

# The Assertive Community Treatment Transition Readiness Scale (ATR)<sup>1</sup>

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# Agenda

- Background – ACT transitions
- Assertive Community Treatment Transition Readiness Scale (ATR)
  - Scale development
  - Field testing the ATR
    - Design
    - Sample
    - Analysis
    - Results
    - Discussion
  - Q & A

# Background

- “ACT for Life” vs. recovery orientation
- Literature on ACT transitions mixed; range of study designs; small, local samples; limited outcomes w/ few standardized measures; transition criteria not clear
  - No, you can’t (transition)
    - Audini et al., 1994; Stein & Test, 1980
  - Yes, you can (transition)
    - McRae et al., 1990; Rosenheck & Dennis, 2001; Salyers et al., 1998; Susser et al., 1997
  - Hackman & Stowell, 2009 – no differences between transitioned and not-transitioned consumers

## Background (cont'd)

- More research is needed on the who (who can transition), how (how should transitions occur), to what (to what types less intensive services) and with what outcomes (no vs. some hospitalizations, for example)
- Research needs to catch up to practice!
- No standardized measures specific to ACT to help identify transition-ready consumers

# Development of the Assertive Community Treatment Transition Readiness Scale (ATR)

- Part of larger study of transitions from ACT
- Developed items for ATR from:
  - Qualitative and quantitative findings
    - Focus groups with ACT staff
    - Examination of post-transition outcomes for transitioned consumers
  - Review of literature and relevant measures
  - Review of available guidelines on [www](http://www)

# “Who Can Transition” Themes (n=16)

Themes	%	Freq.	Themes	%	Freq.
Stability	100	132	Dependence	88	38
Criminal justice contacts	100	98	Complexity	81	49
Housing Stability	100	92	Intensity	81	46
Time	100	65	Benefits	81	45
Substance use	100	57	Social Support	81	38
Engaged in services	94	114	Resources	75	39
Medication	94	63	Insight	69	30
Hospitalization	94	44	Structure	63	20
Independence	88	74	Employment	50	15

# Development of the ATR

- 20 Likert-scale items written to cover content areas:
  - Service needs
    - e.g., He/she no longer needs intensive services.
  - Daily structure
  - Stability (symptoms, behaviors, housing, etc.)
  - Insight
  - Independence
  - Engagement and compliance
  - Social support
  - Complex needs (substance abuse, Axis II, etc.)

# Field Testing the ATR

## ■ Design

- Case-control design - ACT staff completed two copies of ATR (successful consumer [control] vs. unsuccessful consumer [case]) + post-transition outcomes + clinical and demographic info

## ■ Sample (n=96 ACT staff members)

- 65% female; 90% white; 15.30 (SD=8.64) yrs. mh exp; 6.27 (SD = 4.91) yrs. ACT exp; 23.80 (SD=33.60) consumers transitioned; 49% team leaders; 19 states and 3 countries (US, Canada, England)

## ■ Data collected between June 2009 – April 2011



# Data Analysis

- Factor structure of the ATR
  - Exploratory factor analysis (EFA), ULS w/promax rotation, eigenvalues and scree plots, items w/loading  $\geq .4$
- Internal consistency reliability
  - Cronbach's alpha
- Concurrent and predictive validity
  - Bivariate and multivariate analyses to examine relationship b/w ATR scores, transition status (success vs. failure) and post-transition outcomes
- Receiver Operating Characteristic (ROC) Curve
  - Cut-offs, specificity, sensitivity

