Center
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Innovation

Risk-Needs-Responsivity: Moving Beyond the Basics

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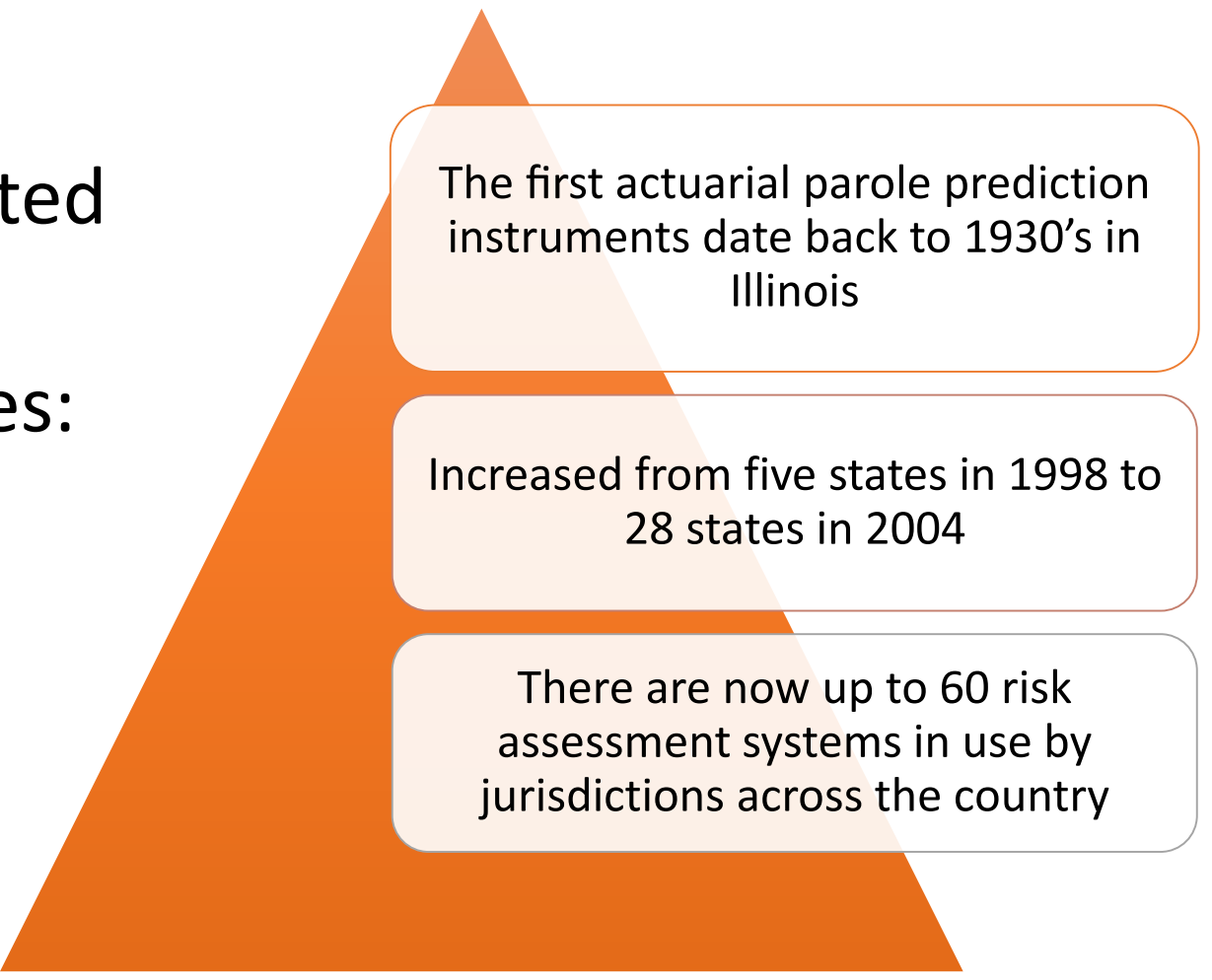Center for Court Innovation

Goals for Today

- Review RNR Theory

- Understand how a RNR tool is created

- Explore the reasons we measure risk

- Discuss how to use RNR tools in case management

- Examine the current critiques for the use of RNR in the justice system

RISK NEED RESPONSIVITY THEORY

Risk-Need-Responsivity Theory

- A model of crime prevention rooted in behavioral psychology

- Composed of three core principles:

   Risk | Need | Responsivity

- Grounded in three decades of research

The first actuarial parole prediction instruments date back to 1930's in Illinois

Increased from five states in 1998 to 28 states in 2004

There are now up to 60 risk assessment systems in use by jurisdictions across the country

The Three Core Principles

Risk Principle: <u>Who</u> to target

- Criminal behavior can be predicted
- Intervention is most effective with higher-risk individuals

Need Principle: <u>What</u> to target

- Assess and target "criminogenic" needs (i.e. needs that fuel criminal behavior)

Responsivity Principle: <u>How</u> to intervene

- Use interventions tailored to the needs, characteristics, learning styles, motivation, and cultural background of the individual.

Defining Risk

Risk = Probability of Criminal Recidivism

Likelihood of <u>re-arrest</u> for <u>any</u> charge, usually within the next six months to one year

While relevant to decision making

Risk ≠ clinical severity

Risk ≠ current charge

Risk ≠ violence or dangerousness

What is Recidivism Risk?

