

# Managing Substance Use Disorders (SUDS) as a Chronic Condition

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## *Problem and Purpose*

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- Over the past several decades there has been a growing recognition that a subset of substance users suffers from a chronic condition that requires multiple episodes of care over several years.
- This presentation will focus on
  1. Quantifying the patterns that demonstrate that substance use disorders are a chronic condition
  2. Examining the cycle of relapse, treatment, incarceration and recovery that characterize the course of this condition and what predicts transition
  3. Presenting the results of two experiments designed to improve the ways in which this condition is managed across time and multiple episodes of care.

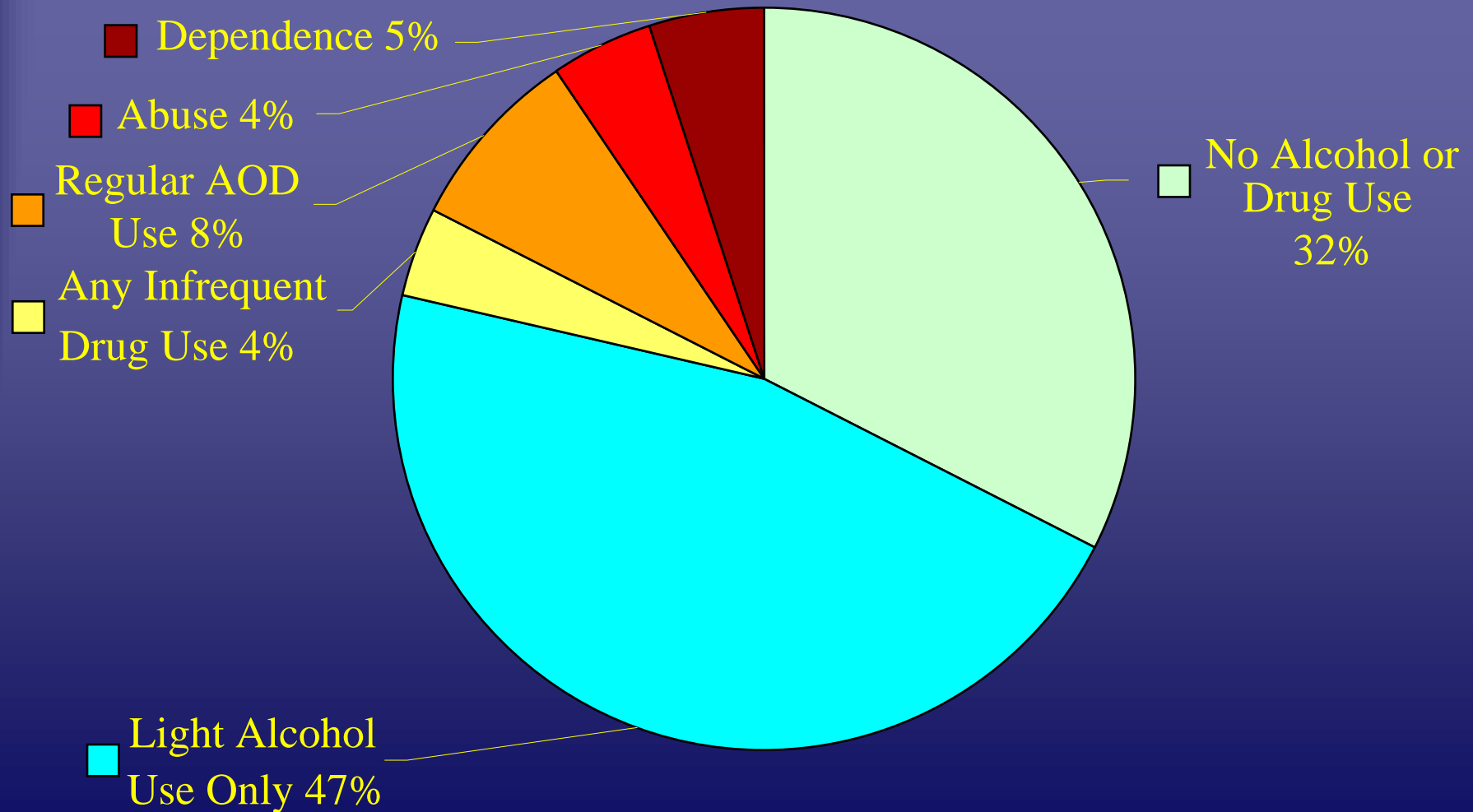
## *Definition of Chronic SUD*

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- The American Psychiatric Association (APA, 1994, 2000) and the World Health Organization (WHO, 1999) use the term “substance dependence” to indicate a pattern of chronic problems (e.g., withdrawal, inability to stop, giving up activities) that are likely to persist.
- They use the term “substance abuse” to identify people not meeting the dependence criteria but having other moderate severity symptoms (e.g., hazardous use, legal problems) suggesting the need for treatment.
- These standards also recognize that the course of substance use disorders includes periods of relapse, treatment, incarceration, and remission (i.e., the absence of symptoms while in the community)

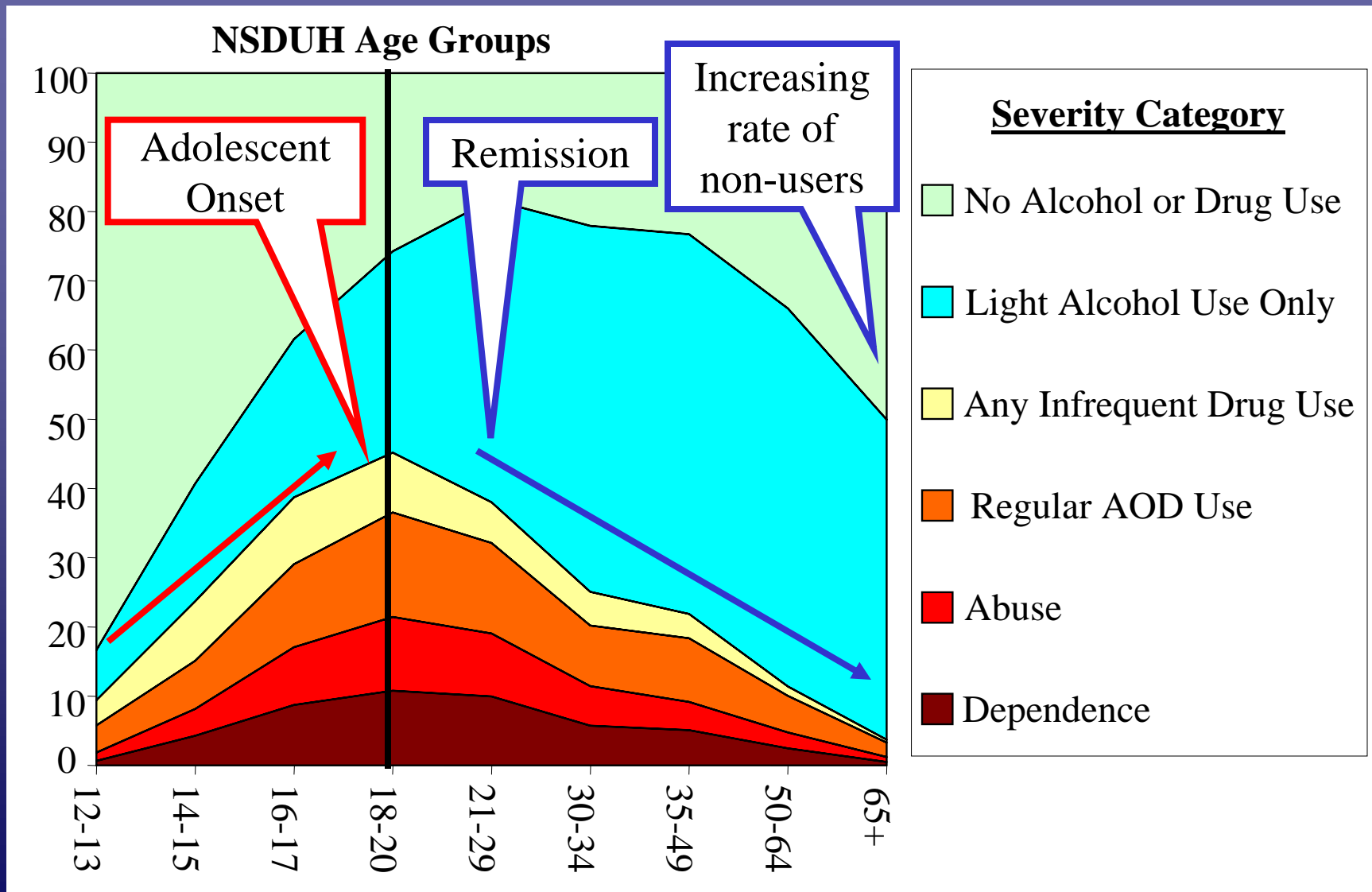
# Severity of Past Year Substance Use/Disorders

(2002 U.S. Household Population age 12+= 235,143,246)



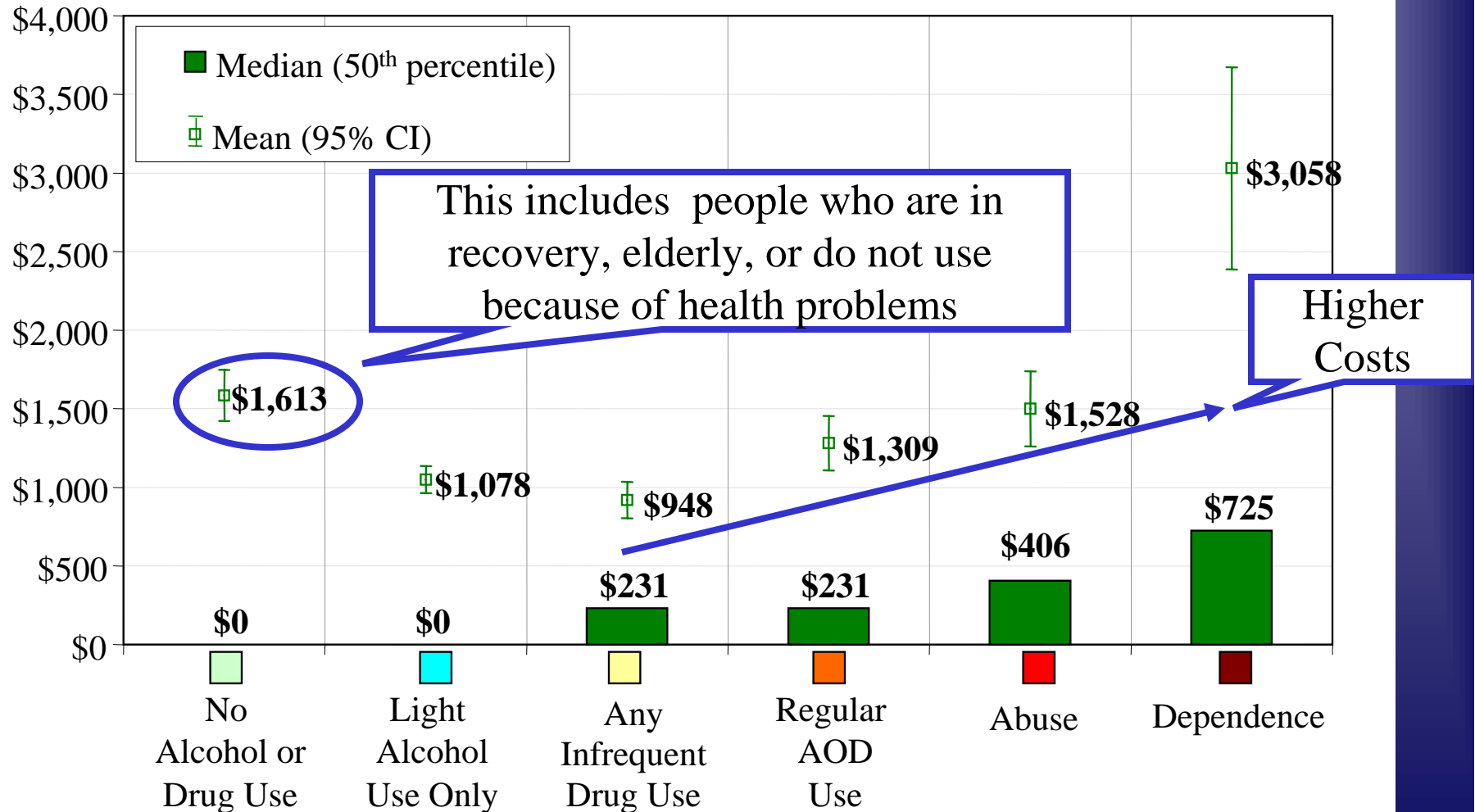
Source: 2002 NSDUH and Dennis & Scott under review<sup>4</sup>