# Results

# ACT Consumer Characteristics (n=218)

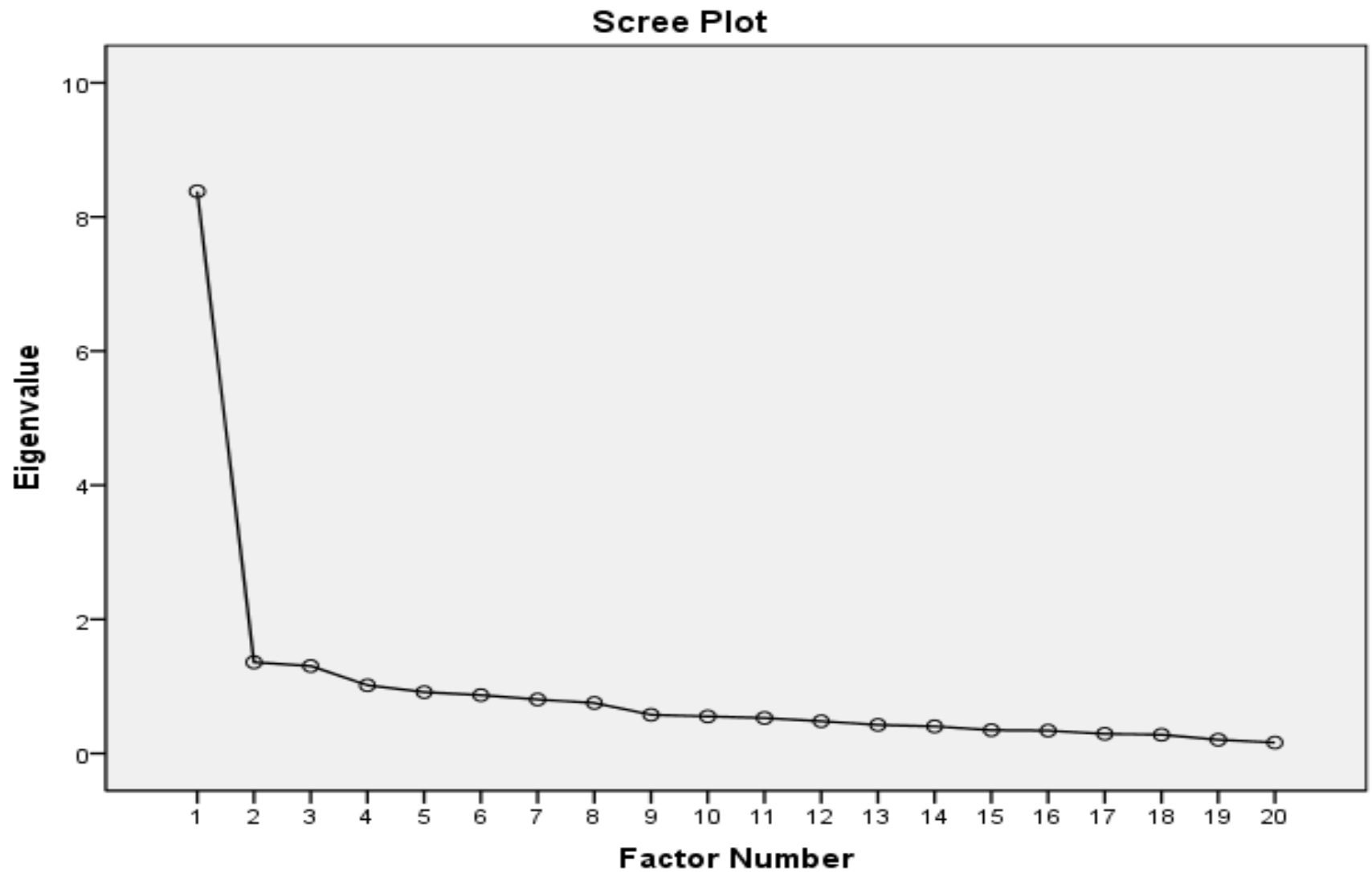
Indicator	Successful (n=124)	Unsuccessful (n=94)
	% (n)	% (n)
Female	46.0 (52)	41.5 (34)
Male	54.0 (61)	58.5 (48)
Race		
White	62.5 (70)	48.8 (40)
African-American	33.9 (38)	48.8 (40)
Diagnosis		
Schizophrenia	63.1 (69)	69.4 (50)
Affective Disorder	25.2 (26)	23.6 (17)
Co-occurring substance abuse*	28.3 (32)	44.6% (37)

