

CPAT Validation Phase 1: Summary

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Phase 1

Phase 1:

- Retroactive validation
- Survey

- **Objectives**
 - Evaluate the relationship between the CPAT risk levels and pretrial outcomes.
 - Evaluate the predictive ability of the CPAT risk classification levels.

Phase 1

Major findings

- CPAT predicts new arrest and FTA better than chance.
- Modification to risk level designation could improve the tool.
- Weighting and scoring of the CPAT does not interfere with its predictive performance.
- Hurdles of implementation are perceived to be related to: risk items & risk levels, information reliability, specificity in prediction and buy-in of the tool.

Phase 1: Retroactive Validation

- CPAT interviews from 2015 & 2016
- Total sample: 3,386
- Reduced sample: 3,124

County	Number of Interviews in Total Sample	Percent of Total Sample
Boulder	226	6.67%
Denver	1527	45.10%
Garfield	85	2.51%
Larimer	489	14.44%
Mesa	283	8.36%
Pueblo	445	13.14%
Weld	331	9.78%
Total	3,386	100%

Pretrial Release Outcomes

- New Arrest and/or FTA at all
- FTA at all
- FTA – no consequence
- FTA – low consequence
- FTA – high consequence
- New arrest at all
- New Arrest - violent
- New Arrest – DV or order violation
- New Arrest – serious
- New Arrest – other

Analysis

- Receiver over characteristic (ROC)
 - Estimates: Area under the curve (AUC)
 - AUC between .50 - .75 greater than chance and realistic.
- Test alternative approaches:
 - Risk levels
 - Weights and score
 - Modified tool

How often is the CPAT's risk level assignment consistent with certain pretrial outcomes?

- New Arrest or FTA at all: 43.33%
- FTA – at all: 29.98%
- New Arrest – at all: 28.90%

Phase 1: Retroactive Validation

Pretrial Outcome	AUC (Confidence Interval)
New Arrest or FTA – at all ^a	.58* (.56 - .60)
FTA – at all	.54* (.52 - .56)
FTA – no consequence	.53* (.49 - .57)
FTA – low consequence	.53* (.49 - .56)
FTA – high consequence	.54* (.51 - .56)
New Arrest – at all ^a	.54* (.52 - .57)
New Arrest – violent ^a	.54* (.45 - .63)
New Arrest – DV or order violation ^a	.51* (.45 - .57)
New Arrest – serious ^a	.58* (.54 - .61)
New Arrest – other ^a	.54* (.52 - .57)

* = Estimate is likely beyond chance

a) Estimates based on reduced sample, n = 3,124

Are the CPAT's risk levels designated, weighted and scored for the instrument's best predictive ability?

- Risk level designation

Category 2	Odds Ratio (SE)	Confidence Interval	AUC
Current CPAT 18 -37	1.05* (.01)	1.03 – 1.07	.54*
CPAT 2A 18 -28	.63* (.08)	.49 - .81	.56*
CPAT 2B 29 - 37	1.58* (.21)	1.23 – 2.04	.56*

* = Estimate is likely beyond chance

- Weighting and scoring
 - Alternative approaches do not improve predictive performance.

Phase 1: Retroactive Validation

CPAT Item	Current CPAT	Modified Tool
Having a Home or Cell Phone	X	X
Owning or Renting One's Residence	X	
Contributing to Residential Payments	X	X
Past or Current Problems with Alcohol	X	X
Past or Current Mental Health Treatment	X	
Age at First Arrest	X	X
Past Jail Sentence	X	
Past Prison Sentence	X	
Having Active Warrants	X	X
Having Pending Cases	X	X
Currently on Supervision	X	
History of Revoked Bond or Supervision	X	

Are the risk factors in the CPAT the best predictors of certain pretrial outcomes?

	New Arrest/FTA (SE, CI)^a	FTA (SE, CI)	New Arrest (SE, CI)^a
Current CPAT - AUC	.59* (.01, .53-.61)	.59* (.01, .51 - .59)	.55* (.01, .52 - .61)
Modified CPAT - AUC	.60* (.01, .54 - .61)	.62* (.01, .56 - .64)	.56* (.01, .50 - .59)

* = Estimate is likely beyond chance

a) Estimates based on reduced sample, n = 3,124

Phase 1: Survey

County	Pretrial Services	Judges	Defense	Prosecution	Total
Boulder	11 (4.2%)	4 (1.5%)	5 (1.9%)	8 (3.0%)	28 (10.6%)
Denver	12 (4.5%)	8 (3.0%)	6 (2.3%)	13 (4.9%)	39 (14.7%)
Garfield	3 (1.1%)	3 (1.1%)	0 (0%)	2 (0.8%)	8 (3.0%)
Larimer	12 (4.5%)	5 (1.9%)	2 (0.8%)	3 (1.1%)	22 (8.3%)
Mesa	6 (2.3%)	3 (1.1%)	4 (1.5%)	16 (6.0%)	29 (10.9%)
Pueblo	8 (3.0%)	7 (2.6%)	1 (0.4%)	1 (0.4%)	17 (6.4%)
Weld	11 (4.2%)	6 (2.3%)	2 (0.8%)	0 (0%)	19 (7.2%)
Other	59 (15.4%)	32 (8.4%)	103 (27%)	26 (6.8%)	220 (57.8%)
Total	122 (31.9%)	68 (17.8%)	123 (32.2%)	69 (18.1%)	382 (100%)

Issues with CPAT

- Prior FTA
- Substance abuse item
- Category 2 overload
- Reliability of self-report measures
- Definitions
- Crime type, severity, and risk
- Buy-in

Phase 1: Survey

Rank	Task	Mean Rank (SD)
1	Interview	1.91 (1.04)
2	Criminal History Checks	2.04 (1.10)
3	Confirming Information	3.01 (1.01)
4	CPAT Assessment	3.33 (1.15)
5	Victim Interviews	4.71 (0.56)

- The interview is important but the process could be improved.

Conclusion

- CPAT validates and has merit for stakeholders.
- Potential improvements in predictive performance via risk items and risk level designation.
- Survey also indicates common hurdles in implementation for all that use the CPAT.

Phase 2

- Focus groups and observations

Phase 3

- Pilot modified tool
- Preliminary analysis:
 - Prior FTA & employment

THANK YOU!

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