# Problems Vary by Age



Source: 2002 NSDUH and Dennis & Scott under review

# Higher Severity is Associated with Higher Annual Cost to Society Per Person



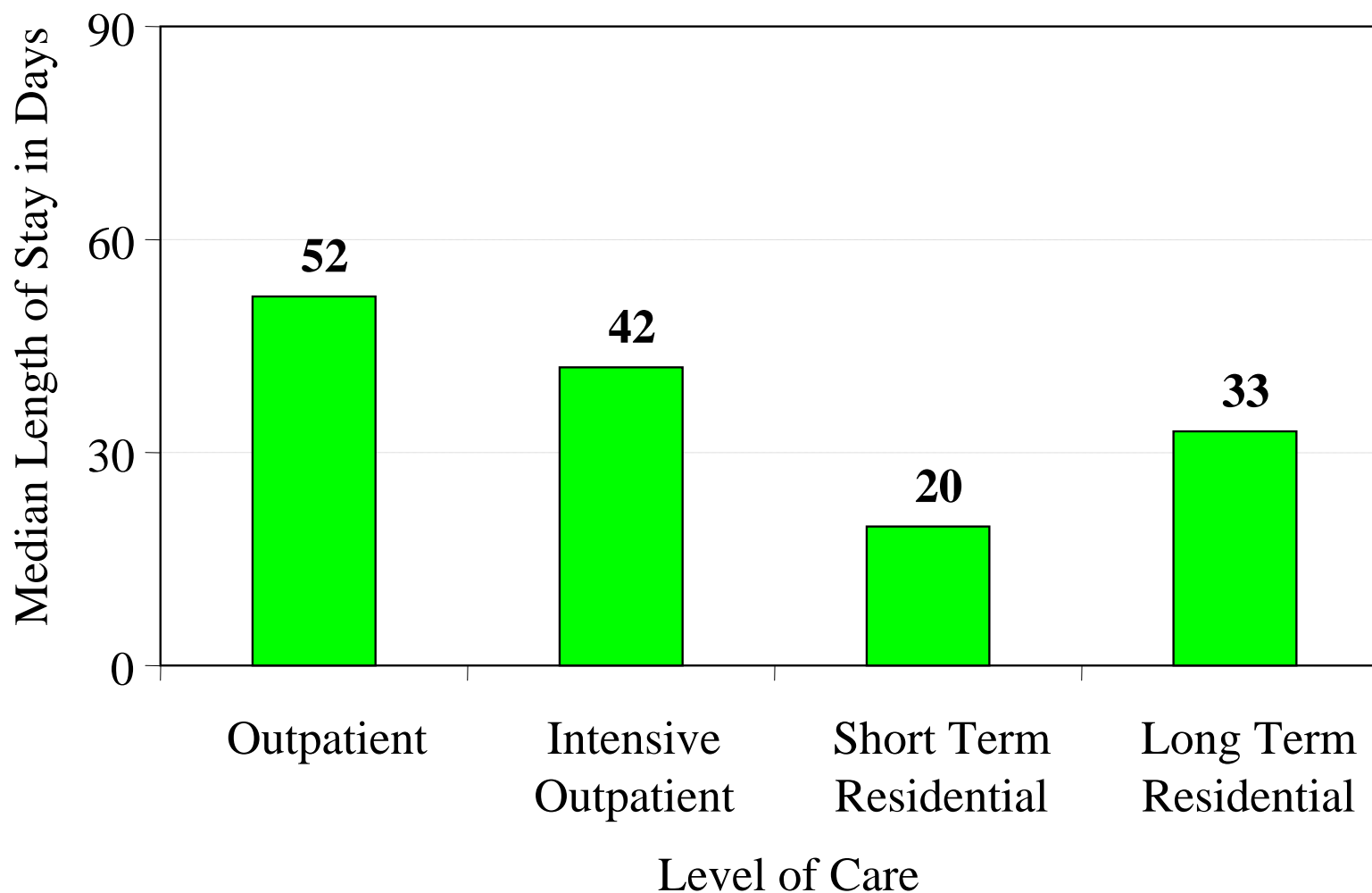
## *Treatment Participation*

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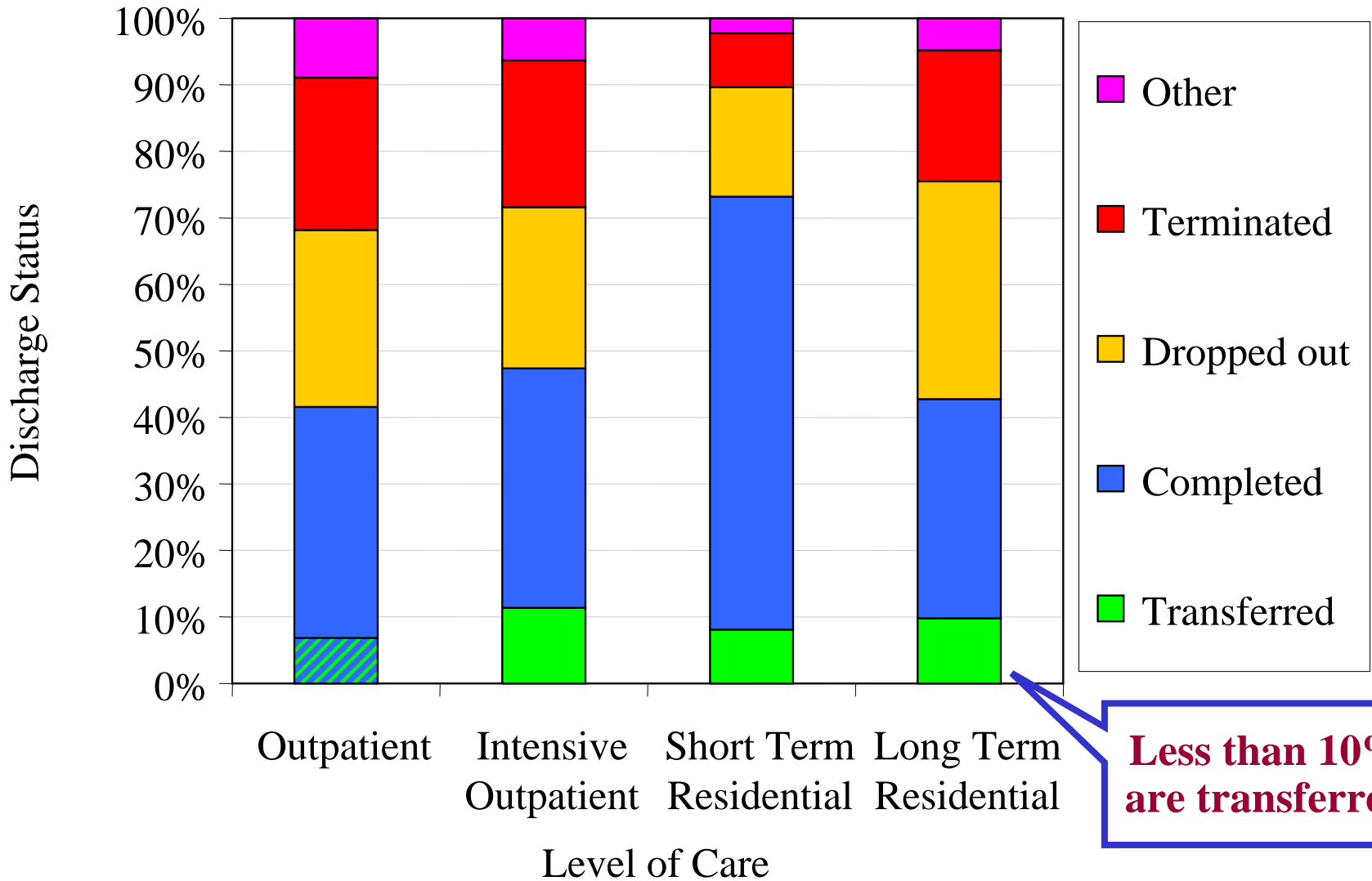
- Only 1 in 5 people with dependence or abuse in the U.S. receive any kind of treatment, and about half of those access it through publicly-funded substance abuse treatment (Epstein, 2002)
- People presenting to publicly funded treatment with dependence (vs. others with abuse, intoxication, primarily other psychiatric diagnoses) are more likely to have been
  - in treatment before one or more times (57% vs. 39%, OR=1.46,  $p<.05$ ),
  - in treatment 3 or more times (16% vs. 9%, OR=1.79,  $p<.05$ ),
  - assigned to intensive outpatient (15% vs. 6%, OR=2.52,  $p<.05$ )
  - assigned to residential treatment (16% vs. 5%, OR=3.17,  $p<.05$ ) (OAS, 2002 on line data at <http://webapp.icpsr.umich.edu/cocoon/ICPSR-SERIES/00056.xml>)
- People with 3 or more diagnoses were significantly more likely than those with just 1 diagnosis to enter treatment (34% vs. 7%) (Kessler, et al., 1996).

## *The Majority Stay in Tx Less than 90 days*



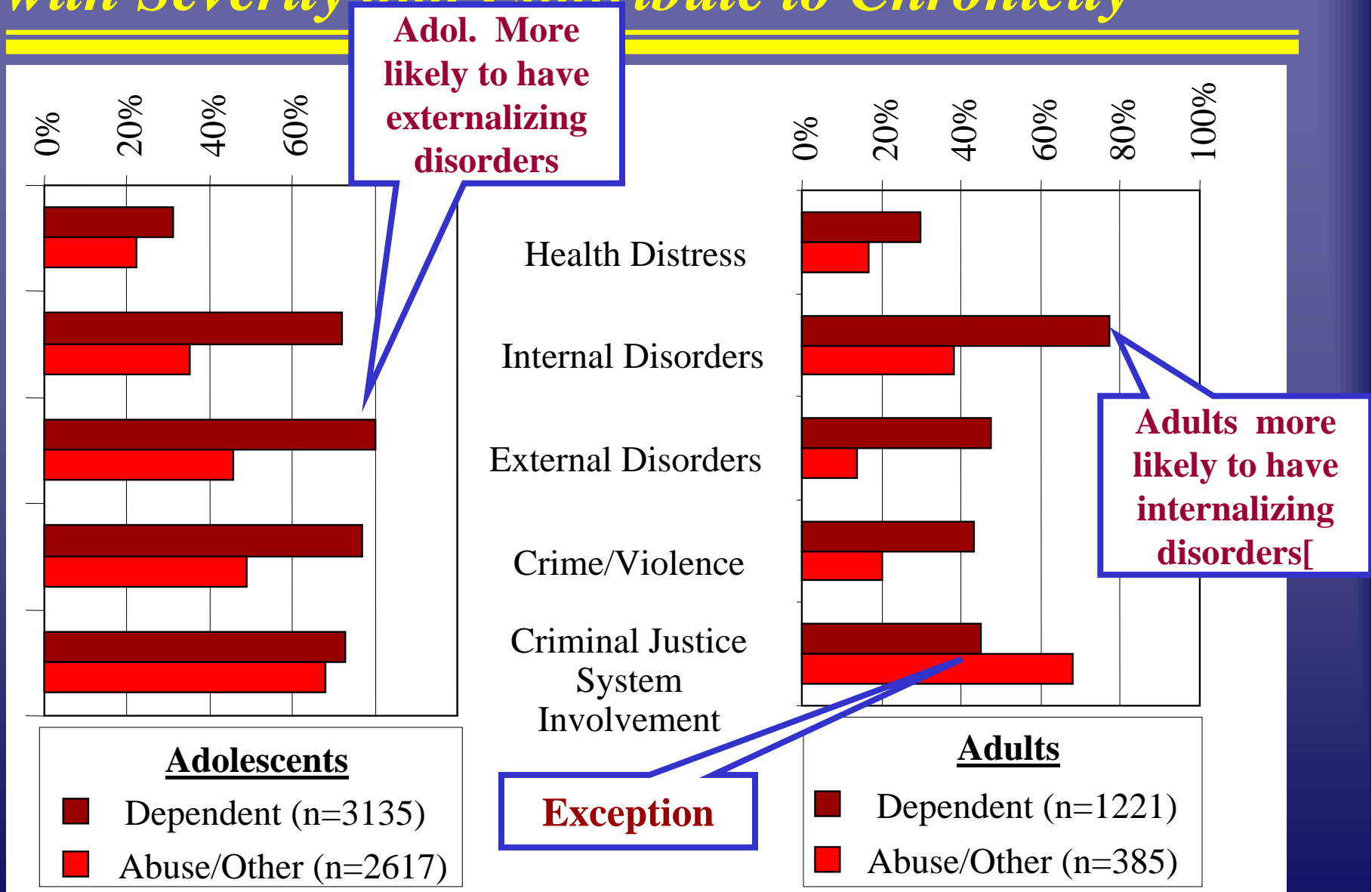
Source: Data received through August 4, 2004 from 23 States (CA, CO, GA, HI, IA, IL, KS, MA, MD, ME, MI, MN, MO, MT, NE, NJ, OH, OK, RI, SC, TX, UT, WY) as reported in Office of Applied Studies (OAS; 2005). Treatment Episode Data Set (TEDS): 2002. Discharges from Substance Abuse Treatment Services, DASIS Series: S-25, DHHS Publication No. (SMA) 04-3967, Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from [http://www.dasis.samhsa.gov/teds02/2002\\_teds\\_rpt\\_d.pdf](http://www.dasis.samhsa.gov/teds02/2002_teds_rpt_d.pdf).