\* Denotes  $p \leq .05$

# Exploratory Factor Analysis

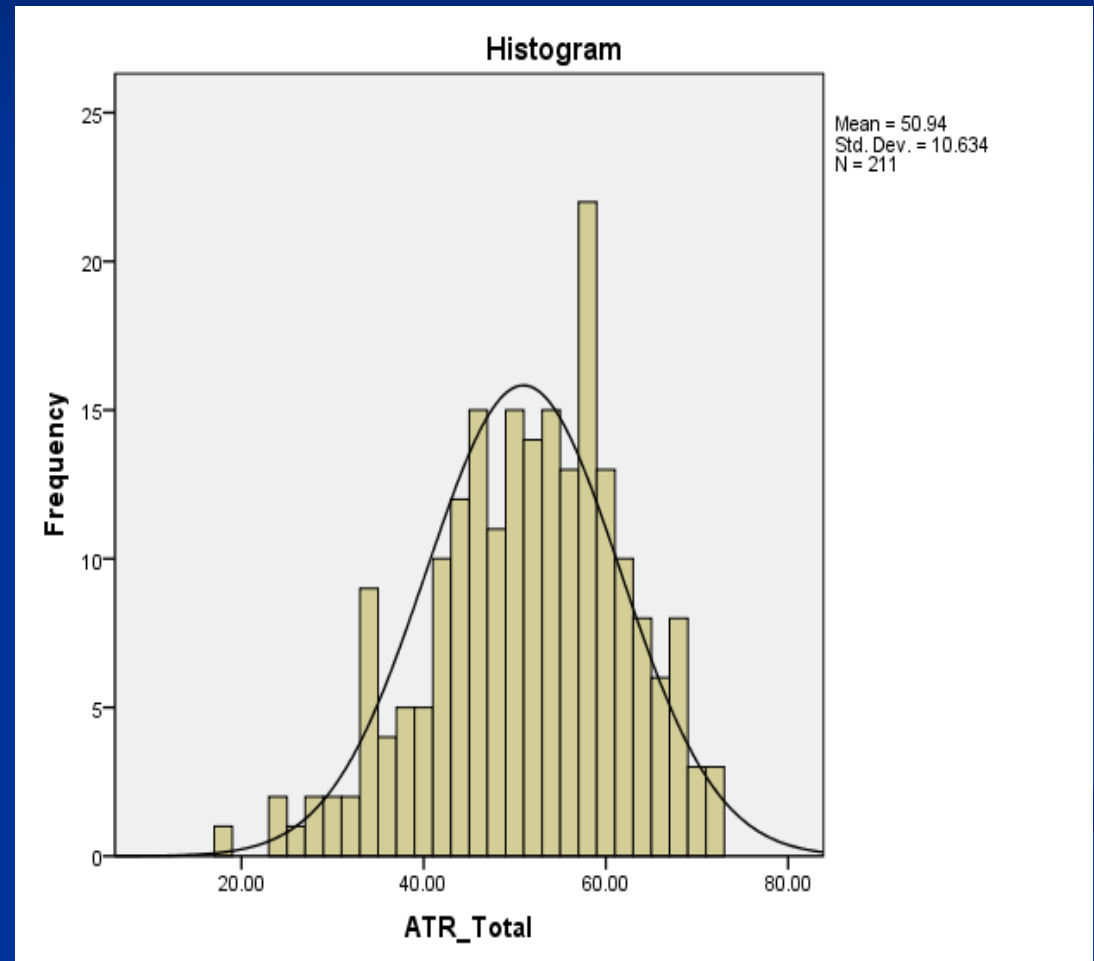
- EFA vs. CFA used when there's no a priori guess about the number of factors
- Diagnostics for factor analysis all good
  - KMO = .92
  - Bartlett's test of sphericity =  $p < .001$
- EFA suggested one factor
  - All but two items did not load on factor – these were dropped
- End result = 18-item measure

# EFA Results



# Internal Consistency Reliability

- Cronbach's alpha was .92 (Excellent!)
- Kurtosis (-.08)
- Skew (-.44)
- SEM (.73)

