

Community Information Exchange

Final Evaluation Results

Cohort 1: Homeless Clients

July 2014 – June 2015

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The CIE Intervention

- Homeless persons often have multiple and complex social challenges that contribute to their health problems and utilization of EMS services.
- The Community Information Exchange (CIE) currently provides an electronic platform where information about housing and EMS transport history is shared between housing, EMS and hospital providers.

The CIE Intervention

- Homeless persons consent to participate in the CIE program which provides for the sharing of their information while they are receiving homeless and medical services.
- The CIE intervention could thus be seen as an enhancement to all of the existing housing and medical services the client is receiving.
- The CIE does not provide direct services. Its value lies in the ability to share information about services provided across disciplines.

We analyzed two components of CIE information sharing

- **CIE Enrollment.** Differences that can be found for clients before and after their enrollment in CIE
- **CIE Look-ups.** Among enrolled CIE clients, differences that can be found between those whose information was looked up and those where no provider ever looked up information.

CIE evaluation questions

Question #1: Is CIE enrollment associated with a reduction in the number of EMS transports before and after enrollment?

Question #2: Once enrolled, are CIE look-ups associated with fewer housed persons returning to the street?

Question #3: Once enrolled, are CIE look-ups associated with clients remaining in their current housing placement?

July 1, 2014-June 30, 2015

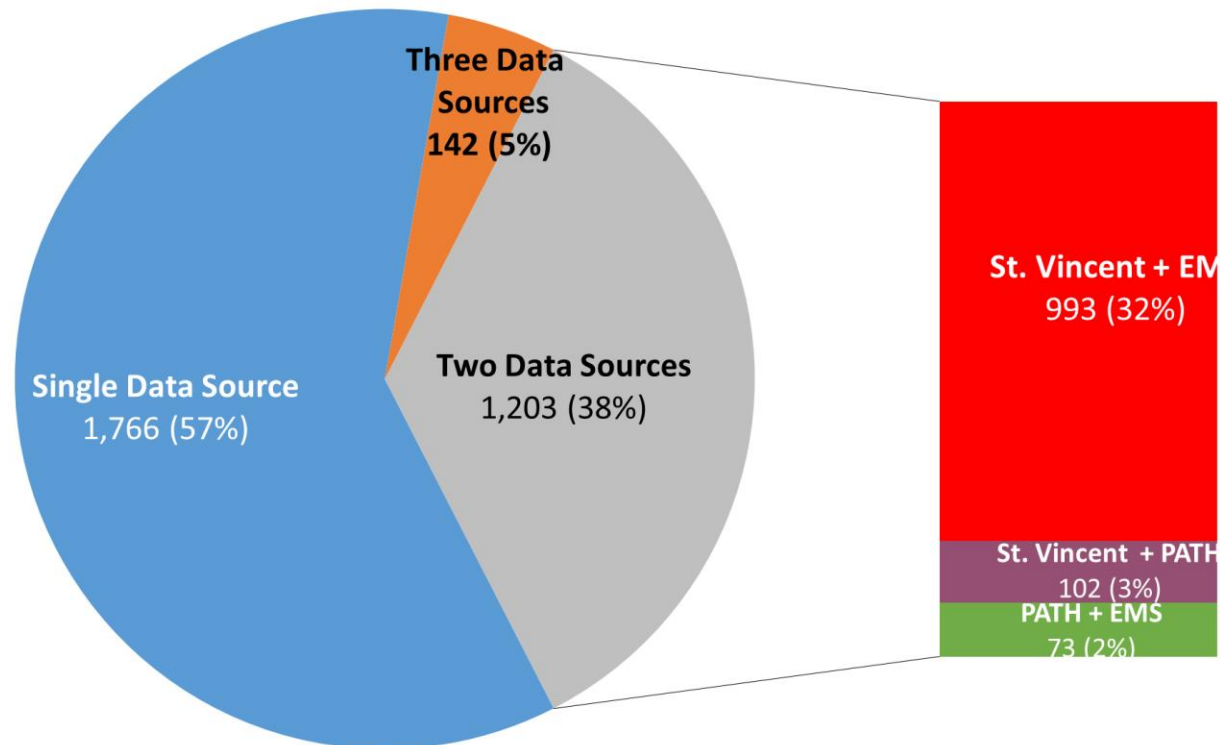
Three CIE partners enrolled 3,043 clients in one year.

- Father Joe's Village: 2,716 clients
- PATH: 281 clients
- EMS/FIRE Rescue: 46 clients

These three partners also agreed to the ongoing sharing of an agreed upon small set of data for each their enrolled clients.

Clients Are Served by Multiple Agencies

43% of CIE Client Dashboards Receive Data from Multiple Sources
(1,345 of 3,111 clients as of 6/30/2015)



This presentation provides information about:

- CIE enrolled client demographics and historical EMS use
- Agency use of the CIE platform to look-up client information
- Three research questions

Client Demographics

Demographic	CIE Enrolled	San Diego County Population*	San Diego Sheltered Population	San Diego Unsheltered Population
Males	70%	51%	58%	70%
Age	Median: 48 years	Median: 35 years		
White	64%	71%		
African American	29%	5%		
Other	6%	24%		
Veterans**	16%	11%		15%&

*San Diego County Data Source: Retrieved from <http://assessment.communitycommons.org/kp/>. Original Data Source [US Census Bureau, American Community Survey](#). Source geography: Tract

**Veteran Data Source: http://www.sandiegocounty.gov/hhsa/programs/phs/documents/CHS-Demographics_NorthCentral.pdf. pg 10.