# Less Than Half Are Positively Discharged



Source: Data received through August 4, 2004 from 23 States (CA, CO, GA, HI, IA, IL, KS, MA, MD, ME, MI, MN, MO, MT, NE, NJ, OH, OK, RI, SC, TX, UT, WY) as reported in Office of Applied Studies (OAS; 2005). Treatment Episode Data Set (TEDS): 2002. Discharges from Substance Abuse Treatment Services, DASIS Series: S-25, DHHS Publication No. (SMA) 04-3967, Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from [http://www.dasis.samhsa.gov/teds02/2002\\_teds\\_rpt\\_d.pdf](http://www.dasis.samhsa.gov/teds02/2002_teds_rpt_d.pdf).

# Multiple Co-occurring Problems are Correlated with Severity and Contribute to Chronicity



Source: GAIN Coordinating Center Data Set

## *Pathways to Recovery Study (Scott & Dennis)*

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Recruitment: 1995 to 1997

Sample: 1,326 participants from sequential admissions to a stratified sample of 22 treatment units in 12 facilities, administered by 10 agencies on Chicago's west side.

Substance: Cocaine (33%), heroin (31%), alcohol (27%), marijuana (7%).

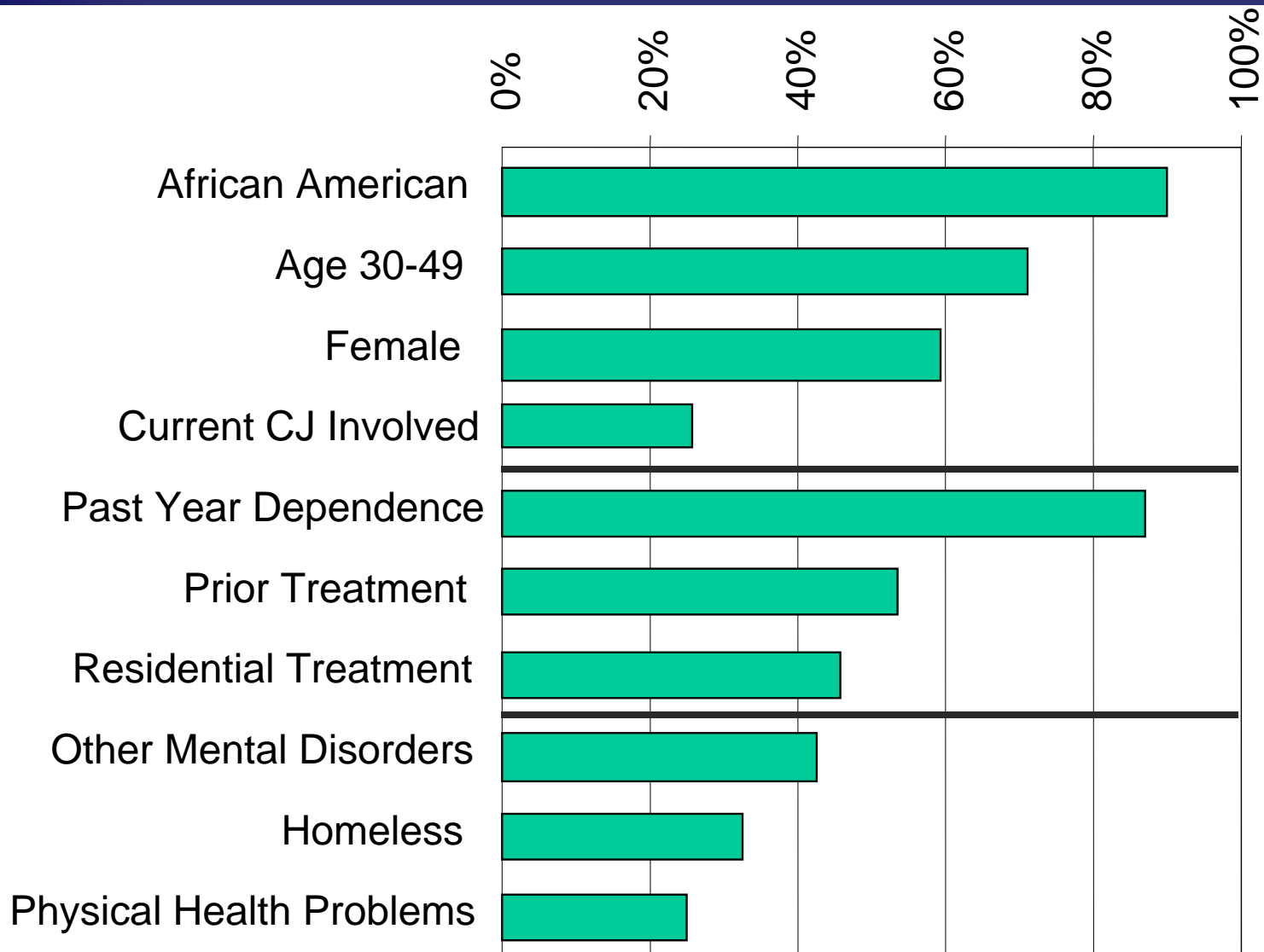
Levels of Care: Adult OP, IOP, MTP, HH, STR, LTR

Instrument: Augmented version of the Addiction Severity Index (A-ASI)

Follow-up: Of those alive and due, follow-up interviews were completed with 94 to 98% in annual interviews out to 8 years (going to 10 years); over 80% completed within +/- 1 week of target date.

Funding: CSAT grant # T100664, contract # 270-97-7011  
NIDA grant 1R01 DA15523

# *Pathways to Recovery Sample Characteristics*



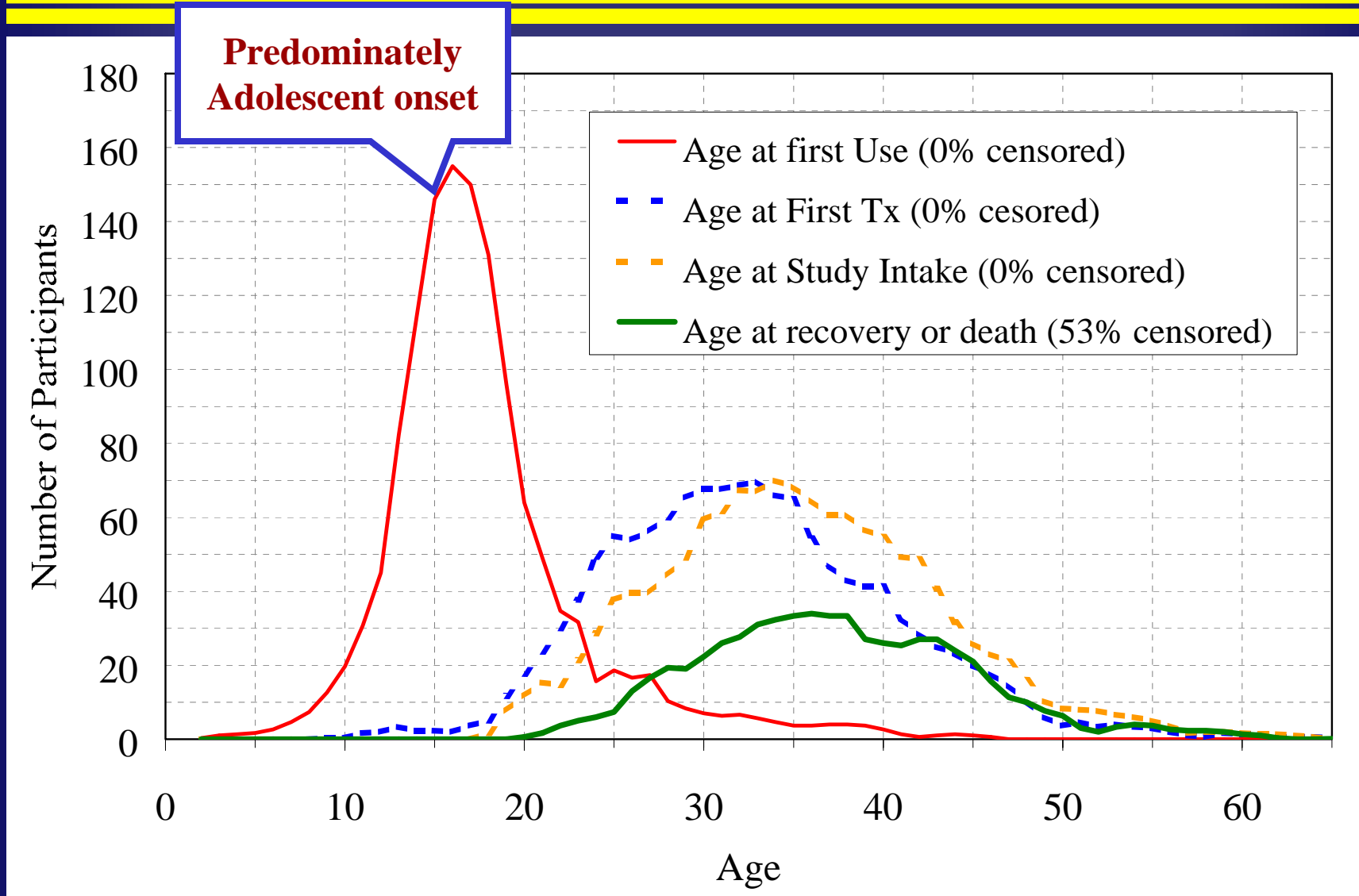
## *Survival Analysis*

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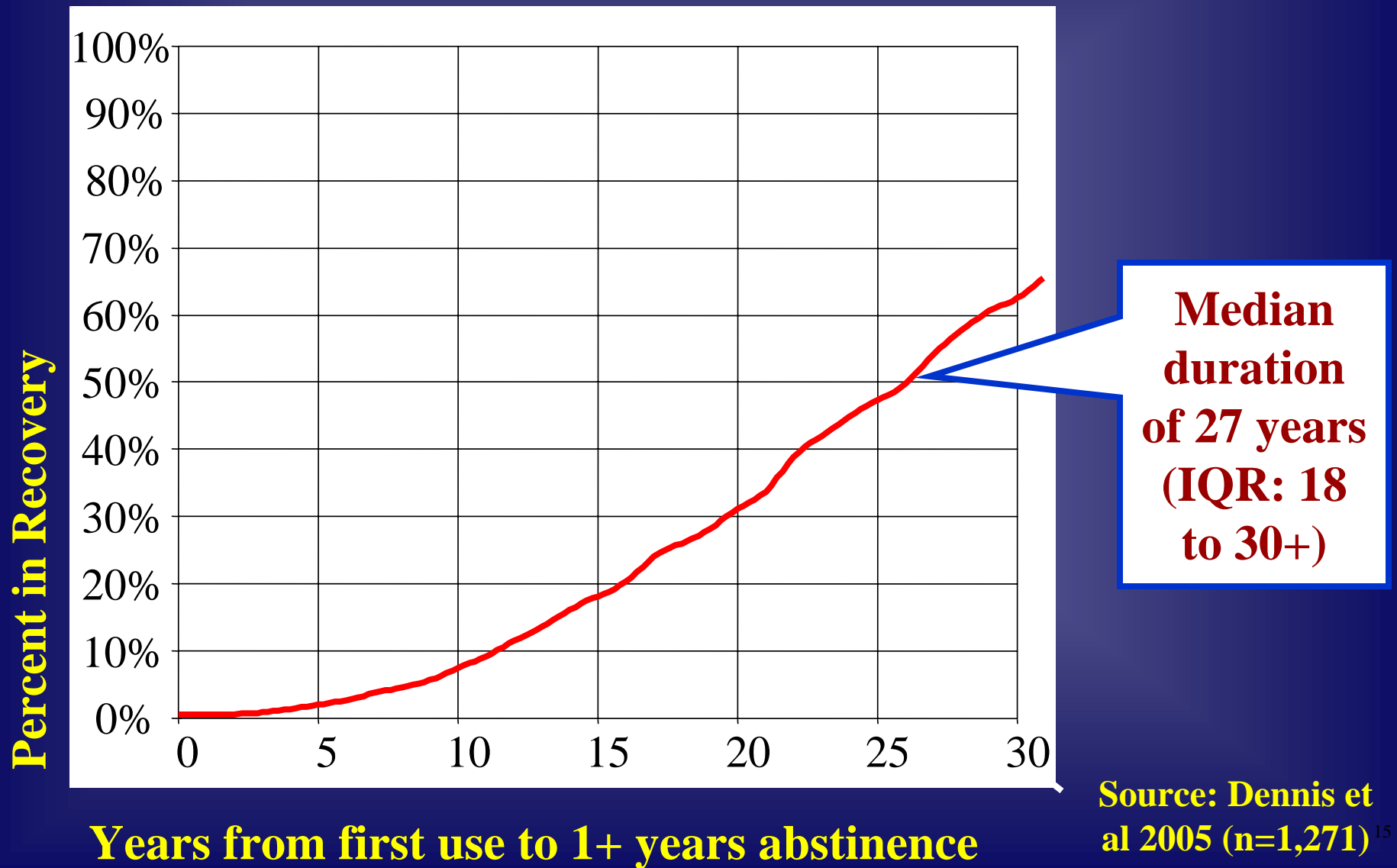
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- Time frames related to age of use, treatment, and death were measured across all sources and waves of information (taking the earliest first use, treatment episode, and 12 month period of abstinence or death).
- Age at last use was defined as the age when a person first completed a period of 12 month abstinence or had died (35 or 2.6% of the people died in 3 years).
- Durations were estimated with Cox Proportional Hazards Regression
  - censoring people who were in treatment or still using,
  - censoring years past which we had less than 100 people to make the estimate, and
  - creating a 30 year window of observation on the trajectory of substance use disorders starting at the time of first use