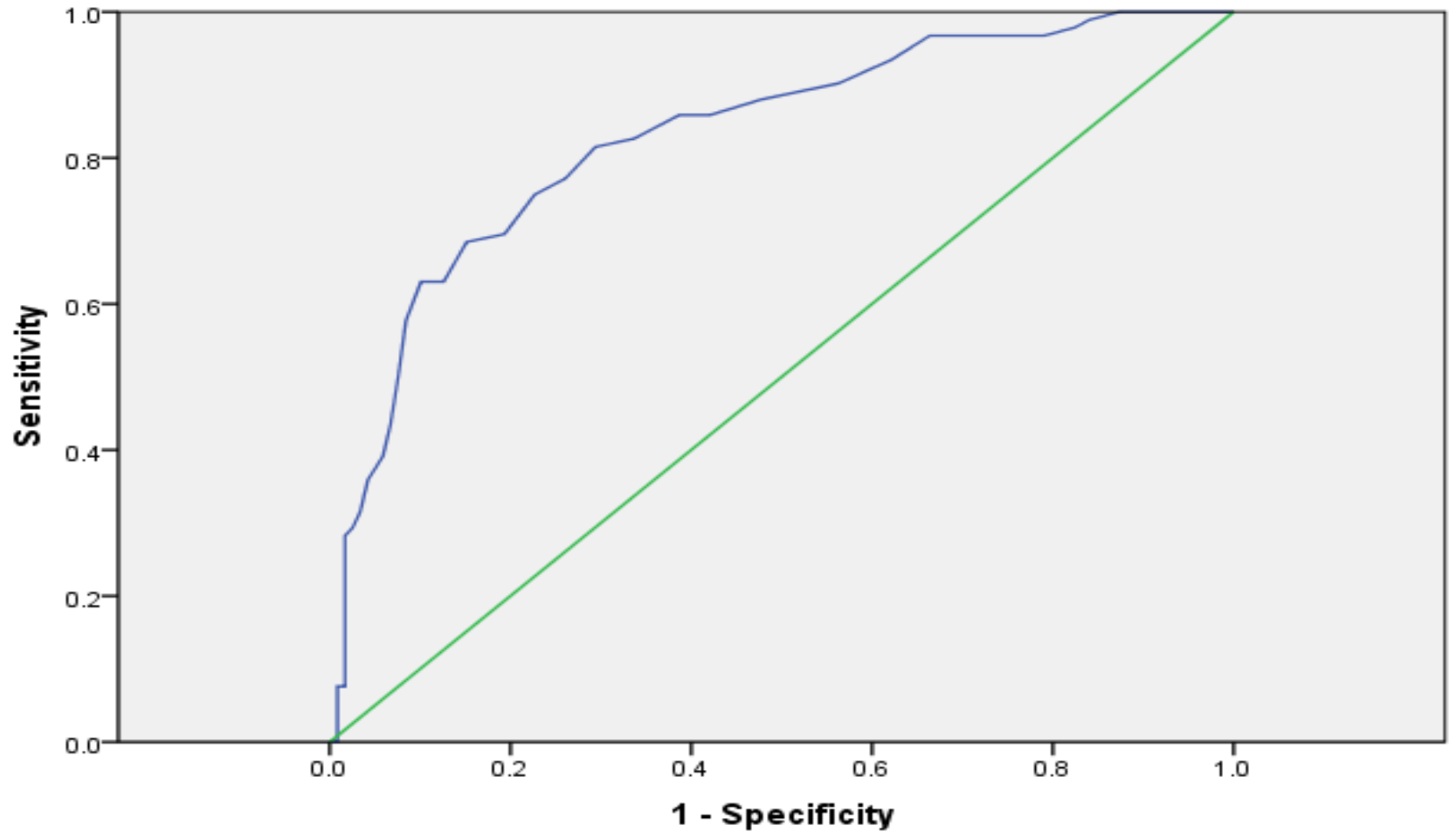


# Receiver Operating Characteristic (ROC) Curve

- ROC indicates “classification” power
  - AUC = .83 (CI .78-.89)
    - (.50 like flipping coin, closer to 1.0 the better the test)
- ATR is sensitive (identifies transition-ready consumers) and specific (w/some mistakes)
- Raw score  $\geq 50$  consider transition
- Mean score  $\geq 2.8$  consider transition
  - These cut-offs catch 75% of successful transitions but misclassify 22% of unsuccessful transitions

# ROC Results

ROC Curve



Diagonal segments are produced by ties.