&Regional Task Force. Source: <http://www.rtfhsd.org/wp/wp-content/uploads/2015/04/2015-WeALLCount-Fact-Sheet-FINAL.pdf>

History of EMS Visits

Annual EMS Trips	Frequency	%
No EMS Trips	2,313	76.0%
General user (1-5 Trips)	625	20.5%
Frequent user (6-26 Trips)	85	2.8%
Super user (27-52 Trips)	17	0.6%
Mega user (>51 Trips)	3	0.1%
Total CIE Clients	3,043	100%

Client CIE Look-Ups By Agency

(3,043 clients)

Agency	Total Client Look-ups	Unique Clients Look-ups	Average Look-ups per Client	Range of Client Look-ups
Father Joe's Village	1,342	824	1.6	1 to 17
PATH	131	60	2.2	1 to 11
SD EMS/Fire	317	119	2.6	1 to 21
Scripps Mercy Hospital	31	10	3.1	1 to 11
UCSD Medical Center	24	11	2.2	1 to 5
Total	1,845	1,024	1.8	1 to 21

*Table excludes supervisor or administrative views



Clients with the most EMS history were more likely to be looked up (3,043 clients)

Annual EMS Trips	Look-up	% of Look-ups	No Look-up	% of No Look-ups	Total Clients
No EMS Trips	754	33%	1559	67%	2,313
General user (1-5 Trips)	243	39%	382	61%	625
Frequent user (6-26 Trips)	45	53%	40	47%	85
Super user (27-52 Trips)	12	71%	5	29%	17
Mega user (>51 Trips)	3	100%	0	0%	3
Total CIE Clients	1,057	34%	1,986	65%	3,043

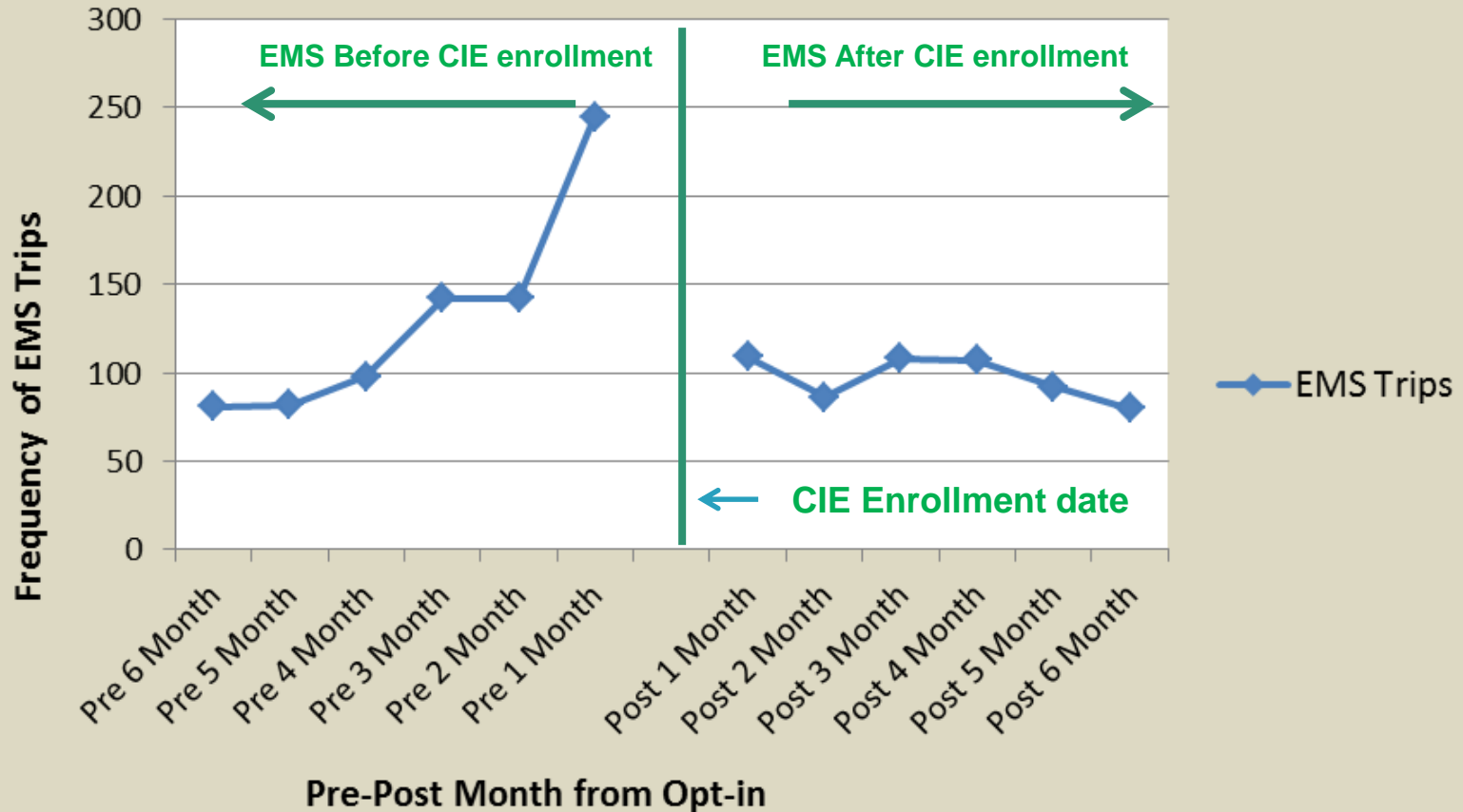
Question #1

Is CIE enrollment associated with a reduction in the number of EMS transports before and after enrollment?