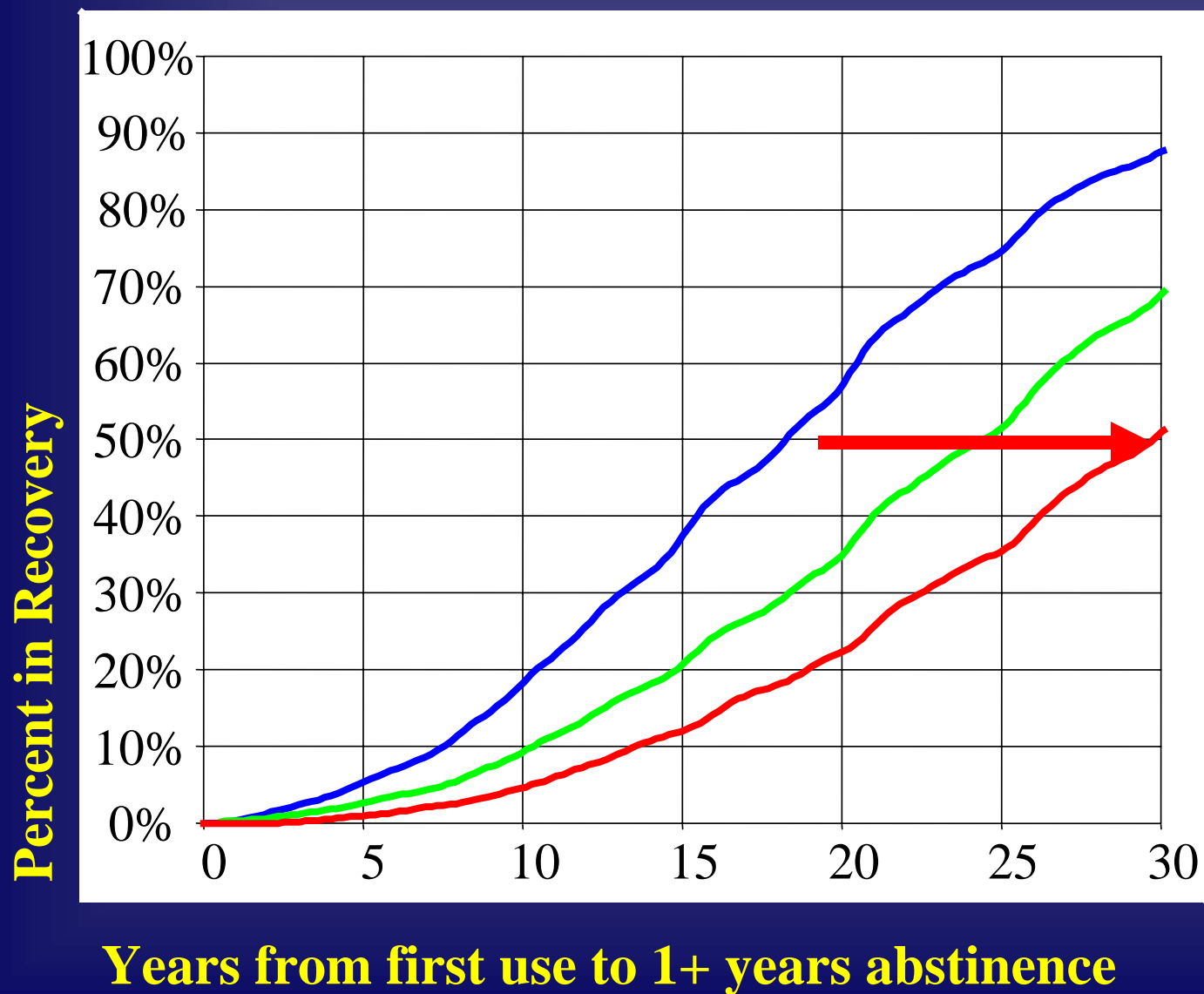
# Age Distributions



# *Substance Use Careers Last for Decades*



# *Substance Use Careers are Longer, the Younger the Age of First Use*



**21+**

**15-20\***

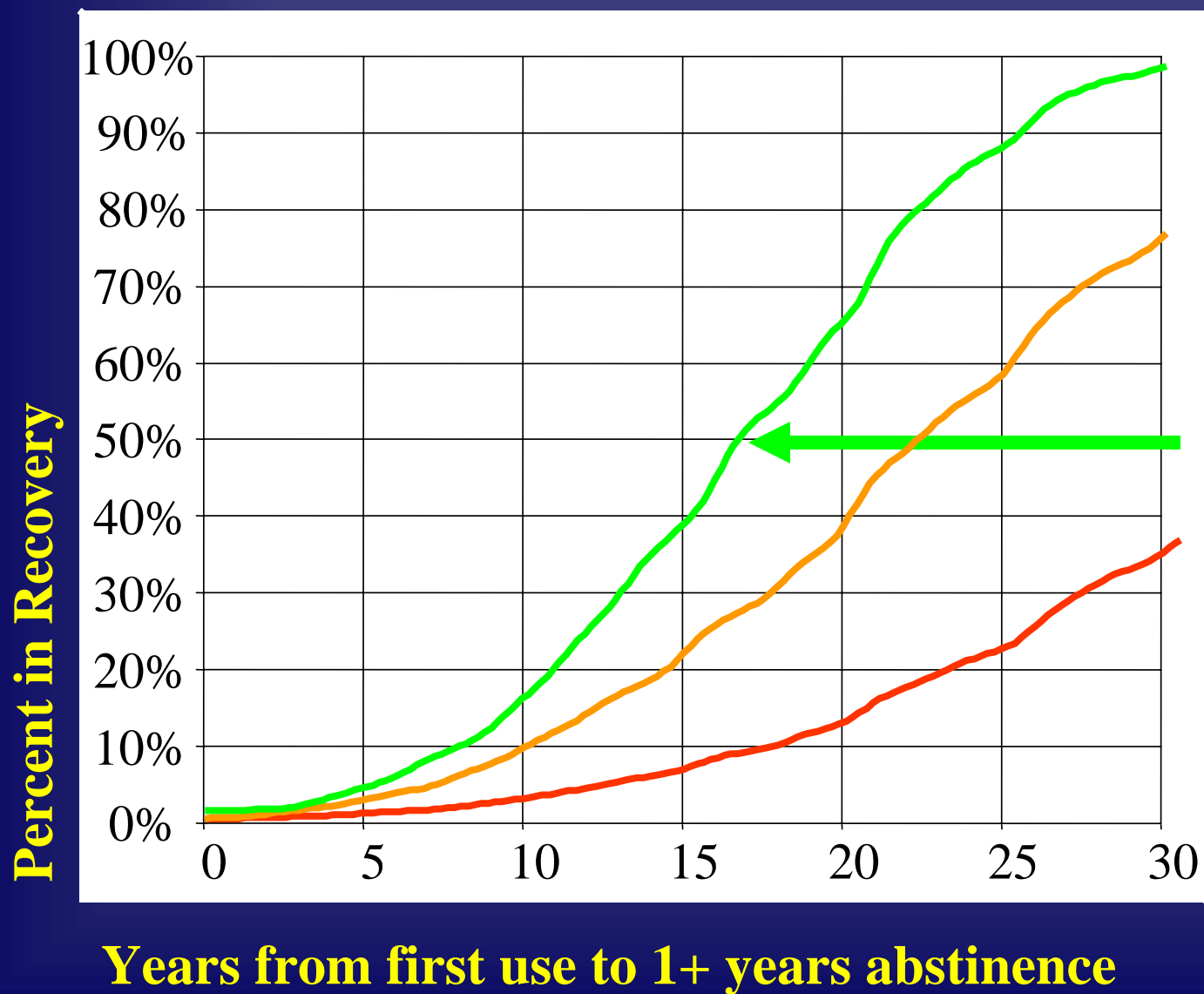
**under 15\***

**Age of 1<sup>st</sup> Use Groups**

**\* p<.05  
(different  
from 21+)**

**Source: Dennis et  
al 2005 (n=1,271)<sup>16</sup>**

# *Substance Use Careers are Shorter the Sooner People get to Treatment*



**0-9\***

**10-19\***

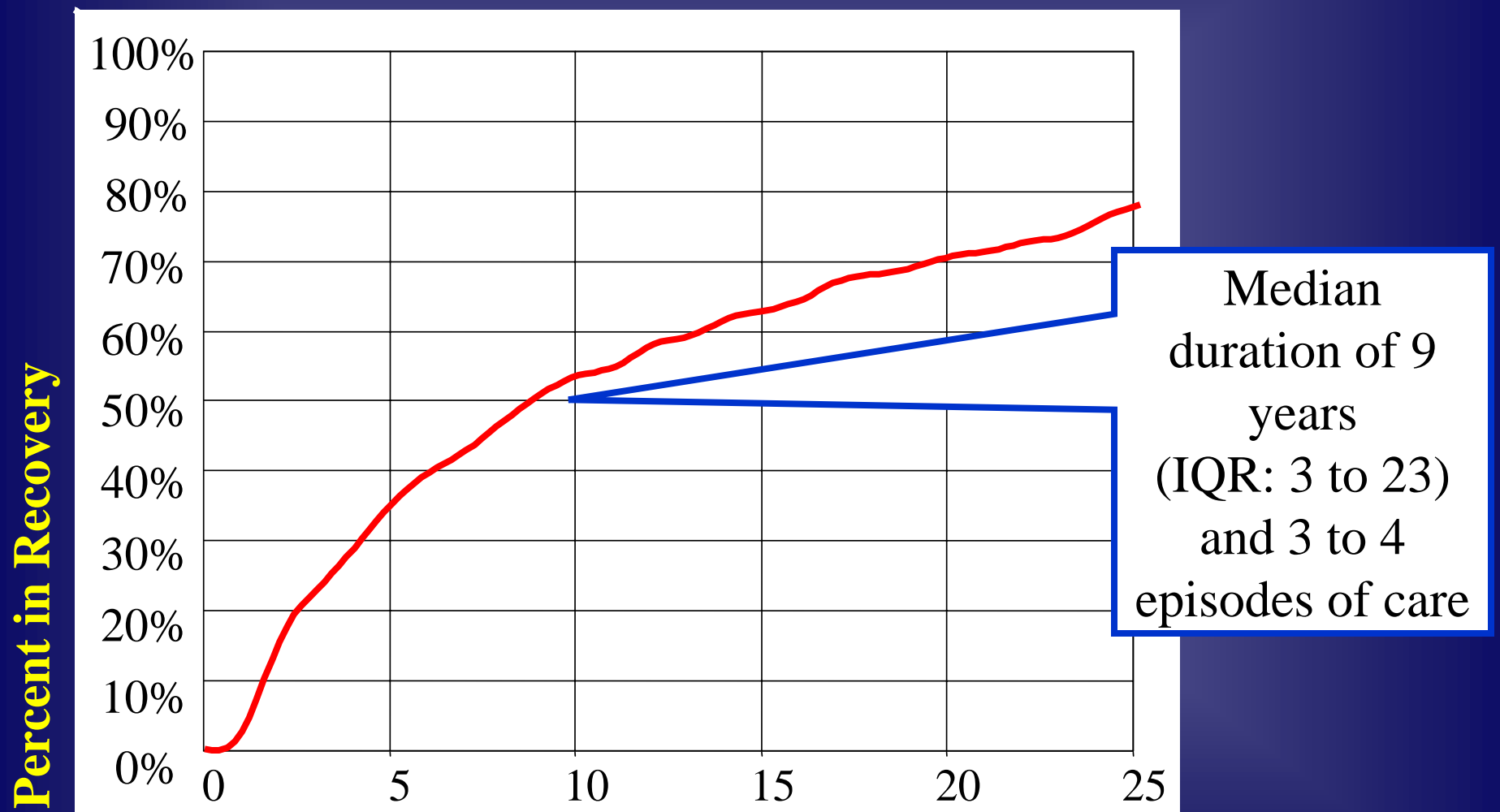
**20+**

**Years to 1<sup>st</sup> Tx Groups**

\*  $p < .05$  (different from 20+)