# Concurrent and Predictive Validity

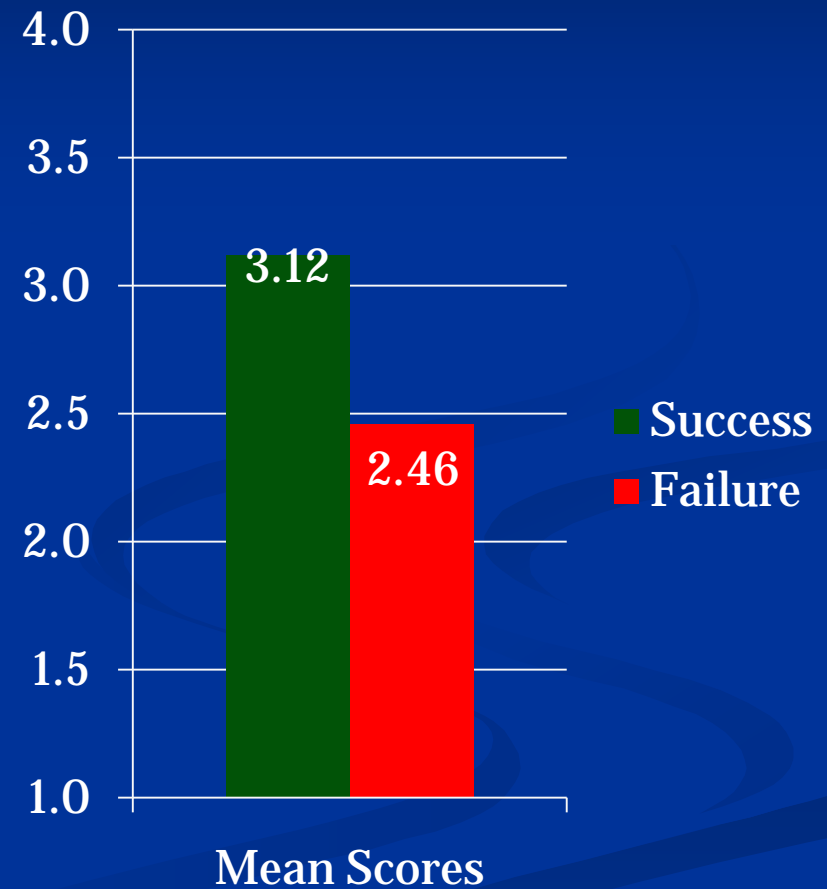
- Regression results indicate ....
  - ATR scores positively and significantly associated with transition status
  - Higher ATR scores associated with lower probability of post-transition ....
    - Homelessness
    - Hospitalization
    - Incarceration
    - Medication noncompliance
    - Treatment noncompliance
    - Return to ACT