Sample: 233 clients with a history of EMS transport prior to CIE and who were enrolled in CIE at least 6 months

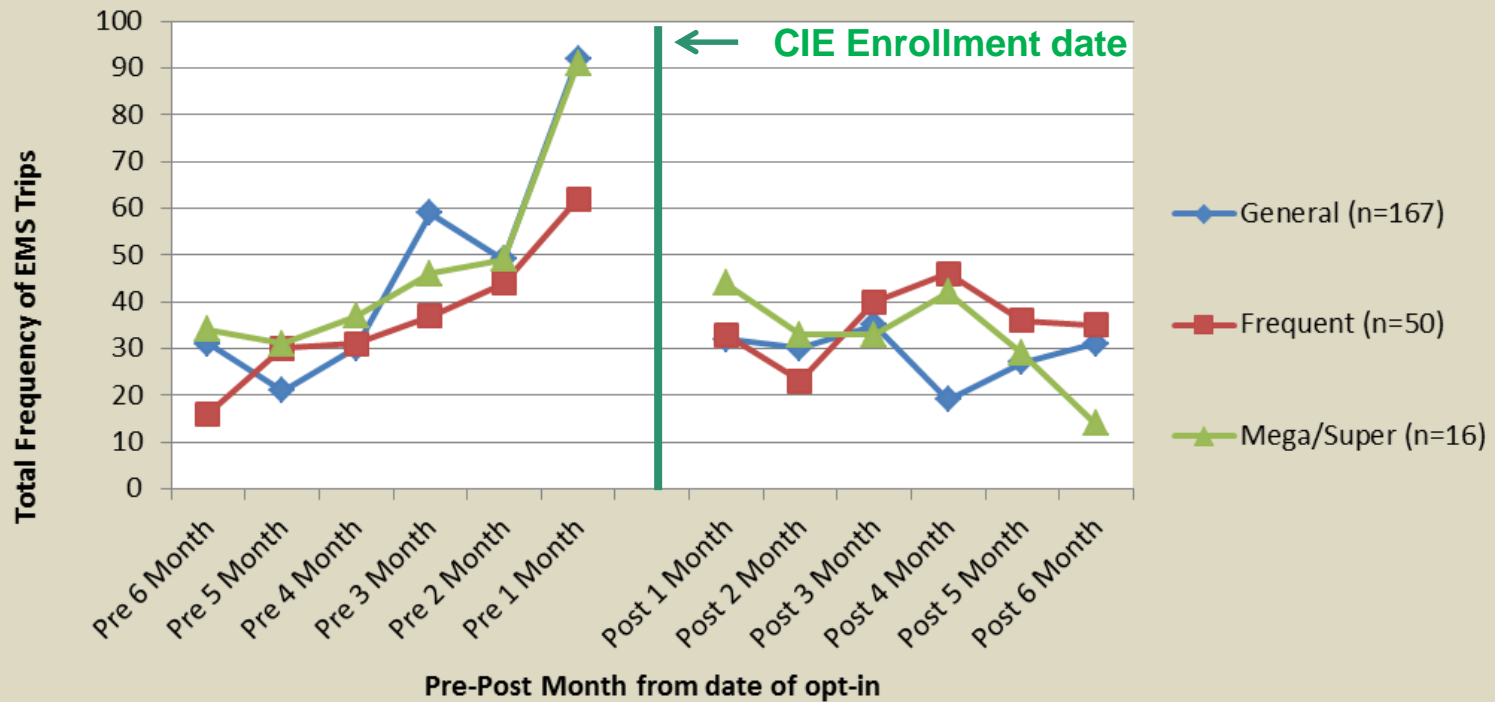
Number of EMS Trips Pre/Post

Total EMS Trips by Month from Opt-in (n=233)



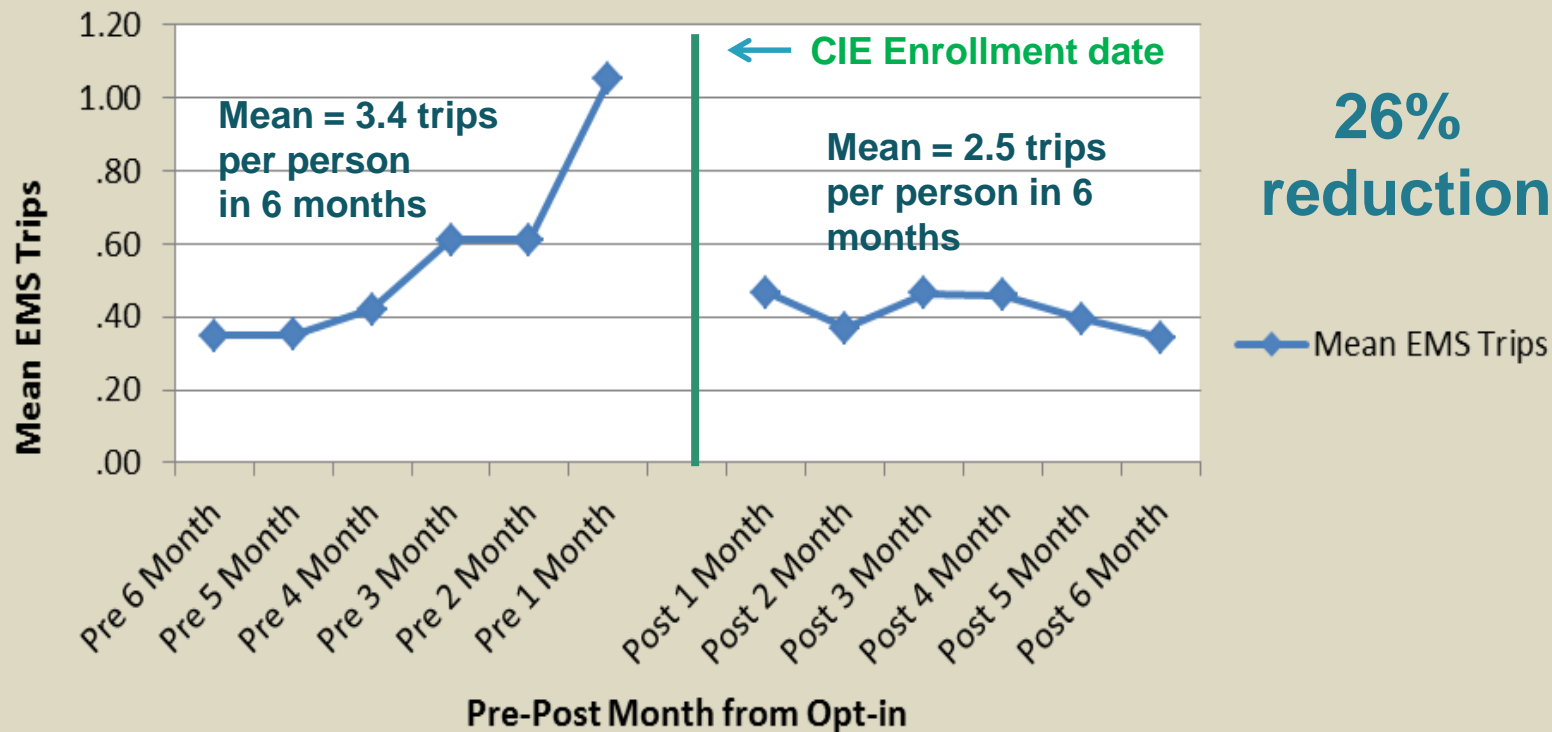
EMS Trips by EMS Risk Category

Total EMS Trips by Month from Opt-in & EMS Risk
(n=233)