Source: Dennis et al 2005 (n=1,271)<sup>17</sup>

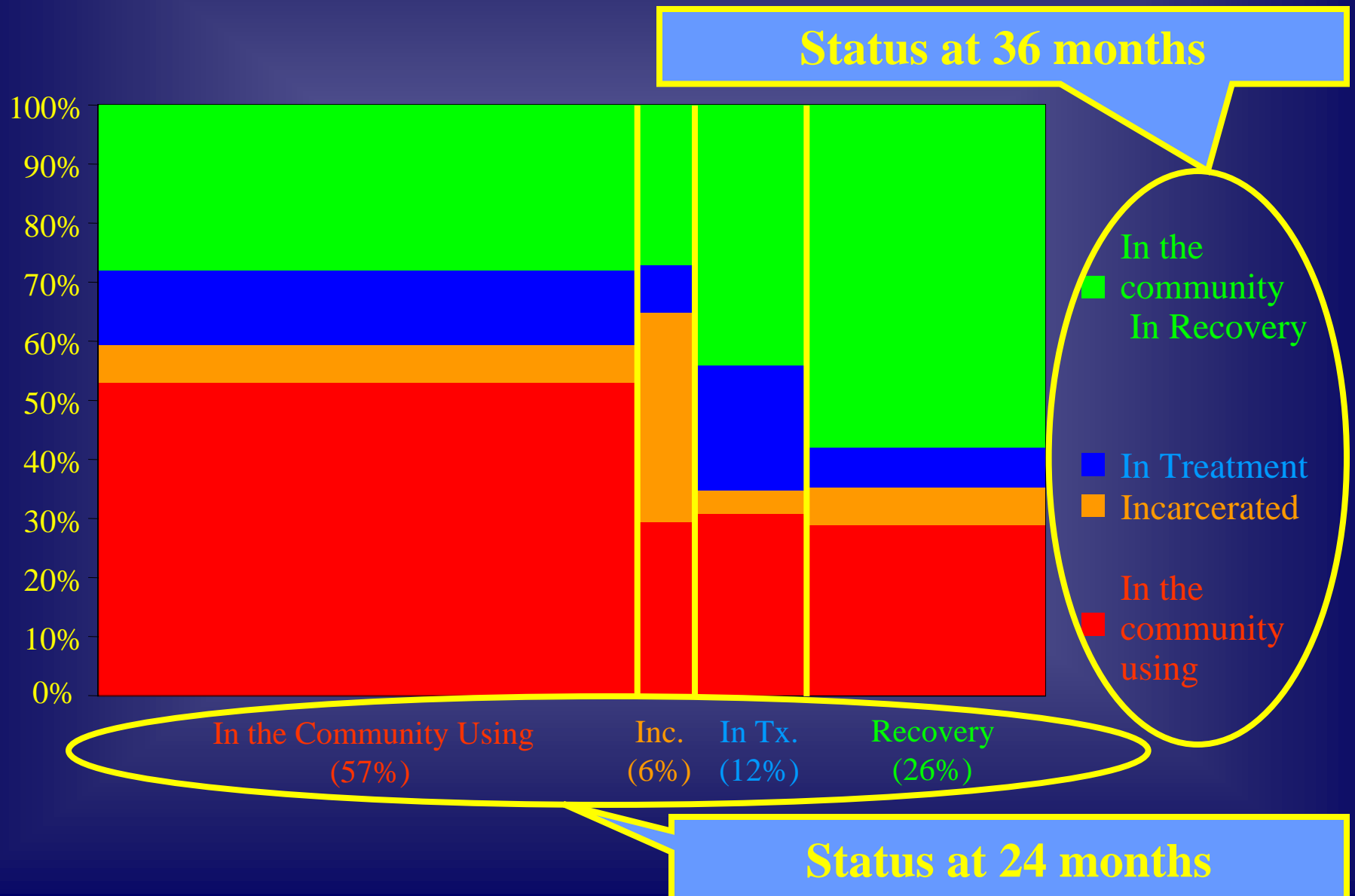
# *It Takes Decades and Multiple Episodes of Treatment*



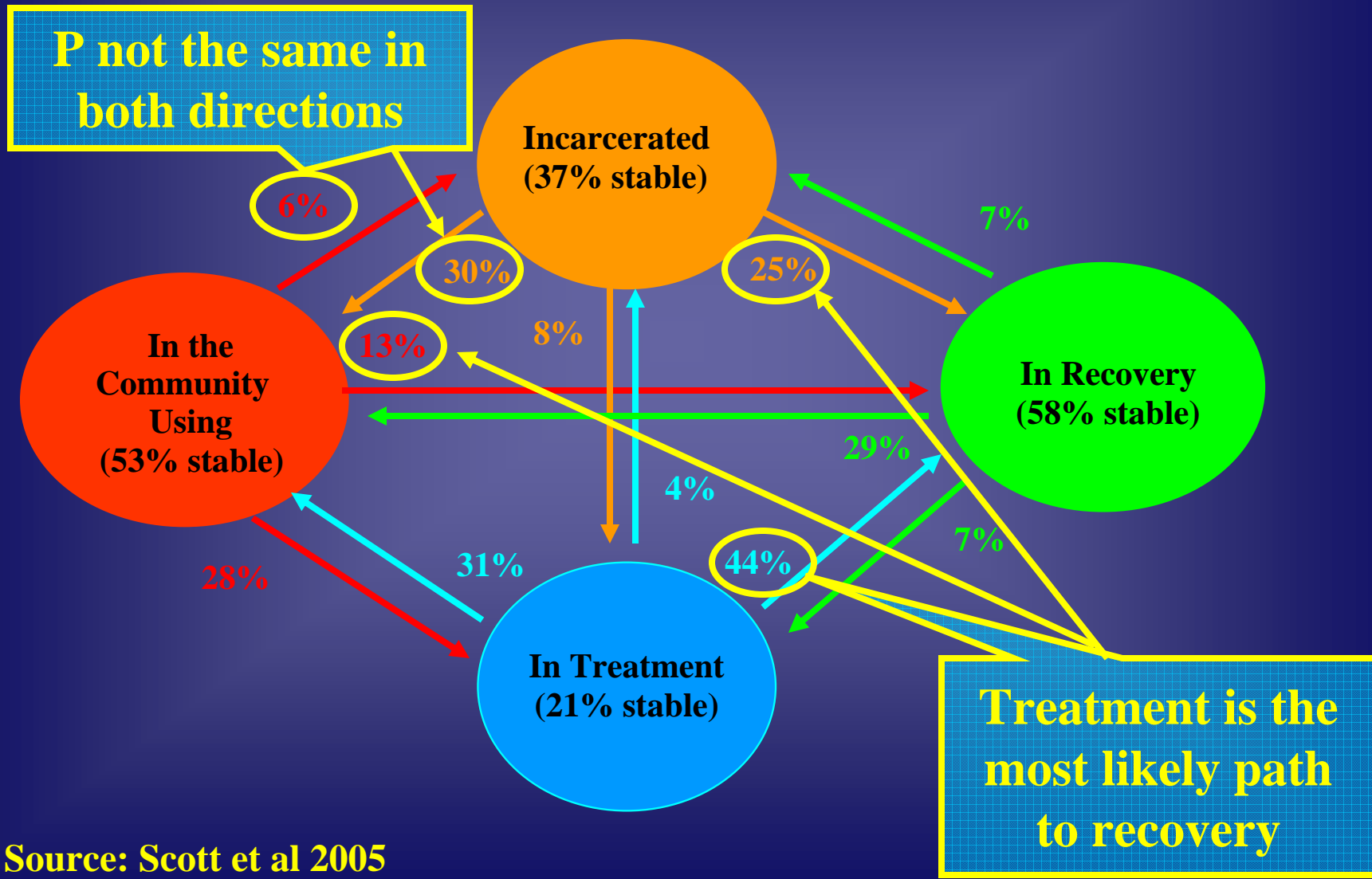
**Years from first Tx to 1+ years abstinence**

**Source: Dennis et al 2005 (n=1,271)<sup>18</sup>**

# Over 55% Continued to Changed Status Between Annual Follow-up Interviews (83% over 3 years)



# The Cyclical Course of Relapse, Incarceration, Treatment and Recovery

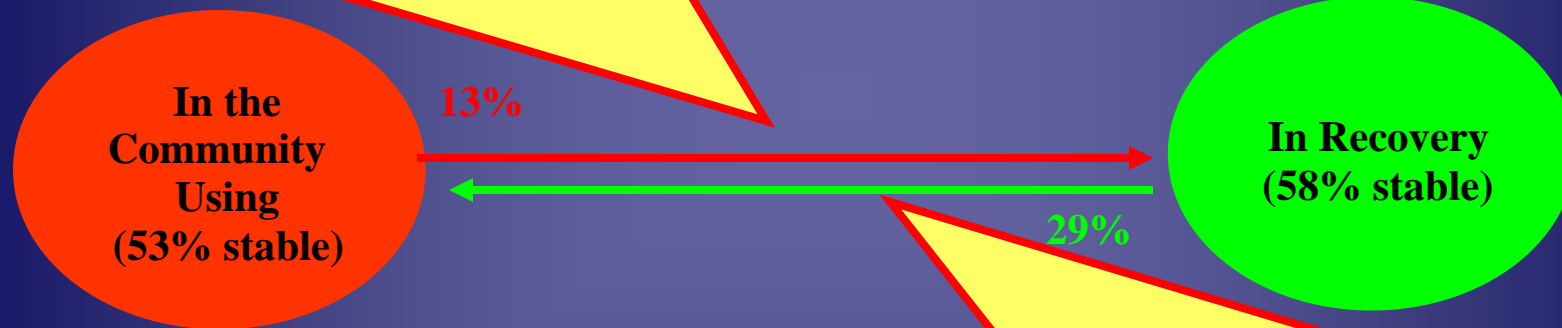


Source: Scott et al 2005

# Predictors of Change Also Vary by Direction

## Probability of Transitioning from Using to Abstinence

- mental distress (0.88)
- ASI legal composite (0.84)
- + older at first use (1.12)
- + homelessness (1.27)
- + # of sober friend (1.23)
- + per 8 weeks in treatment (1.14)



## Probability of Relapsing from Abstinence

- + times in treatment (1.21)
- + homelessness (1.64)
- female (0.58)
- number of arrests (1.12)
- ASI legal composite (0.84)
- # of sober friend (0.82)
- per 77 self help sessions (1.41)

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# *Post Script on the Pathways Study*

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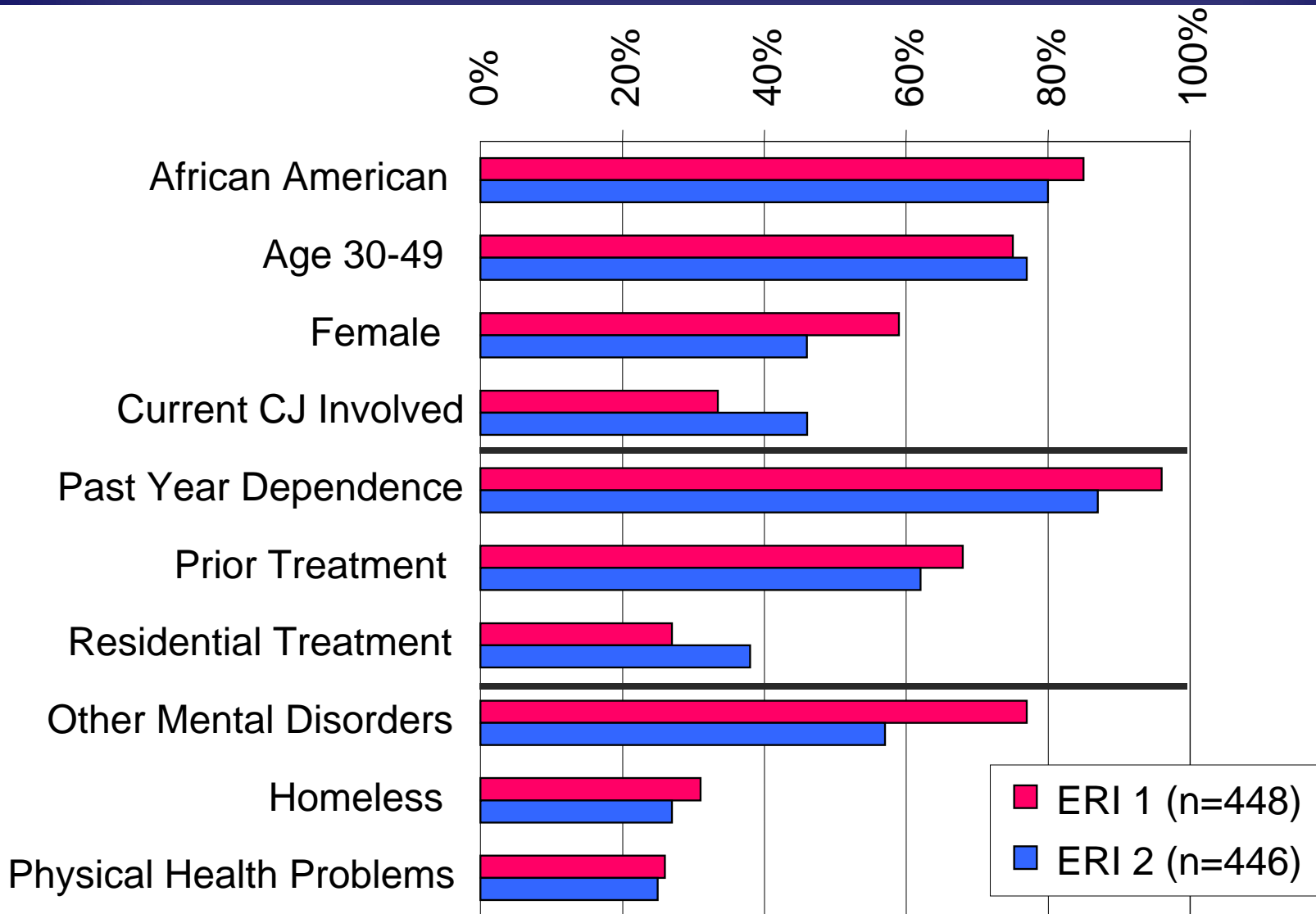
- There is clearly a subset of people for whom substance use disorders are a chronic condition that last for many years
- Rather than a single transition, most people cycle through abstinence, relapse, incarceration and treatment 3 to 4 times before reaching a sustained recovery.
- It is possible to predict the likelihood risk of when people will transition
- Treatment predicts who transitions from use to recovery and self help group participation predicts who stays in recovery.

