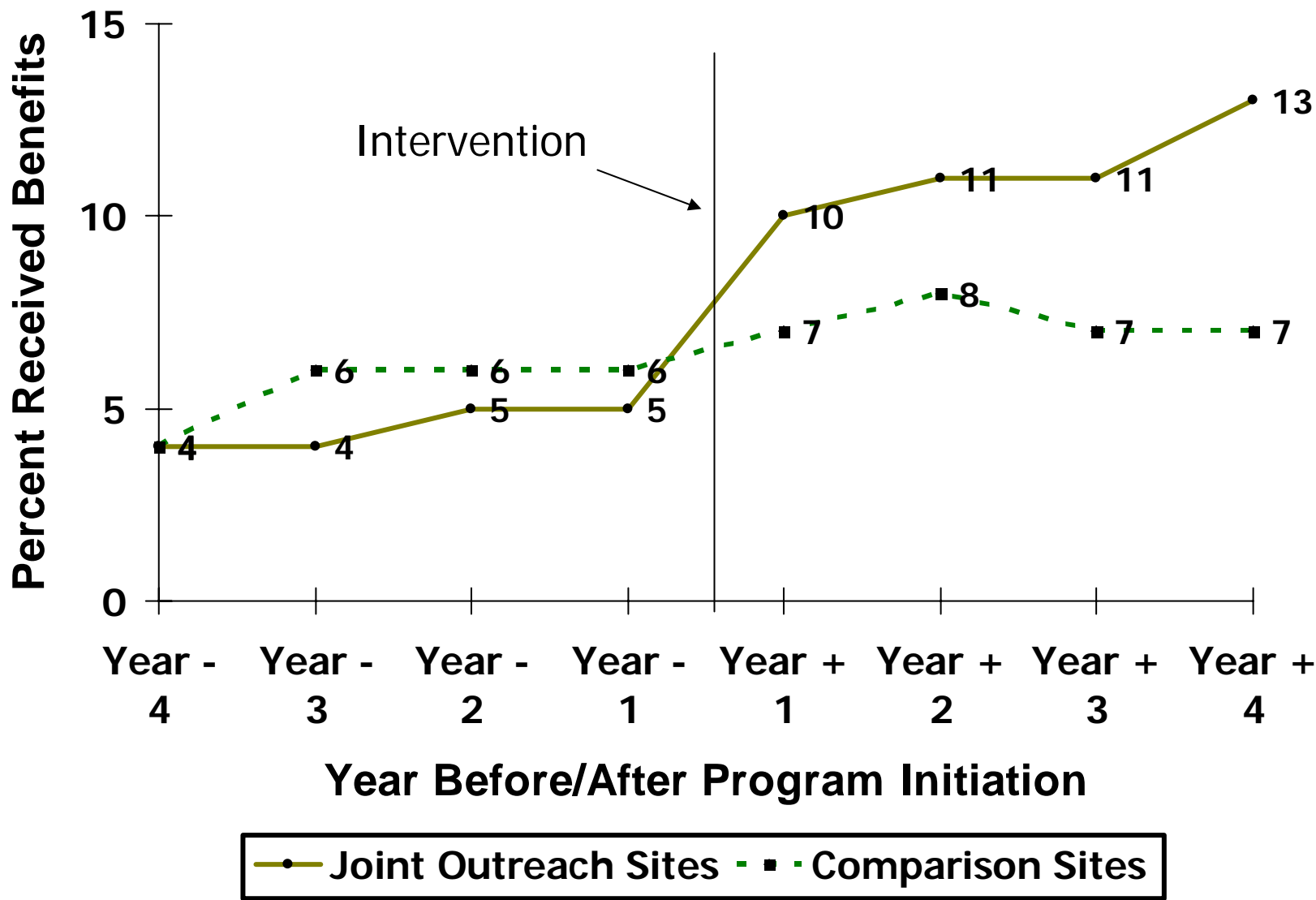


Figure 14. SSA-VA Joint Outreach: Rates of Award Among All Outreach Veterans (N=34,431)

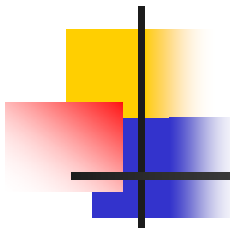




SSA-VA Outreach: Client Outcomes (Subsample) (1)

- Conducted baseline assessment just before benefits decision (N=173).
- Of those interviewed and followed-up 29 % (n=50) received benefits, 71% (n=123) did not.
- Compared 3-month outcomes among recipients and non-recipients.
- Total monthly income \$735 vs. \$458 ($p < .001$)
- No difference in psychiatric, substance abuse, or medical status at baseline OR follow-up.