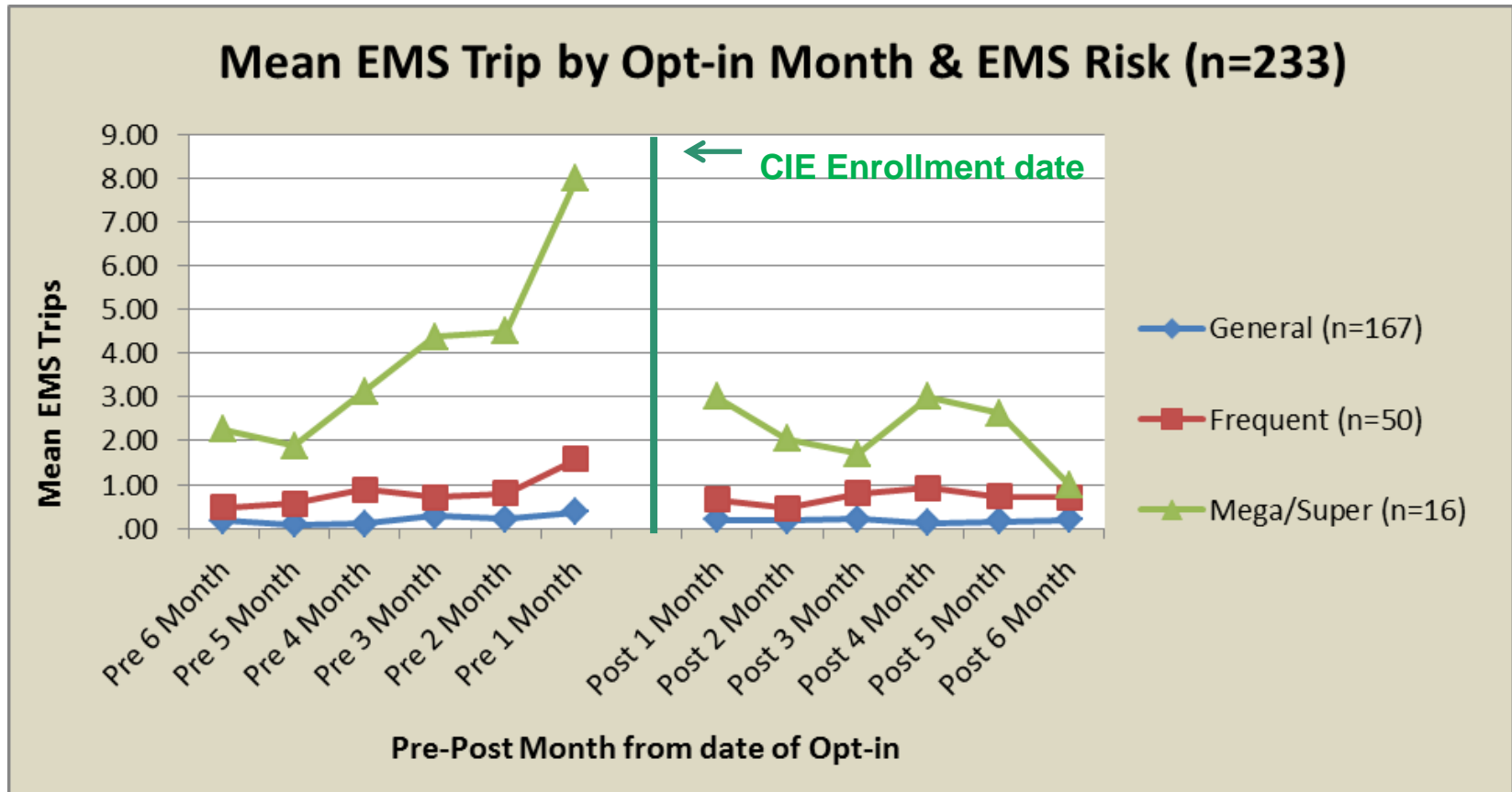
Average number of EMS Trips Pre/Post Enrollment

Mean EMS Trips by Month from Opt-in (n-233)



Overall, a 26% reduction in the mean number of EMS trips.
A statistically significant difference ($p=0.002$)