## *The Early Re-Intervention (ERI) Experiments (Dennis & Scott)*

	ERI 1	ERI 2
Recruitment	Recruited 448 from Community Based Treatment in Chicago in 2000 (84% of eligible recruited)	Recruited 446 from Community Based Treatment in Chicago in 2004 (93% of eligible recruited)
Design	Random assignment to Recovery Management Checkups (RMC) or control	Random assignment to Recovery Management Checkups (RMC) or control
Follow-Up	Quarterly for 2 years (95-97% per wave)	Quarterly for 4 years (95 to 97% per wave)
Data Sources	GAIN, CEST, Urine, Salvia Staff logs	GAIN, CEST, CAI, Neo, CRI, Urine, Staff logs
Publication	Dennis, Scott & Funk 2003; Scott, Dennis & Foss, 2005	Dennis & Scott (under review); Scott & Dennis, (under review)

Funding Source NIDA grant R37-DA11323

# Sample Characteristics of ERI-1 & -2 Experiments



## *Need For Treatment Re-Intervention*

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- **Eligibility:** Not already in treatment or incarcerated and living in the community
- **Need:** Yes to at least one of the following...
  - (a) During the past 90 days, have you used alcohol, marijuana, cocaine, or other drugs on 13 or more days?*
  - (b) During the past 90 days, have you gotten drunk or been high for most of 1 or more days?*
  - (c) During the past 90 days, has your alcohol or drug use caused you not to meet your responsibilities at work/school/home on 1 or more days?*
  - (d) During the past week, had withdrawal symptoms when you tried to stop, cut down, or control your use?*
  - (e) Do you feel that you need to return to treatment?*
  - (f) During the past month, has your substance use caused you any problems?*

*Note alpha > .90*

## *Recovery Management Checkups (RMC) in both ERI 1 & 2 included:*

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- Quarterly Screening to determining “Eligibility” and “Need”
- Linkage meeting/motivational interviewing to:
  - provide personalized feedback to participants about their substance use and related problems,
  - help the participant recognize the problem and consider returning to treatment,
  - address existing barriers to treatment, and
  - schedule an assessment.
- Linkage assistance
  - reminder calls and rescheduling
  - Transportation and being escorted as needed

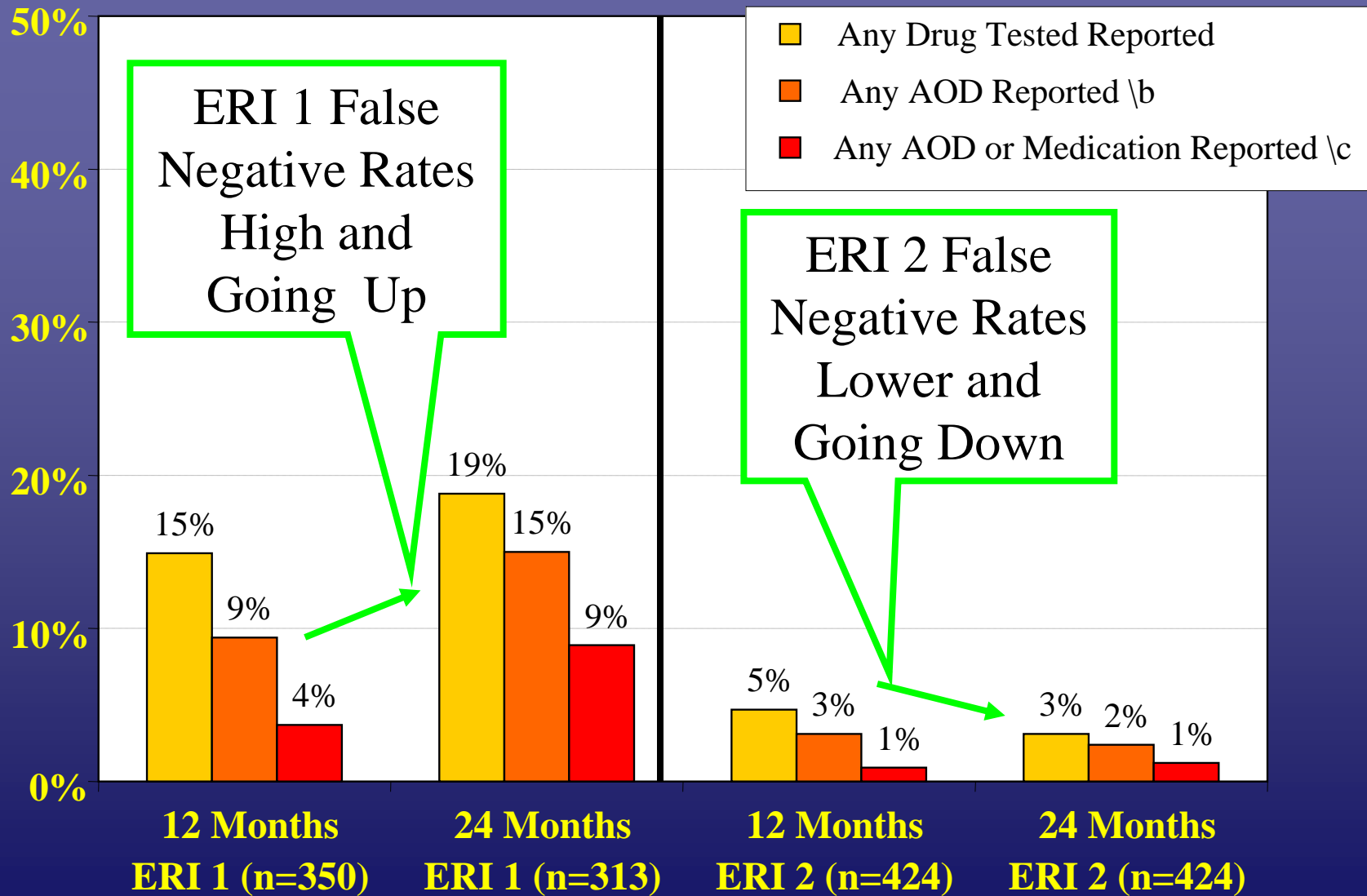
## *Modifications to RMC for ERI -2 included:*

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- Switch to from off- to on-site urine monitoring with immediate feedback on results (before detailed questions) to allow to probing and improve identification
- Transportation assistance for everyone to improve the show rates for assessment and treatment
- Improved Quality Assurance/Adherence
- Engagement assistance to improve the rates of staying at least 14 days
  - Daily contact (mostly face to face)
  - Acting as an ombudsman
  - Agreement from provider not to administratively discharge from treatment without contacting us first

# False Negative Rates by Time and Experiment

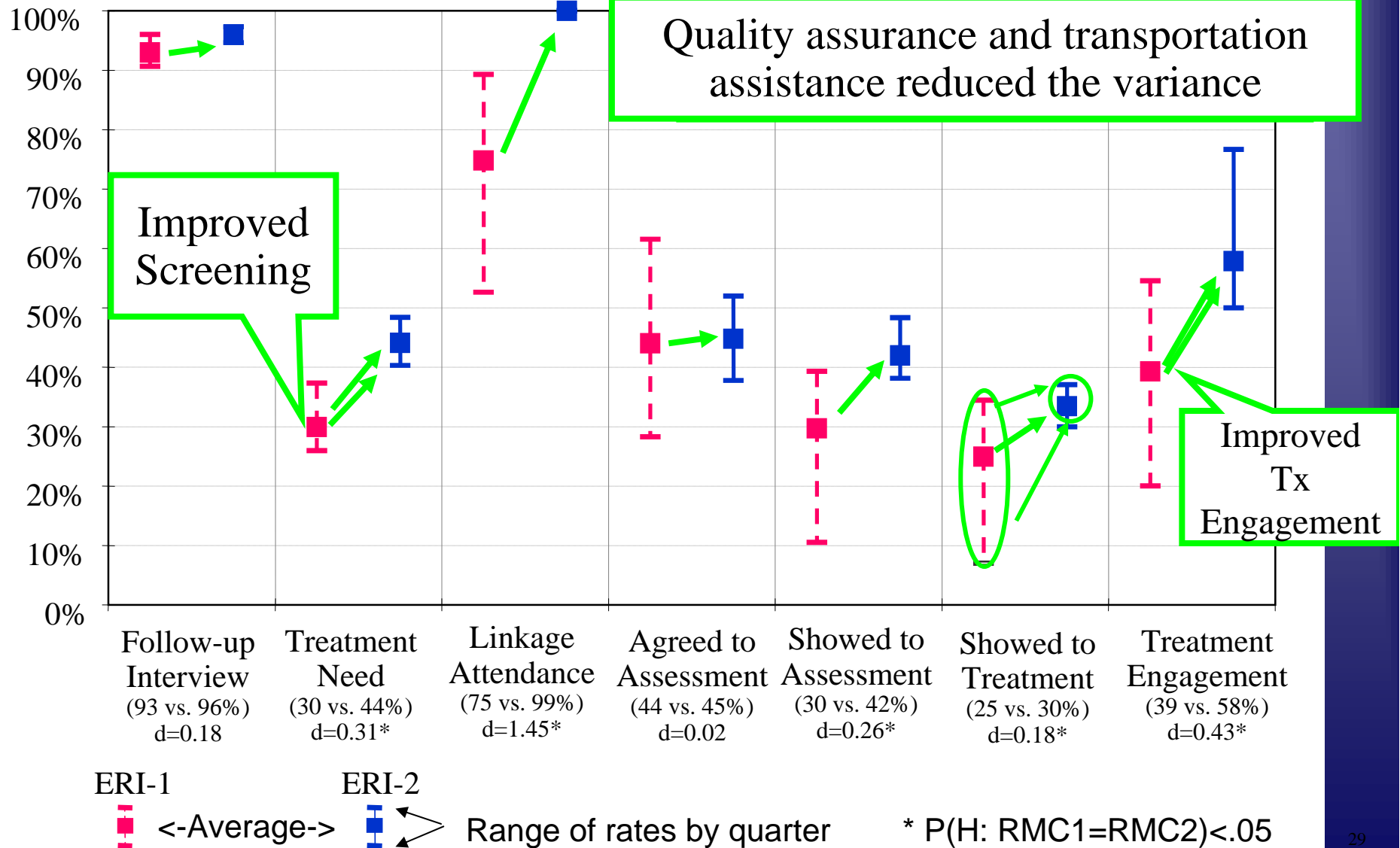


\a False negative defined as positive on the substance(s) but reporting no use in the past month

