

Construction and Implementation of the CPAT-R

Victoria Terranova, PhD

Adams County, CO

3/25/24



UNIVERSITY OF
NORTHERN
COLORADO

What is pretrial risk assessment?

- Actuarial risk assessment instruments (APRAIs)
 - Provide information about the risk of pretrial failure.
- Goals:
 - Standardization
 - Maximize successful decisions

What is pretrial risk assessment?

- Algorithm of risk factors that compose a risk score.
 - Features: risk factors, scores for risk factors, cut-points for risk categories
- Pretrial risk factors:
 - Criminal history
 - Appearance history
 - Community stability

Why use pretrial risk assessment?

- Validated risk assessments have been found to accurately assign pretrial risk.
- Accurate risk informed decisions can:
 - Reduce detention
 - Reduce recidivism
- Summarize static and dynamic risk factors.

CPAT Validation Study

Goal: Improve the effectiveness of the CPAT at assessing a defendant's pretrial risk to return to court and/or new arrest.

-Provide a transparent and accessible risk assessment tool to CO pretrial stakeholders

Participating pretrial service agencies:

Boulder, Denver, Garfield, Larimer, Mesa, Pueblo & Weld

Phases:

Phase 1 (Jan 2018 – June 2018)

Retroactive Validation & Implementation survey

Phase 2 (June 2018 – August 2018)

Focus groups and on-site observation

Phase 3 (August 2018 – June 2020)

Pilot test of modified tool, the CPAT-R

Findings

- The CPAT validated.
- Modifying risk category designation and risk factors could improve the predictive performance of the CPAT.
- Weighting and scoring methods do not interfere with the predictive performance.
- Perceived implementation considerations:
 - Risk factors
 - Self-report items
 - Buy-in

Findings

- Themes about perceived implementation considerations
 - Role of pretrial risk assessment
 - How the tool is used
 - Consideration of other factors, independent of the risk assessment
 - Pretrial supervision decisions
 - Training and education

Phase 3 – Pilot Study CPAT-R

Pilot Study

- 3-months and 1-year follow-up

Pilot CPAT-R Construction

- Selection variables
- Weighting/features

Data Sources

- Pilot survey
- Pretrial agency records
- CO Courts
- Denver Municipal Court
- Criminal history records

Pilot Analysis

Validation & Calibration

- CPAT-R, CPAT & CPATR-SV validated and calibrated.
- CPAT-R best performing tool.

Bias

- Modifications
 - Prior violent arrest
 - Time at current residence

Self-report reliability and features

- Self-report risk factors low to moderate agreement with official records.
- Modifications
 - Prior alcohol or drug feature remove

Pilot - Bias Analyses

Sub-groups

- Race/Ethnicity: White, Black and Hispanic
- Sex: Male, Female
- Residential Status: Homeless, Housed

Analyses

- Differences in risk prediction across groups?
- Sub-group membership plays a role in risk prediction?
- Errors in risk prediction differ across groups?

Findings

- Risk prediction does not differ across groups.
- Sub-group membership does not play a role in risk prediction.
- Errors in risk prediction do not meaningfully differ across groups - race/ethnicity and sex.

Recommended CPAT-R

Risk Factor	Score (range 0-20)	Definition
Employment/education	0/2	Self-reported employment or current student at the time of arrest. (0 = yes, 2 = no).
Current problems with alcohol or drugs	0/1	Self-reported current problems with alcohol and/or drugs (0 = no, 1 = yes).
Prior Arrests	0/3	Prior arrests confirmed with criminal history records (0 = 1 or less, 3 = 2 or more).
Arrest in the last year	0/3	Arrest within the last year confirmed with criminal history records (0 = none, 3 = 1 or more).
Age at first arrest	0/1	Defendant age at first arrest confirmed with criminal history (0 = 21 years old or older, 1 = 20 years old or younger).
Prior FTA	0/3	Prior FTA confirmed with court history records (0 = none, 3 = 1 or more).
FTA in the last year	0/3	FTA within the last year confirmed with court history records (0 = none, 3 = 1 or more).
Pending charge at arrest	0/1/2	Pending charge at arrest (0 = none, 1 = misdemeanor charge(s) only, 2 = at least 1 felony charge).
Active warrant	0/2	Active warrant at arrest (0 = no, 2 = yes).