Mean EMS Trips EMS Risk Category and Month of Enrollment



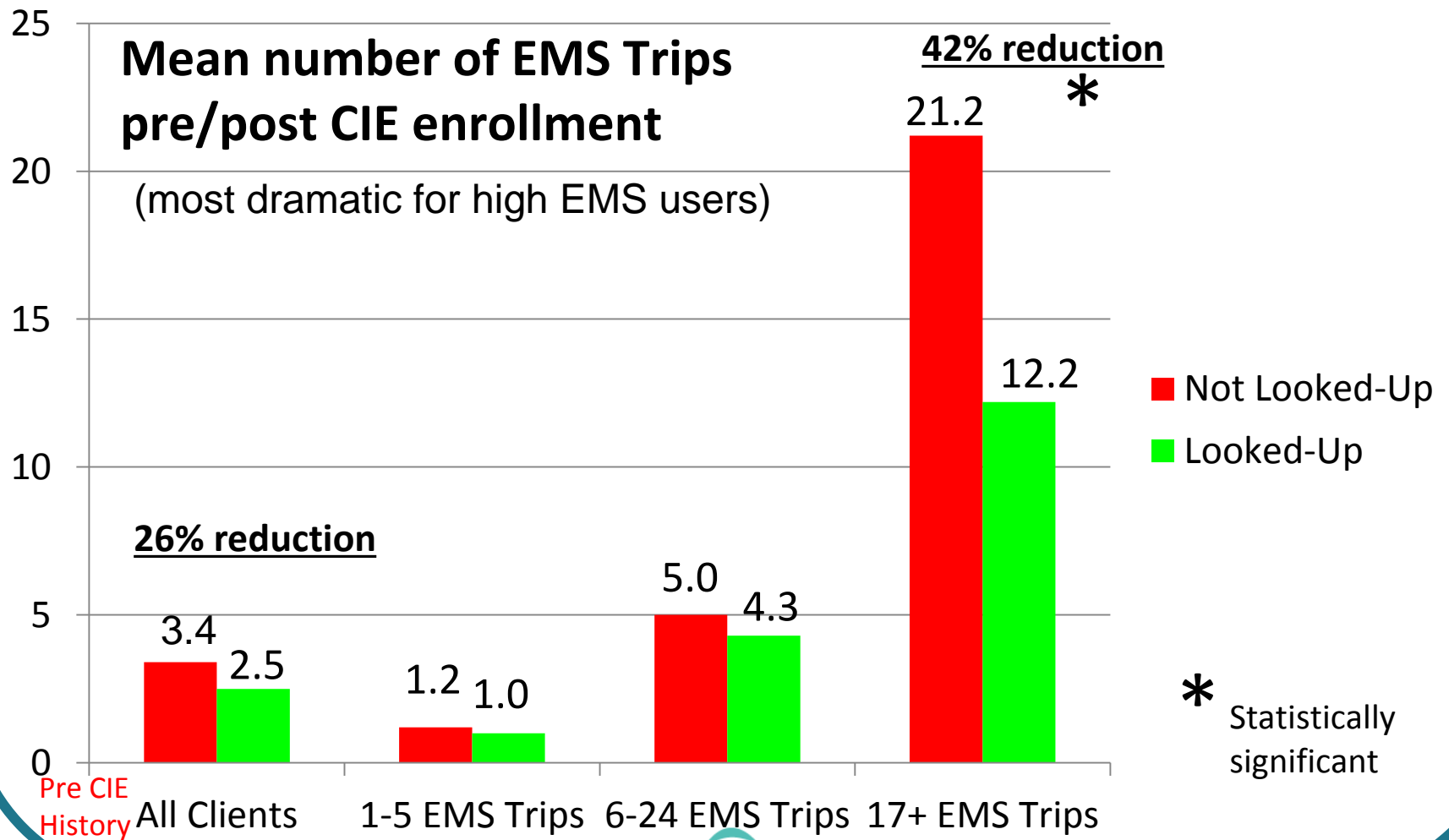
Mean trips pre/post enrollment:

General users: 1.2 vs 1.0 (p=0.27), a 16% reduction in mean # of trips

Frequent users: 5.0 vs 4.3 (p=0.29), a 14% reduction in mean # of trips

Super/mega: 21.2 vs 12.2 (p=0.004), a 42% reduction in mean # of trips

Clients with Look-ups Have Fewer EMS Trips Post Enrollment (n=233 clients)



Result #1

For 233 clients with EMS history and six months of CIE enrollment:

CIE enrollment is associated with a reduction in the number of EMS transports before and after enrollment. The effect is greatest (42% reduction) for clients with the highest number of EMS visits prior to CIE enrollment.

Question #2

Once enrolled, are CIE look-ups associated with fewer housed persons returning to the street?

Sample: 1,206 clients who were enrolled in CIE and also in a housing program with a bed

Housing Exit Variables

If a client exits a housing placement, the HUD assessment form requires the service provider to enter the date of exit and the exit destination (required field). For all CIE clients we categorized the exit destinations into four categories.

Exit Destinations

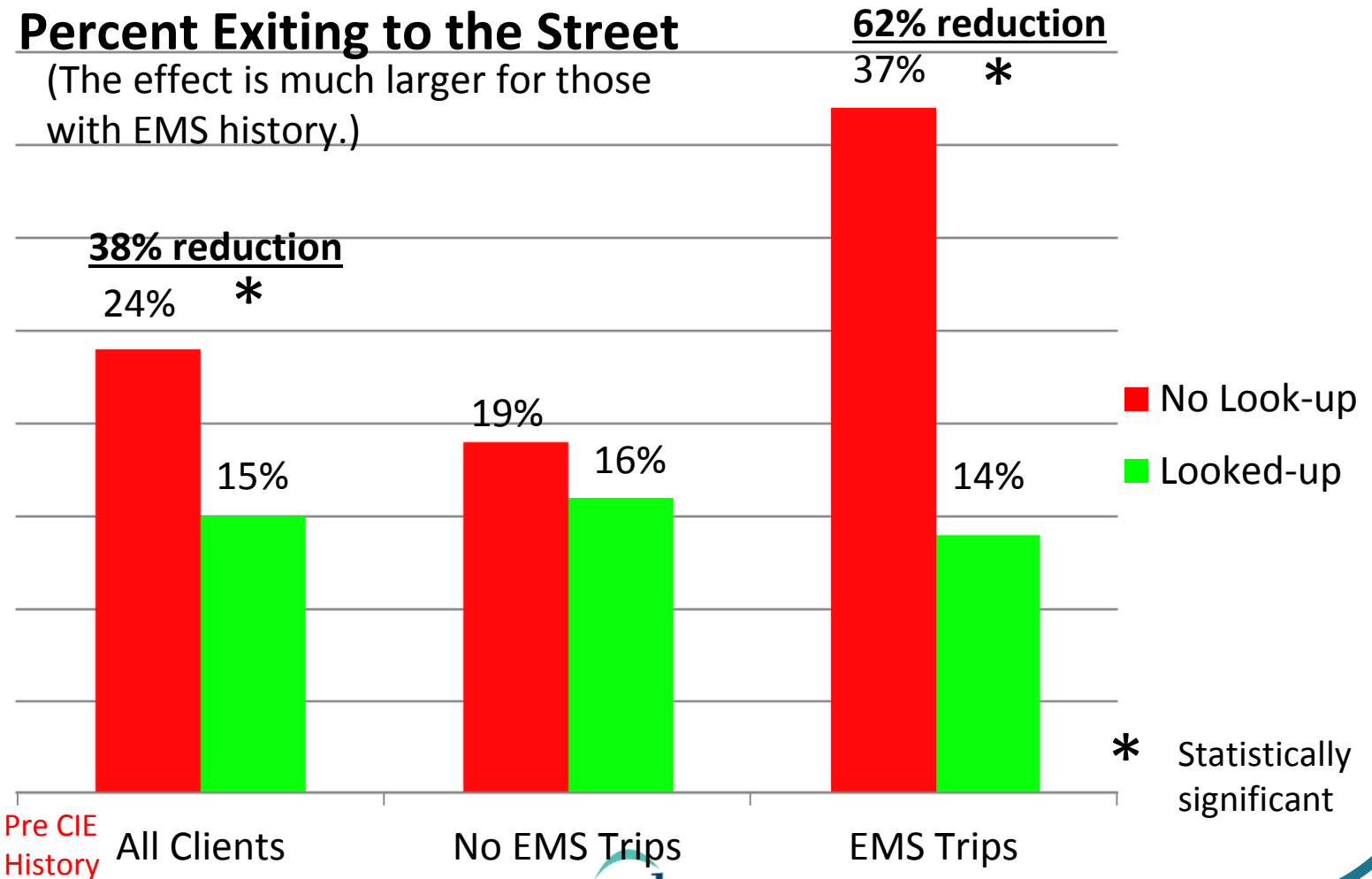
(1,206 clients with a bed)