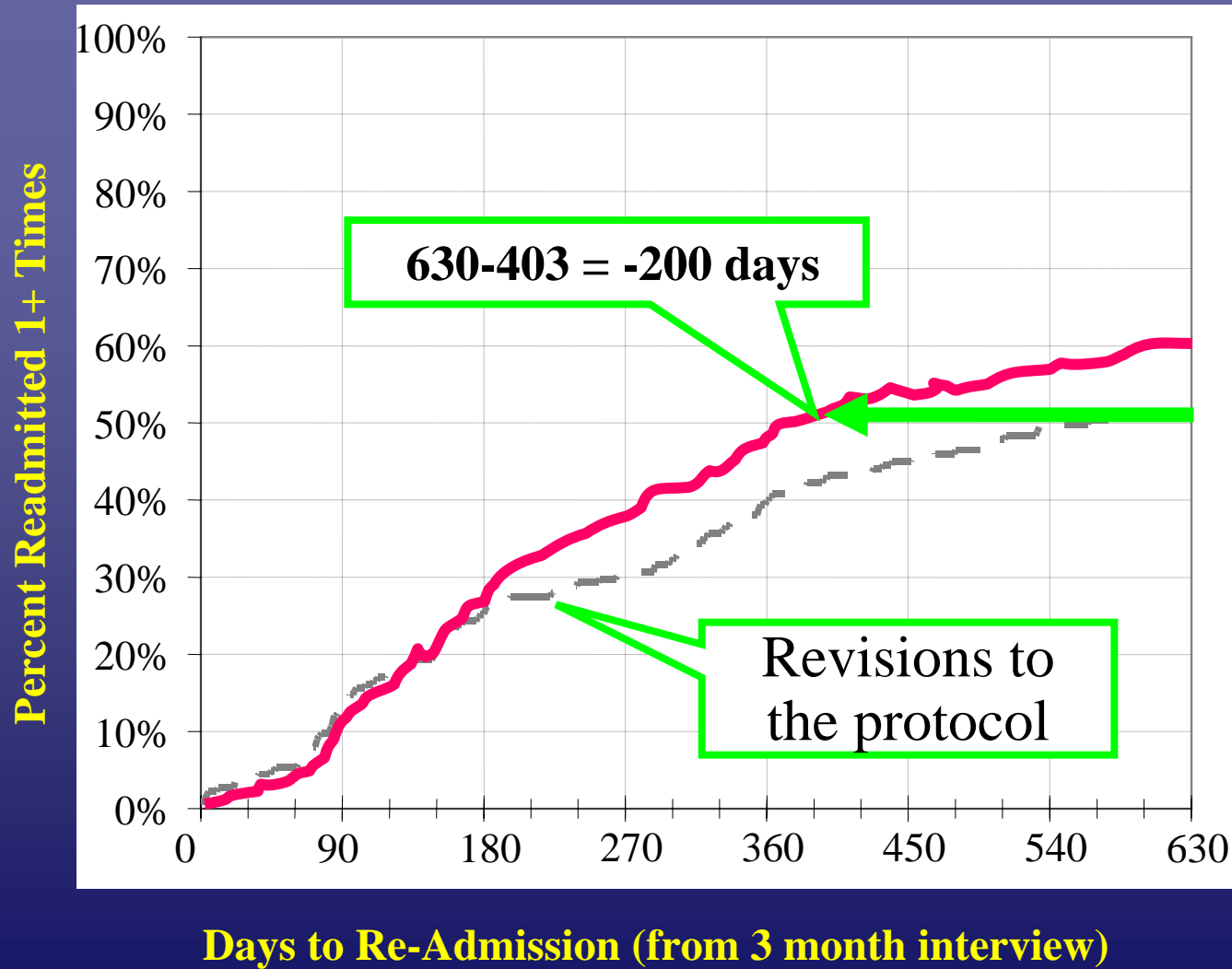
\b Considers self report of above plus alcohol, hallucinogens, PCP, other psychotropics, inhalants, and other drugs

\c Any of the above or any prescribed medication related to substance use, mental health or physical health treatment

# RMC Protocol Adherence Rate by Experiment



# ERI-1 Time to Treatment Re-Entry

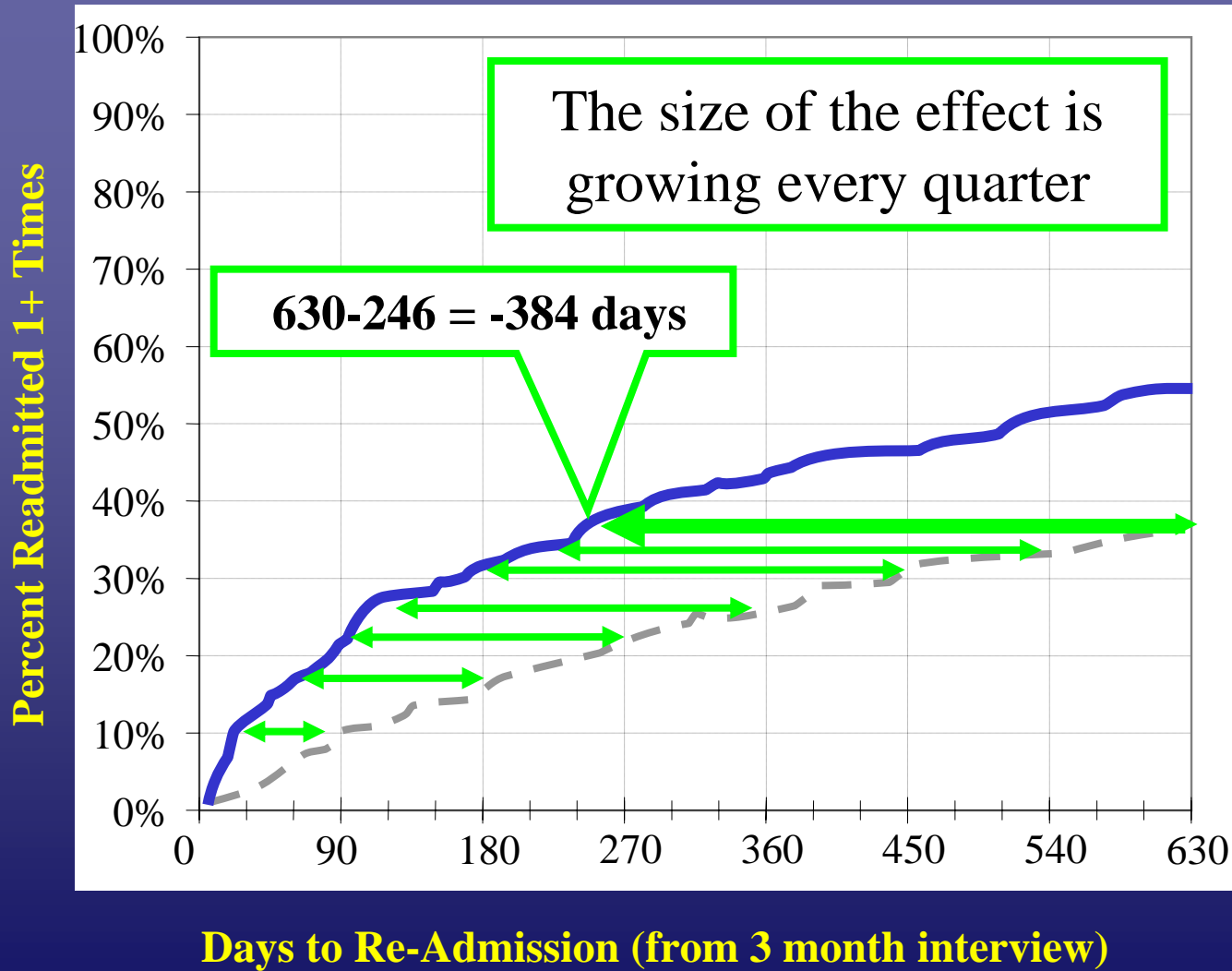


60% ERI-1 RMC\*  
(n=221)  
51% ERI-1 OM  
(n=224)

\*Cohen's  $d=+0.22$   
Wilcoxon-Gehan  
Statistic (df=1)  
 $=5.15, p < .05$



# ERI-2 Time to Treatment Re-Entry



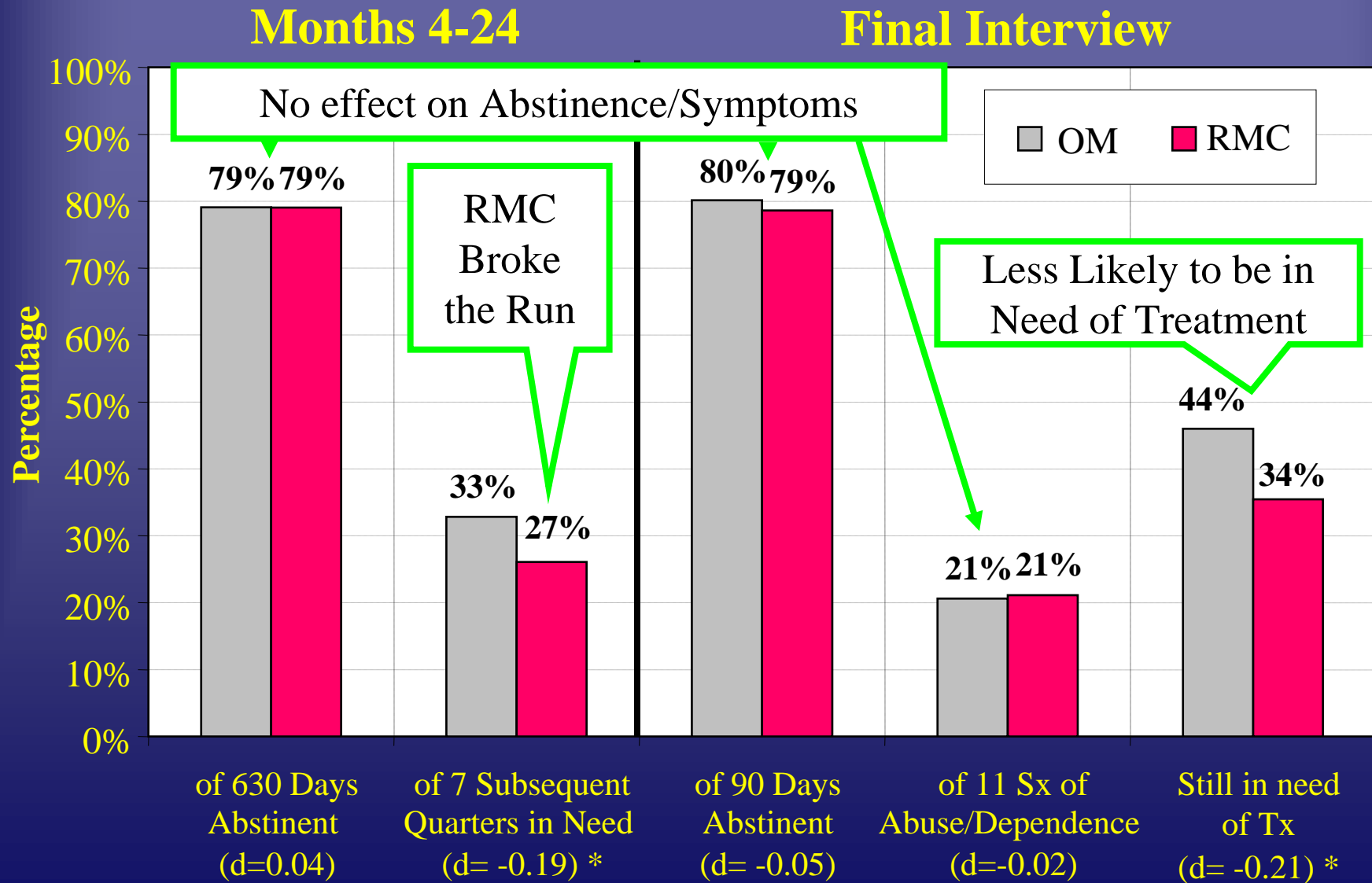
**55% ERI-2 RMC\***  
(n=221)