# Transition Success Status, ATR Scores and Consumer Outcomes

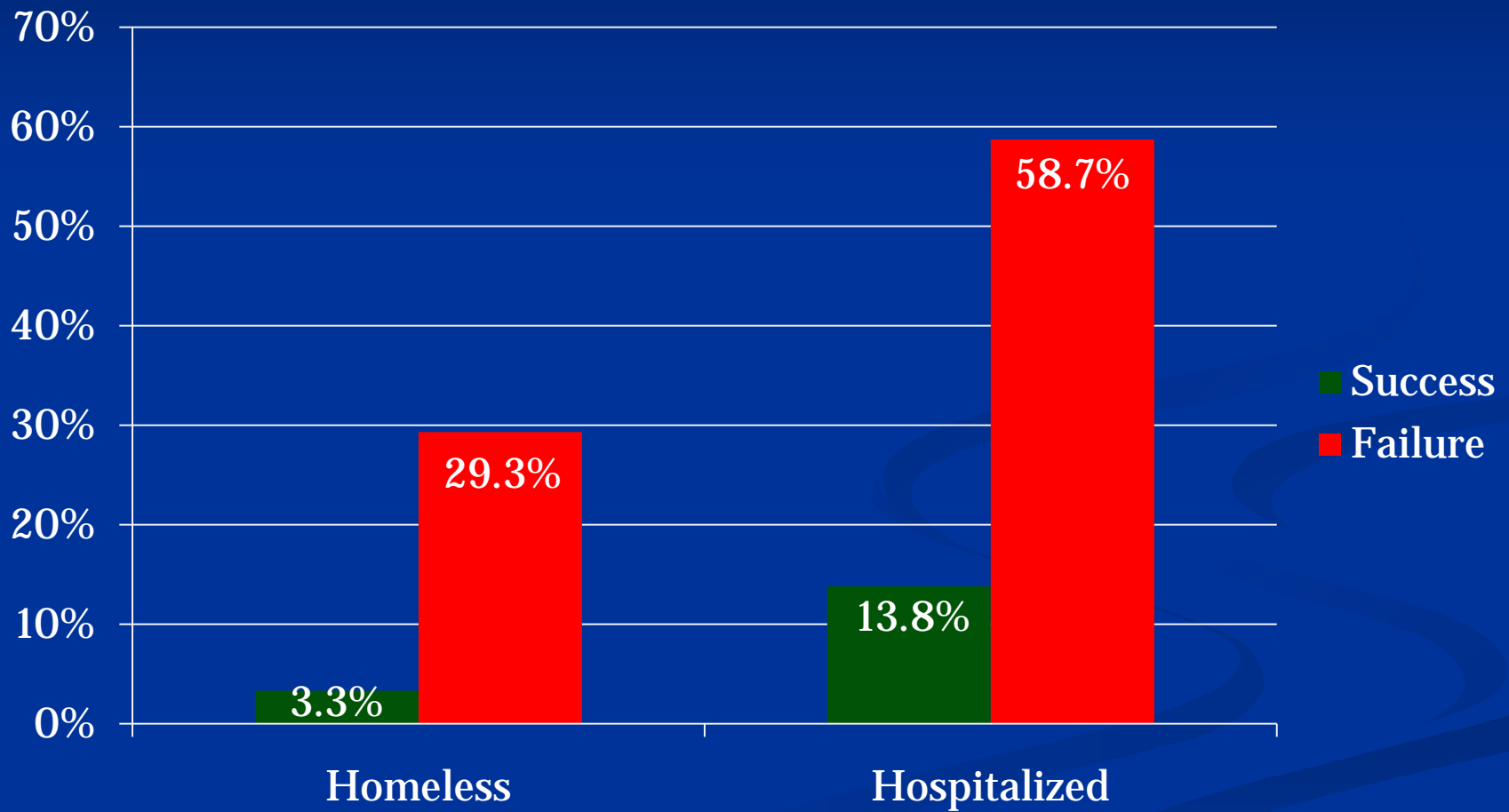
Indicator	Successful (124)	Unsuccessful (94)
	% (n)	% (n)
ATR raw scores (M(SD))***	56.09 (8.48)	44.28 (9.39)
ATR mean scores (M(SD))***	3.12 (.47)	2.46 (.52)
Post-transition outcomes		
Homeless***	3.3 (4)	29.3 (27)
Hospitalized***	13.8 (17)	58.7 (54)
Incarcerated**	4.1(5)	14.1 (14)
Stopped medication***	8.1 (10)	65.2 (60)
Stopped treatment***	7.4 (9)	57.6% (53)
Returned to ACT***	9.8% (12)	43.5 (40)

\* Denotes  $p \leq .05$ ; \*\* denotes  $p \leq .01$ ; \*\*\* denotes  $p \leq .001$