Exit Destination	Frequency	%
Exit to the Street/homeless	225	19%
Exit to Hotel/shelter/temporary	198	16%
Exit to permanent housing	158	13%
No exit. Still housed	625	52%
Total	1,206	100%

Housed Clients with Look-ups Are Less Likely to Exit to the Street (n=1,206 persons)

Percent Exiting to the Street

(The effect is much larger for those with EMS history.)



Pre CIE
History

All Clients

No EMS Trips

EMS Trips

* Statistically significant

Result #2

***Among 1,206 enrolled CIE clients
with a bed:***

*CIE look-ups were associated with fewer
housed persons returning to the street.
The effect is greatest for those with a
history of EMS transport*

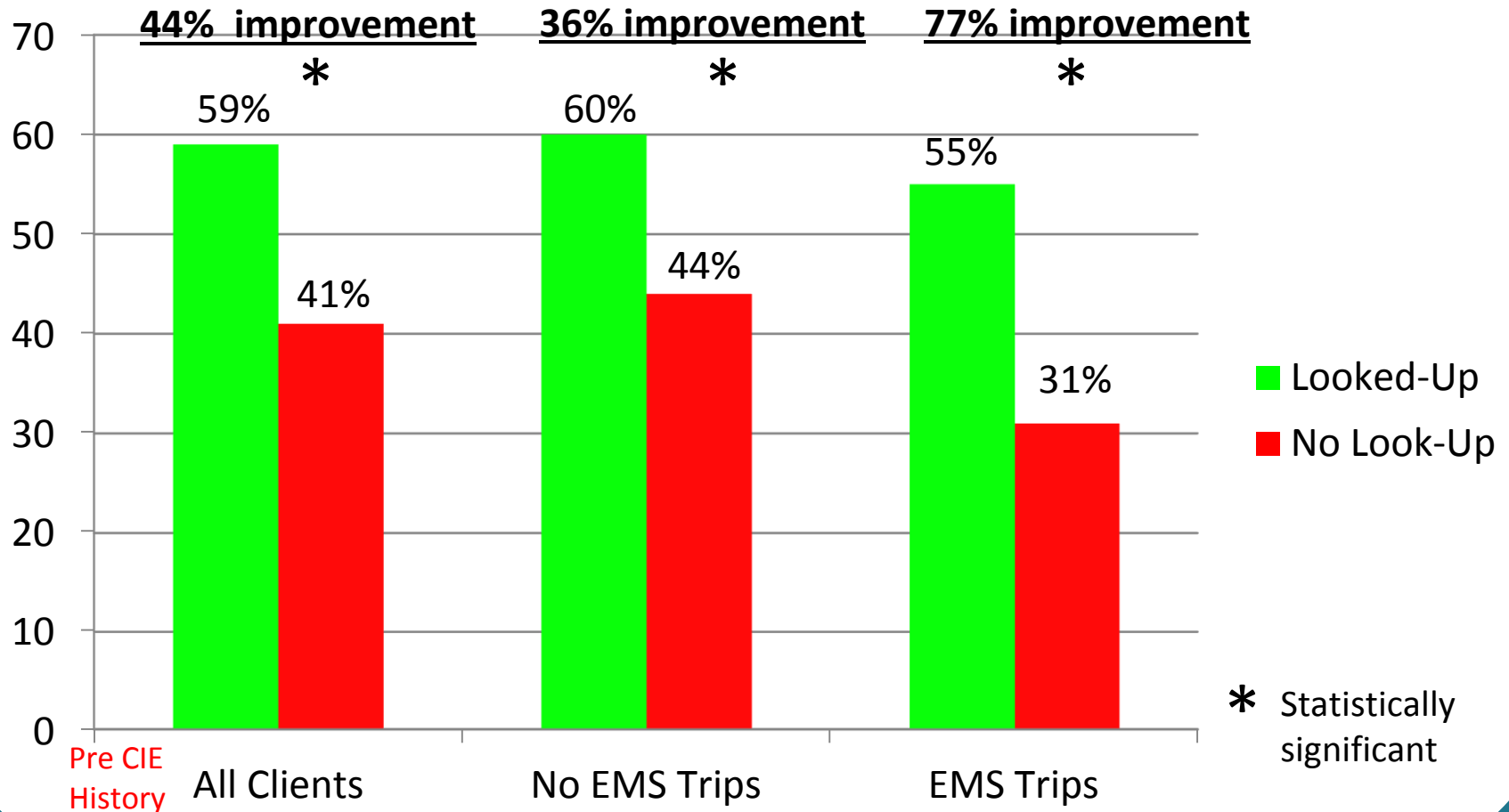
Question #3

Once enrolled, are CIE look-ups associated with clients remaining in their current housing placement?