**37% ERI-2 OM**  
(n=224)

\*Cohen's  $d=+0.41$   
Wilcoxon-Gehan  
Statistic (df=1)  
=16.56,  $p < .0001$



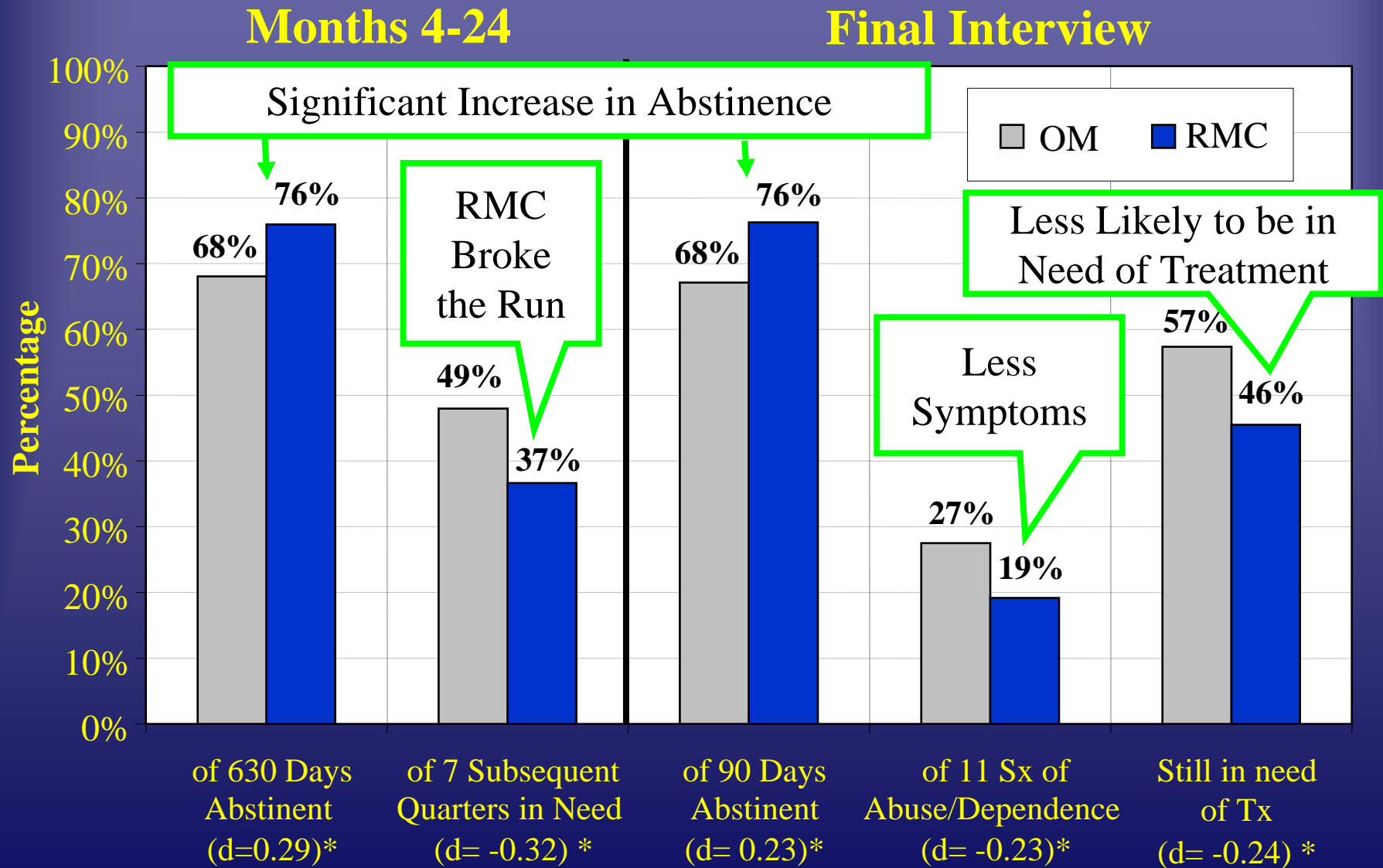
# ERI-1: Impact on Outcomes



\* p<.05

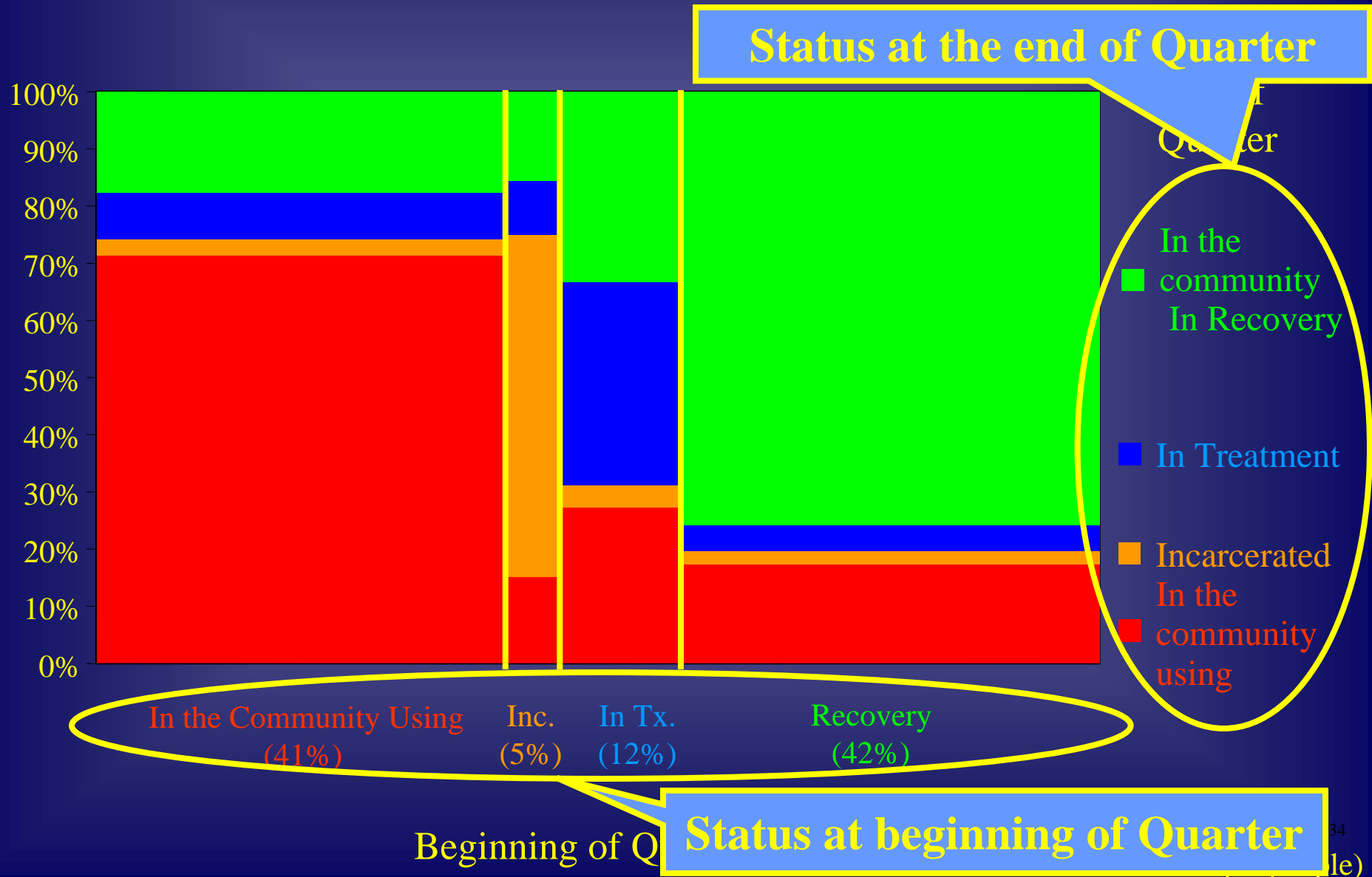


# ERI-2: Impact on Outcomes



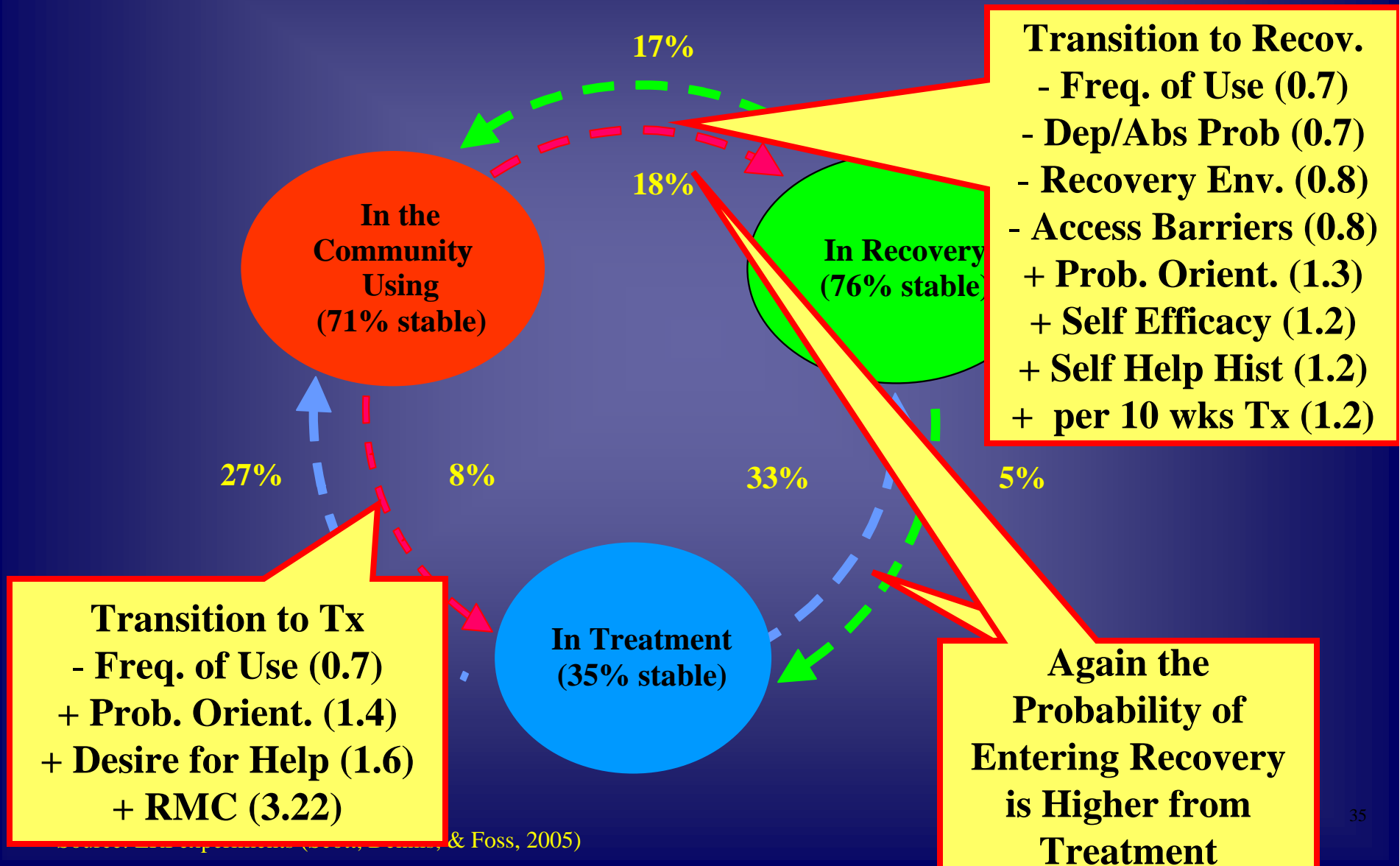
\* p<.05

*As expected, 32% of individuals change status between the beginning and end of the quarter (82% over 2 years)*



# Impact on Primary Pathways to Recovery

(incarceration not shown)



## *Other Variables That Lost Significance in Multivariate Model*

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- Problem Recognition, External Pressure, Internal Motivation, Treatment Resistance
- Current Withdrawal, Number of Diagnosis, Emotional Problems, Illegal Activity, Homelessness
- Coming from a controlled environment
- Involvement with the Criminal Justice System, Mental Health, Health, or Training/School Systems
- Lifetime number of prior treatment, arrests
- Gender, Race, Age, Employment

# *Post Script on ERI experiments*

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- Again, severity was inversely related to returning to treatment on your own and treatment was the key predictor of transitioning to recovery
- The ERI experiments demonstrate that the cycle of relapse, treatment re-entry and recovery can be shortened through more proactive intervention
- Working to ensure identification, showing to treatment, and engagement for at least 14 days upon readmission helped to improve outcomes

## *These studies provide converging evidence demonstrating that*

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- substance use disorders are often chronic in the sense that they last for years and the risk of relapse is high
- the majority of people accessing publicly funded substance abuse treatment have been in treatment before, are likely to return, have a variety of co-occurring problems and may need several additional episodes of care before they reach a point of stable recovery.
- Yet over half do make it to recovery and the odds of getting to and staying in recovery can be improved with proactive management.

## *We need to..*

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- Educate policy makers, staff and clients to have more realistic expectations
- Redefine the continuum of care to include monitoring and other proactive interventions between primary episodes of care.
- Shift our focus from intake matching to on-going monitoring, matching over time, and strategies that take the cycle into account
- Identify other venues (e.g., jails, emergency rooms) where recovery management can be initiated
- Evaluate the costs and determine generalizability to other populations through replication
- Explore changes in funding, licensure and accreditation to accommodate and encourage above

## *Other Emerging Recovery Support Initiatives*

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- **Assertive Continuing Care (ACC;**  
**<http://www.chestnut.org/li/apss/CSAT/protocols/> )**
- **Interactive phone and web based monitoring and recovery support**
- **Self help groups**
- **Recovery homes**
- **Recovery High Schools & Colleges**
- **Well-briety movement in Indian Country**
- **Recovery advocacy movement**
- **Network for the Improvement of Addiction Treatment (NIATx; <http://www.pathstorecovery.org/> )**
- **Washington Circle Group (<http://www.washingtoncircle.org/>) and other efforts to introduce performance monitoring**

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