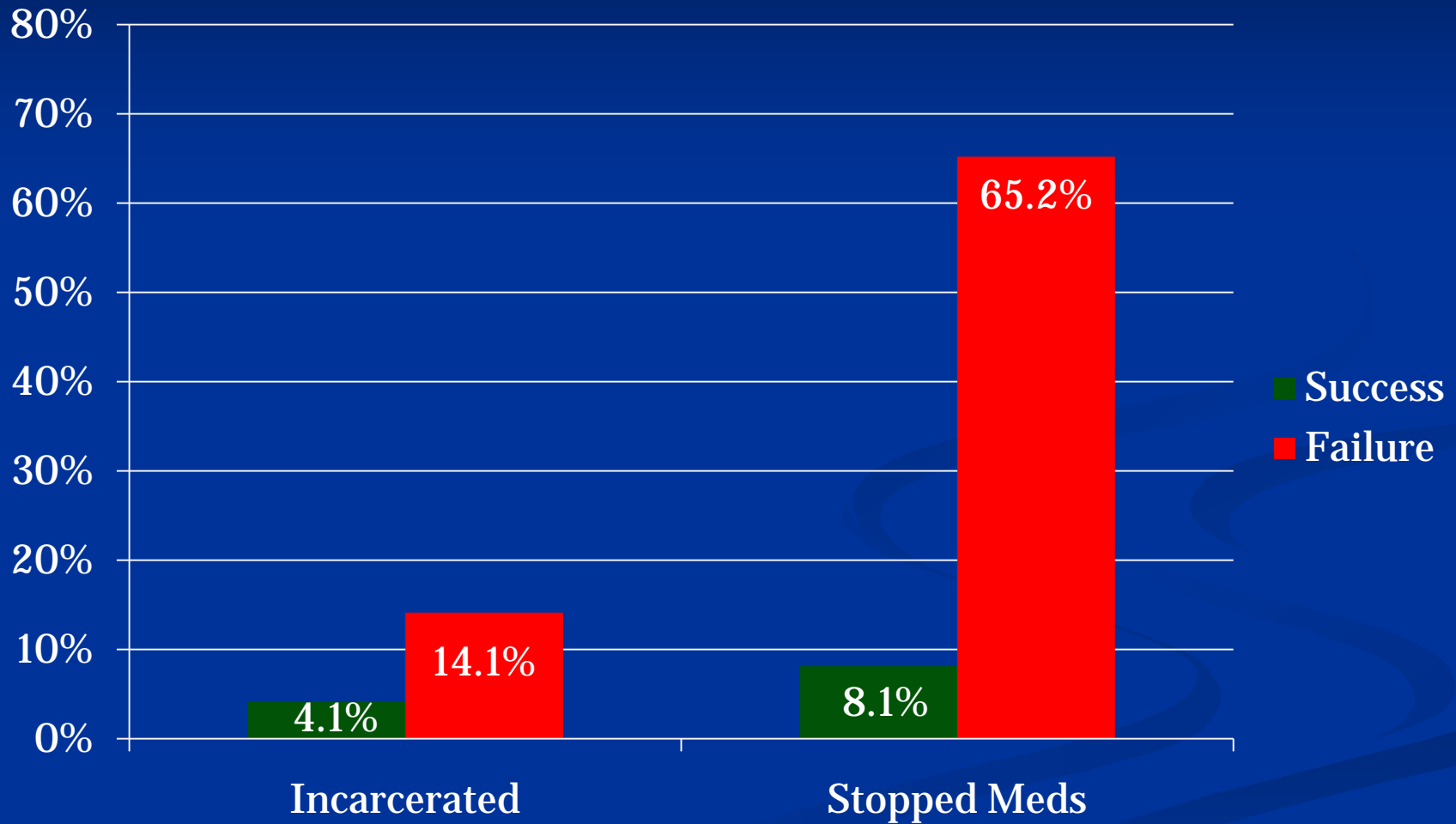
# ATR Scores and Transition Success Status