Sample: 1,206 clients who were enrolled in CIE and also in a housing program with a bed

Housed Clients with Look-ups Are More Likely to Remain in their Current Placement (n=1206 persons)

Percent Remaining in Current Placement (higher % is better outcome)

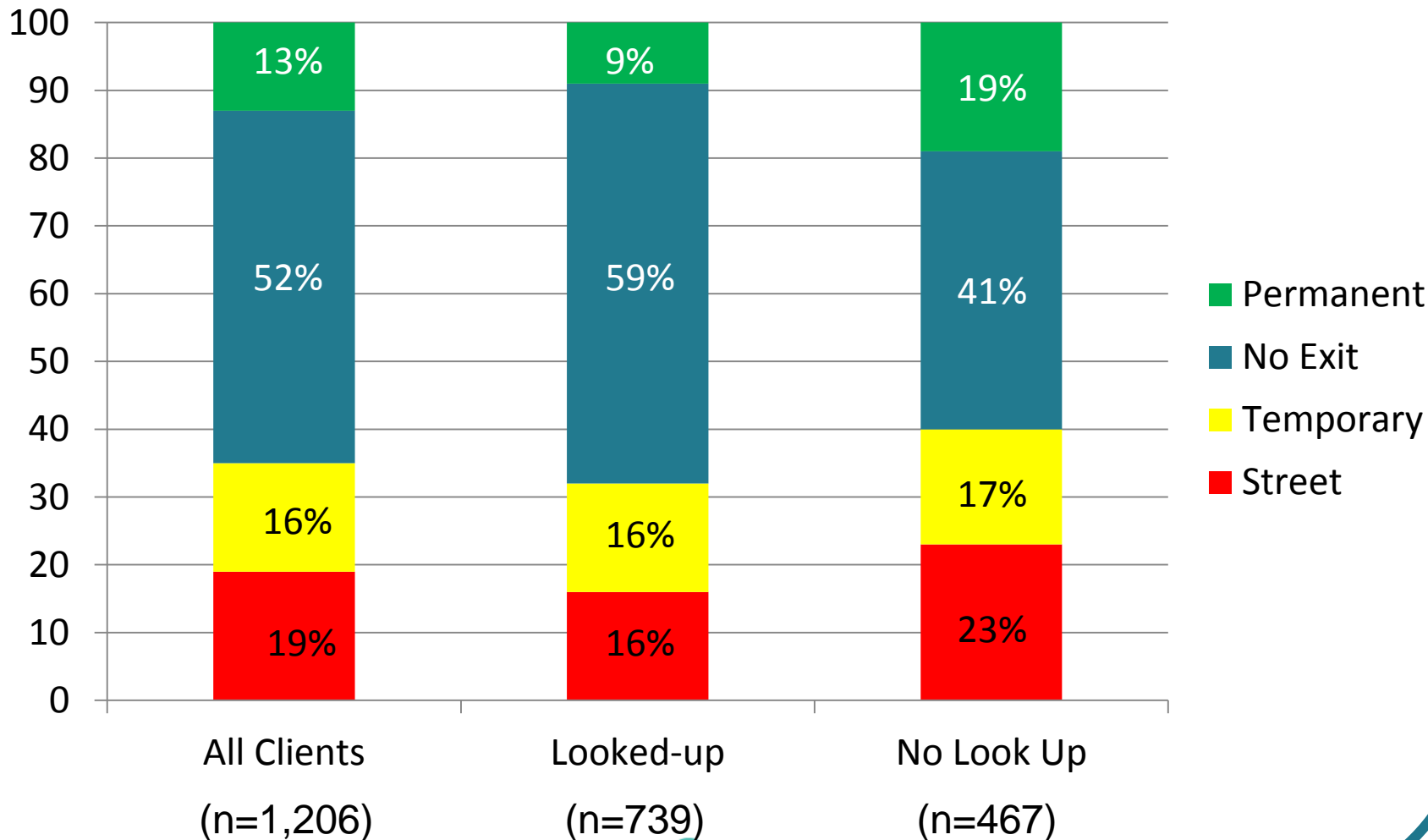


Result #3

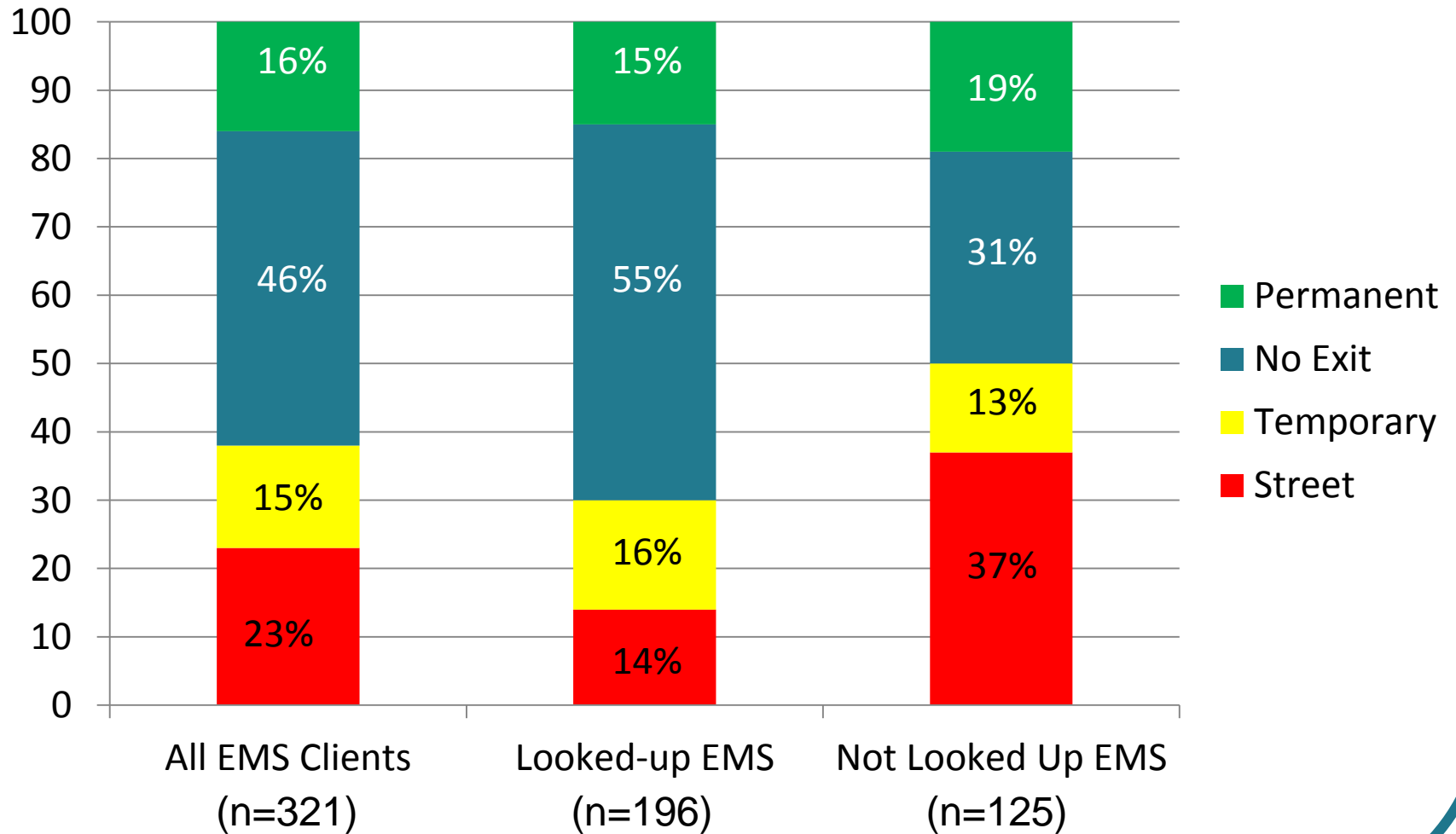
***Among 1,206 enrolled CIE clients
with a bed:***

*CIE clients with look-ups were more
likely to stay in their current housing
placement.*

Housing Status at the End of the Evaluation Period



Housing Status at the End of the Evaluation Period for Clients with Pre-CIE EMS History



Housing Status at the End of the Evaluation

Housing status at the end of the evaluation period was related to both EMS history and CIE look-up status. Those with an EMS history who were looked up were the most likely to remain in their current housing placement.

Summary

- 3,043 clients were enrolled in CIE from July 1, 2014 – June 30, 2015
- 74% were male, 64% were white, 16 % were veterans and the median age was 48 years.
- 24% of those enrolled had a history of one or more EMS trips in the past year (range 1-21 trips)
- Agency personnel from FJV, PATH, EMS, Scripps, and UCSD looked-up information on 35% (n=1,057) of the enrolled clients. Clients with a history of more EMS visits were the most likely to be looked up.

Summary (continued)

- Overall, there was a **26% reduction** in the mean number of EMS trips pre and post CIE enrollment for 233 CIE enrolled clients with a history of EMS use. The largest percent reduction (42%) was for clients with the highest EMS risk.
- Overall, there was a **38% reduction** in the percentage of housed clients who exited housing and went back to the street (24% vs 15%) between those that were not looked up compared to those that were looked up. The largest effect was seen among clients with EMS history (62% reduction)
- Overall, there was a **44% improvement** in the percentage of housed clients who remained in their current housing placement between those who were not looked-up and those who were looked up. The largest effect (77% improvement) was seen among clients with EMS history.

How do we Explain These Results?

(Key Informant Comments)

1. Knowing what other services the client is accessing:

“With care coordination often times we just don’t always know what other services our clients are accessing. Our clients tend to be mediocre to poor reporters of things like that, and so it can be challenging for us to understand what other services our clients are accessing and when. CIE helps us with this”

2. Using CIE EMS data to decide the best referral program for the client:

“We use this information to decide on the type of programs for the client. If we know the client has a history of multiple EMS use, they are more accurately referred to the best program for their needs.”

Hypothesis

- The associations we are seeing may be the result of the case manager's ability to trust the accuracy of the historical information recorded in CIE (as opposed to client self-report), and as a result make more appropriate client program referrals sooner. This enables them to do the job they were trained to do, and could reduce the number of placements and shorten the length of time from street homelessness to permanent housing.
- Or, it could be that the case manager gains an "awareness" of the difficult issues for their client and begins monitoring for them earlier.
- Other hypotheses?

Association vs. Causation

This prospective evaluation analyzed the association between CIE enrollment and EMS trips and CIE look-ups and housing. We found a positive association in both cases. This does not infer causation. Many factors likely contributed to this finding. Further research is warranted.

Future Research Possibilities

- A cost-benefit analysis of the savings incurred by fewer EMS trips for CIE enrolled clients. What is the cost-benefit of reduced exits to the streets and improved likelihood of remaining in current placement?
- With CIE look-ups, hospitals can discharge patients to their previous homeless providers. What is the impact of this continuity of care as opposed to a client having to establish new relationships with a new homeless service provider after a hospitalization?
- Which pieces of information are most critical to providers and could there be improvements in the efficiency of workflow with new or better information or auto-notifications?

Future Research Possibilities

- What factors contribute most to reduce the number of placements and shorten the length of time from street homelessness to permanent housing? Are these factors different for different sub-populations of homeless? (i.e. veterans, youth, first time homeless, chronically homeless, substance use, mental health etc.)?
- Other possible future research?