SSA-VA Outreach: Client Outcomes (2)



	<u>Benefits</u>	<u>No benefits</u>
■ Days homeless	9.4	17.0 ns
■ Quality of Life	3.0	2.7 **
■ Wants to work	2.9	3.2 **
■ Days worked	2.3	5.8 *

* $p < .05$

** $p < .01$

*** $p < .001$



Supported Employment

- Employment specialists work directly with clients to identify, obtain and retain employment.
- Pre-post intervention cohort design at 9 VA sites
- Phase 1: before intervention (N=308)
- Phase 2: after intervention (N=322)
- Employment Specialist Cost=\$2,063/ client
- Less productivity of \$1,299 = \$764/client/year

Figure 15. Days Competitive Employment in Supported Employment (Least Square Means)

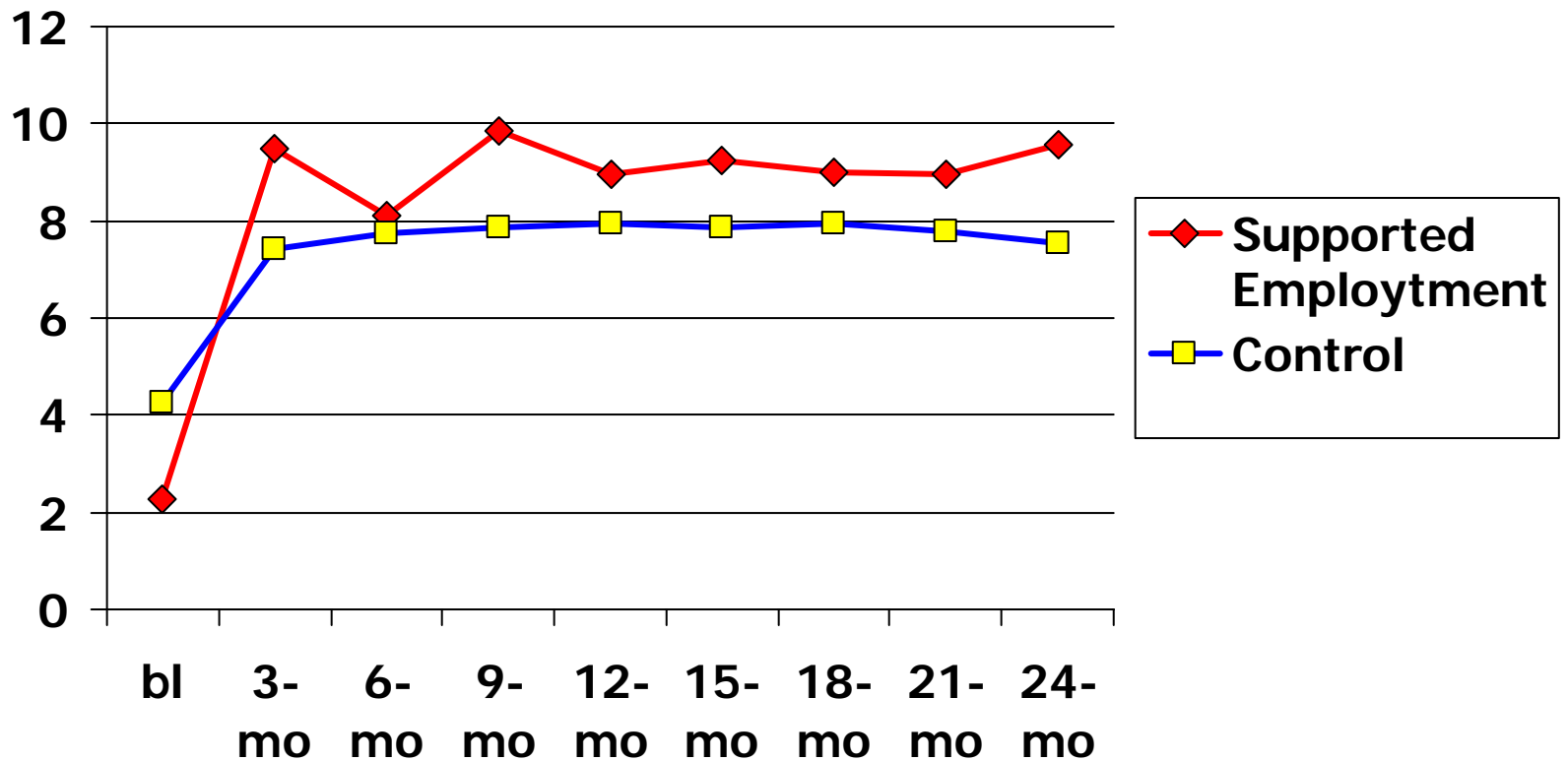
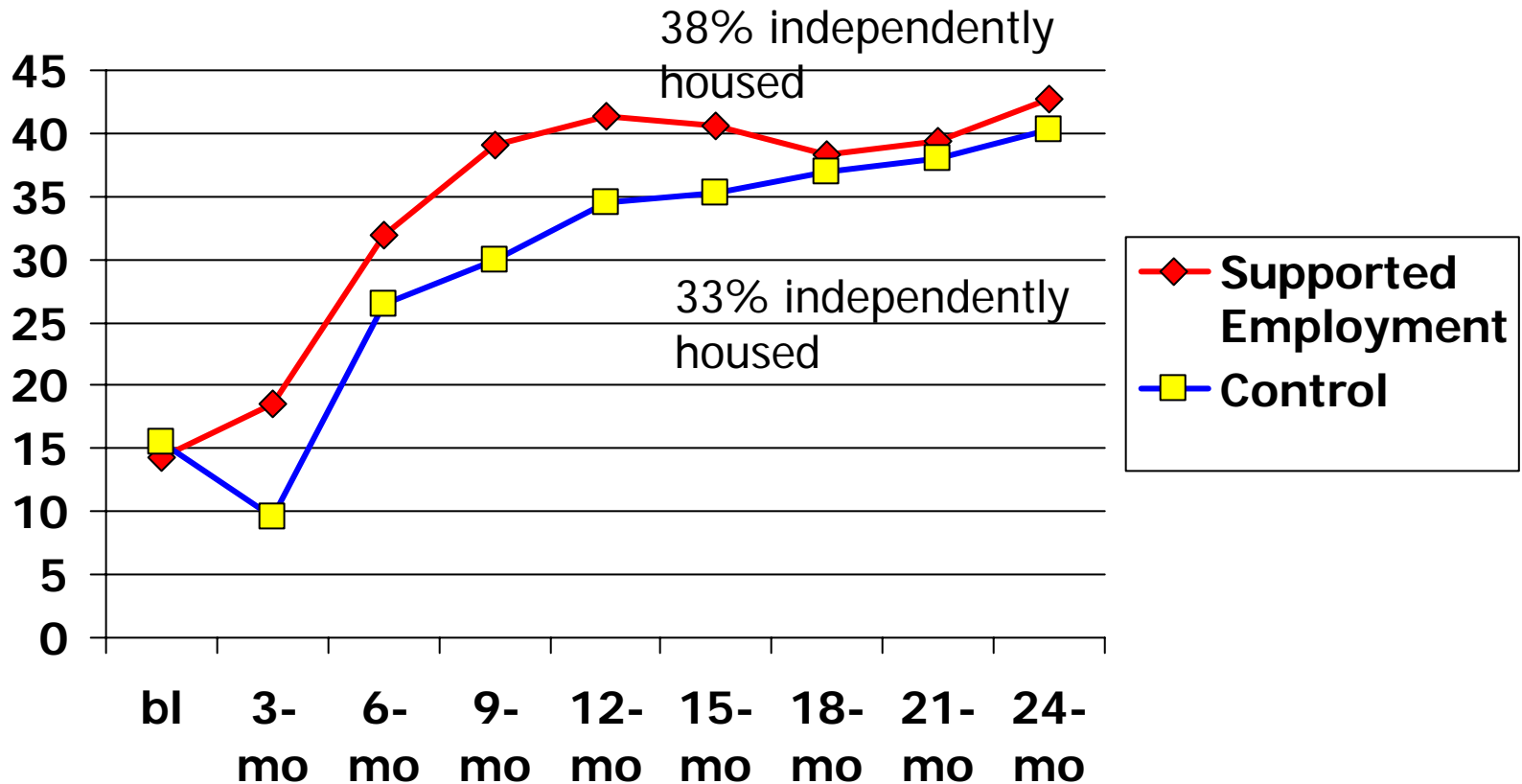


Figure 16. Days Housed in past 90 (Independent)

(Least Square Means)





Conclusions (1)

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Conclusions (2)

- Program costs can be substantial (\$2,000-\$9,000/client/year) and are entirely offset by savings only when high-cost, high-risk populations are targeted, or when the duration of treatment is limited. i.e. there is a cost-effectiveness generalizability tradeoff
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