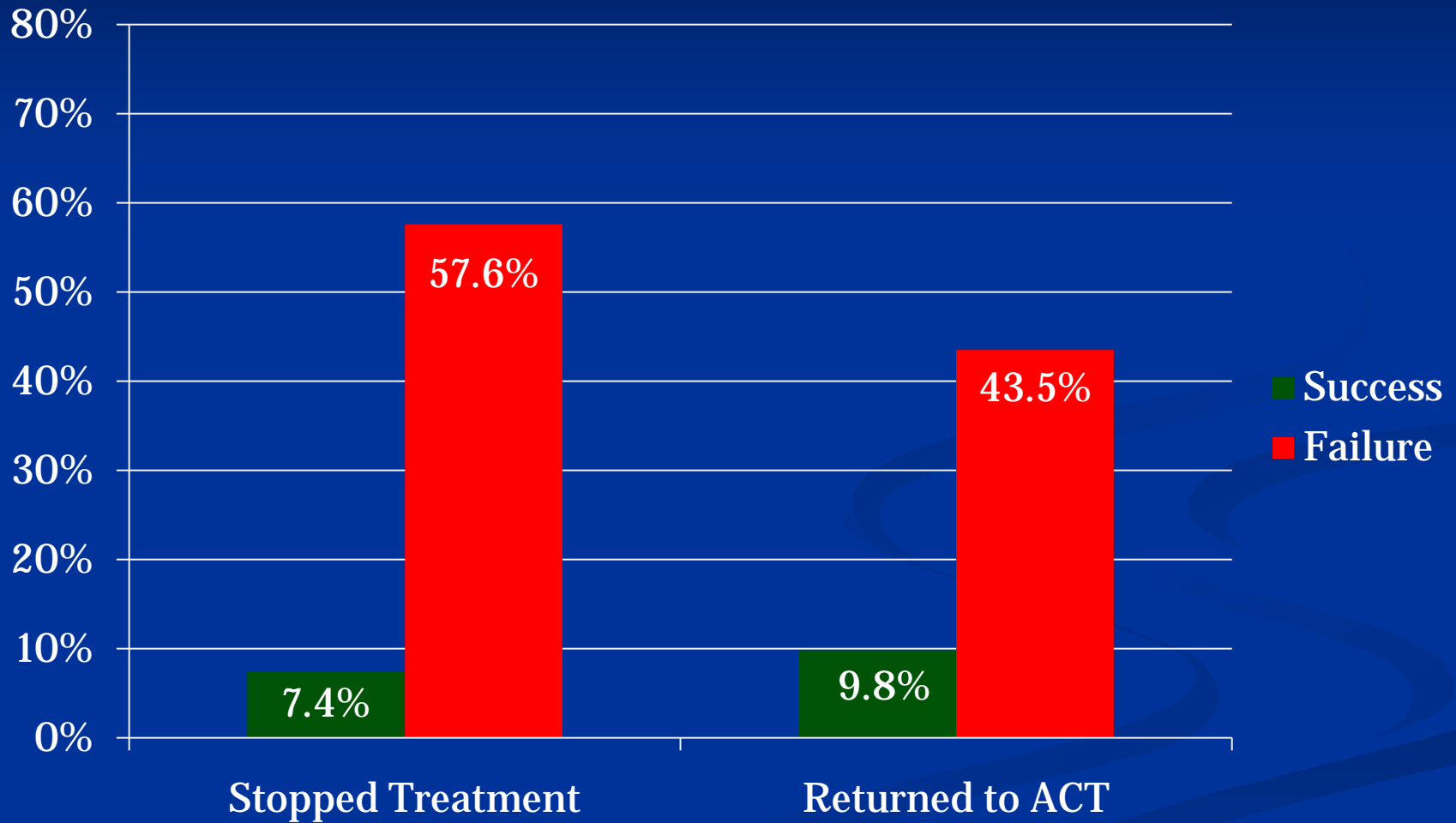
# Post-transition Outcomes and Transition Success Status



# Post-transition Outcomes and Transition Success Status (cont'd)



# Post-transition Outcomes and Transition Success Status (cont'd)



# Administration of ATR

- Straight forward, 18-item measure
  - 4 pt. Likert scale (strongly disagree – strongly agree)
- Paper and pencil
- Completed by staff member or as a team
- Scoring (by hand, EXCEL, etc.)
  - Sum total score (range 18 – 72)
    - Reverse score 4 items
  - Compute average score (total score / 18)
    - Reverse score 4 items

# Limitations

- Design
  - Retrospective vs. prospective
  - Worker bias & selection bias
- Further testing of reliability and validity needed
- Prospective testing needed



# ATR Applications

- Can be used to help make transition decisions (but shouldn't be the only method)
- Helps team focus on transition issues and process
- Can be used to monitor consumer progress
  - Use ATR as baseline measure with periodic assessments
- Can be used to monitor team progress
  - If no consumers are being transitioned this could indicate a problem

# Discussion

- ACT consumers (some) can be transitioned
- The ATR is a tool that can be used along with clinical judgment and other assessment methods to identify consumers who might be ready to transition from ACT to less intensive services
- Helps formalize an informal process
- Brief user's manual coming soon
- ATR available free for use in the public domain

# Contact Information

THANKS!

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