Category 1: 0-7
 Category 2: 8-11
 Category 3: 12-14
 Category 4: 15-20

Recommended CPAT-R Odds and Rates of Success

Category	Rate of Success – New Arrest and/or FTA	Odds of Success – New Arrest and/or FTA	Rate of Success – New Arrest	Odds of Success – New Arrest	Rate of Success – FTA	Odds of Success - FTA
1	89%	4.60 greater	97%	8.48 greater	91%	10.01 greater
2	59%	1.44 greater	82%	4.58 greater	71%	2.36 greater
3	55%	1.20 greater	78%	3.50 greater	67%	2.02 greater
4	54%	1.18 greater	74%	3.24 greater	66%	1.97 greater

- a) The proportion of those in the risk category who are not arrested or FTA during the pretrial release period. *n* = 1,858
- b) The odds of no new arrest and/or FTA vs. a new arrest and/or FTA occurring (e.g. Category 1 defendants have a 4.60 greater odds of having no new arrest and/or FTA while release on bond compared to having a new arrest and/or FTA). c) The proportion of those in the risk category who are not arrested during the pretrial release period.
- d) The odds of no new arrest vs. a new arrest occurring (e.g. Category 1 defendants have 8.48 greater odds of having no new arrest while released on bond compared to having a new arrest.)
- e) The proportion of those in the risk category who do not FTA during the pretrial release period.
- f) The odds of no FTA vs. an FTA occurring (e.g. Category 1 defendants have a 10.01 greater odds of having no FTA while released on bond compared to having an FTA occurring).

Other Recommendations

Accuracy and Balance

- On-going evaluation of predictive performance
- Differences across sub-groups
- Fidelity to implementation

Appropriate and Standardized Use

- CPAT-R and the release decision
- Pretrial outcomes
- Training and education

Recommended CPATR-SV Odds and Rates of Success

Category	Rate of Success – New Arrest and/or FTA	Odds of Success – New Arrest and/or FTA	Rate of Success – New Arrest	Odds of Success – New Arrest	Rate of Success – FTA	Odds of Success - FTA
1	74%	2.86 greater	87%	6.60 greater	83%	5.00 greater
2	59%	1.46 greater	77%	3.33 greater	74%	2.88 greater

- a) The percentage breakdown of the sample who fell in each category: n = 2,174
 Category 1) 60.00%, Category 2) 40.00%
- b) The proportion of those in the risk category who are not arrested or FTA during the pretrial release period.
- c) The odds of no new arrest and/or FTA vs. a new arrest and/or FTA occurring (e.g. Category 1 defendants have a 42.86 greater odds of having no new arrest and/or FTA while release on bond compared to having a new arrest and/or FTA).
- d) The proportion of those in the risk category who are not arrested during the pretrial release period.

PTRA Education & Training Summary

Virtual Courses

- PTR A Education
- CPAT-R Training

Learning Objectives

- Science behind PTR A
- PTR A's utility for decision-making
- Empirical debate about bias
- CPAT & CPAT-R
 - Construction and testing
 - Interview
 - Investigation

Self-paced

- Estimated 2-4 hours to complete
- Learning checks

Audience

- Judges, prosecutors, public defenders, defense attorneys
- Pretrial officers

PTRA Education & Training Lessons

Introduction

- History of risk assessment
- Pretrial decision-making

Pretrial Risk Assessment

- Define PTRA
- Construction
- Common risk factors & Outcomes

Bias & Predictive Performance

- Define bias and predictive performance
- Bias debate
- PTRA validation

CPAT & CPAT-R

- The CPAT
- CPAT Validation Study
- CPAT-R and Recommendations

Risk Factors

- Define risk factor
- CPAT-R risk factors

CPAT-R Interview & Investigation

- Interview questions and process
- Investigation records
- Interview vignettes

THANK YOU!

Contact:

Victoria Terranova, PhD – victoria.terranova@unco.edu



UNIVERSITY OF
NORTHERN
COLORADO