Likelihood of New Arrest After Release :

- <u>General Risk</u>: Likelihood of re-arrest on any charge

- <u>Risk of Violence</u>: Likelihood of re-arrest for a VFO

- <u>Risk of Domestic Violence</u>: Likelihood of new arrest on a domestic violence charge

Risk-need assessment tools such as the COMPAS, LSI-R, and C-CAT measure one or more of these outcomes. They do not measure other outcomes of interest, such as likelihood for treatment compliance or relapse.

What's a Risk and What's a Need?

The terms "risk" and "need" are often used interchangeably and the term "criminogenic need" is used without being fully defined.

A *criminogenic need* is simply a <u>risk factor</u> amenable to change. They are sometimes referred to as "dynamic" risk factors.

There are many needs but not all are criminogenic.

Criminal history and demographics are the only truly static factors (they can't be addressed through treatment).

Central Predictors of Recidivism Risk

Risk Factor	Common Measures
Criminal History	Prior adult and juvenile arrests; Prior adult and juvenile convictions; Prior failures-to-appear; Other currently open cases; Prior and current charge characteristics.
Demographics	Younger age; Male gender.
Antisocial Attitudes	Patterns of antisocial thinking (lack of empathy, attitudes supportive of violence, system blame).
Antisocial Personality Pattern	Impulsive behavior patterns; Lack of consequential thinking.
Criminal Peer Networks	Peers involved in drug use, criminal behavior and/or with a history of involvement in the justice system.
School or Work Deficits	Poor past performance in work or school (lack of a high school diploma; history of unemployment.
Family Dysfunction	Unmarried; Recent family or intimate relationship stress; Historical lack of connection with family or intimate partner.
Substance Use	Duration, frequency and mode of current substance use; History of substance abuse or addiction; Self-reported drug problems.
Leisure Activities	Isolation from pro-social peers or activities.
Residential Instability	Homelessness; Frequent changes of address.

Static (Criminal History, Demographics)

Dynamic (Antisocial Attitudes through Residential Instability)

Static v. Dynamic

- Static factors
  - Those that are unchangeable either by virtue of being historical in nature or by being largely immutable characteristic of an individual

- Dynamic Factors
  - Those that can be changed
  - These are our criminogenic needs

Non-criminogenic Needs

Examples of <u>non-criminogenic</u> needs:

- Trauma history
- Mental health
- Medical needs

Why assess and treat?

- Ethical reasons (affects individual well-being)
- Can interfere with treatment for criminogenic needs (trauma especially should be treated simultaneously)

What is a "risk need assessment tool"?

Risk and needs assessment instruments typically consist of a series of items used to collect data on behaviors and attitudes that research indicates are empirically related to the risk of recidivism.

CREATING A RISK NEED TOOL

Understanding the Tools

- The simplest tools rely exclusively on criminal records (no defendant interview required)

- Others add a short defendant interview, integrating the results into a single risk score

- Still other tools constitute more comprehensive risk and need assessments that require a long interview

- Beyond risk classification, these longer tools offer the benefit of assessing the severity of criminogenic needs

Understanding the Tools

Static Tools

- Assess for static (unchanging) factors only (i.e., demographic and criminal history information).

Dynamic Tools

- Assess for static AND dynamic factors (those that can change).
- Ideal when aiming to create a risk reduction or treatment plan based on individual needs.

Tool Development in 7 Steps

1. Factors are included in a "draft tool" based on Risk-Need Model;
2. Using a real sample of defendants, each factor is tested separately for its association with recidivism (re-arrest);
3. All factors are tested together to reduce redundancies and eliminate weak factors;
4. Each factor is given a score based on the strength of its association with recidivism;
5. A summary ("raw" risk score) is created;
6. Risk categories are created based on logical cut-points where re-arrest rates increase;
7. The score and categories are validated (re-tested) on a "fresh" sample.

Creating a Risk Need Assessment Tool

- Tools are typically based on the central risk factors
- Additional questions might be added
  - e.g., more specific criminal background questions depending on the context and purpose of the assessment
- Empirical analysis conducted to assess the statistical association of each selected factor on the outcome of interest (e.g., re-arrest over a certain time period); item "weights" established based on the relative strength of each risk factor in actually predicting recidivism
- Risk categories created based upon logical "cut points" in the scoring
- Validation of pilot version

Creating a Risk Need Assessment Tool

- Validity: A tool is "validated" when…
  - The scores and categories it produces are shown to be statistically associated with recidivism.
- Accuracy: Even among validated tools, some are more accurate than others.
  - Some tools are less likely to misclassify (produce "false positives").
  - The AUC statistic measures accuracy. Higher than .7 is good by industry standards.
- Discrimination: Good discrimination means a tool produces meaningful differences by category…
  - E.g., the re-arrest rate increases substantially as you move from low to moderate or moderate to high.

Does one size fit all when assessing for risk?

- Yes…No…*Maybe*

- RNR has historically been studied in general felony or "serious" offender populations

- While most research to date has found that the "central 8" predicts recidivism across subgroups, the study of RNR in offender subgroups remains an important field of inquiry.

  - E.g., low-level offenders, youth, women, racial/ethnic minorities, veterans

- That said, the <u>principles</u> of RNR apply across contexts.

WHY IS IT IMPORTANT TO MEASURE RISK?

Clinical v. Actuarial Prediction

	Clinical	Statistical
General Recidivism	0.08	0.22
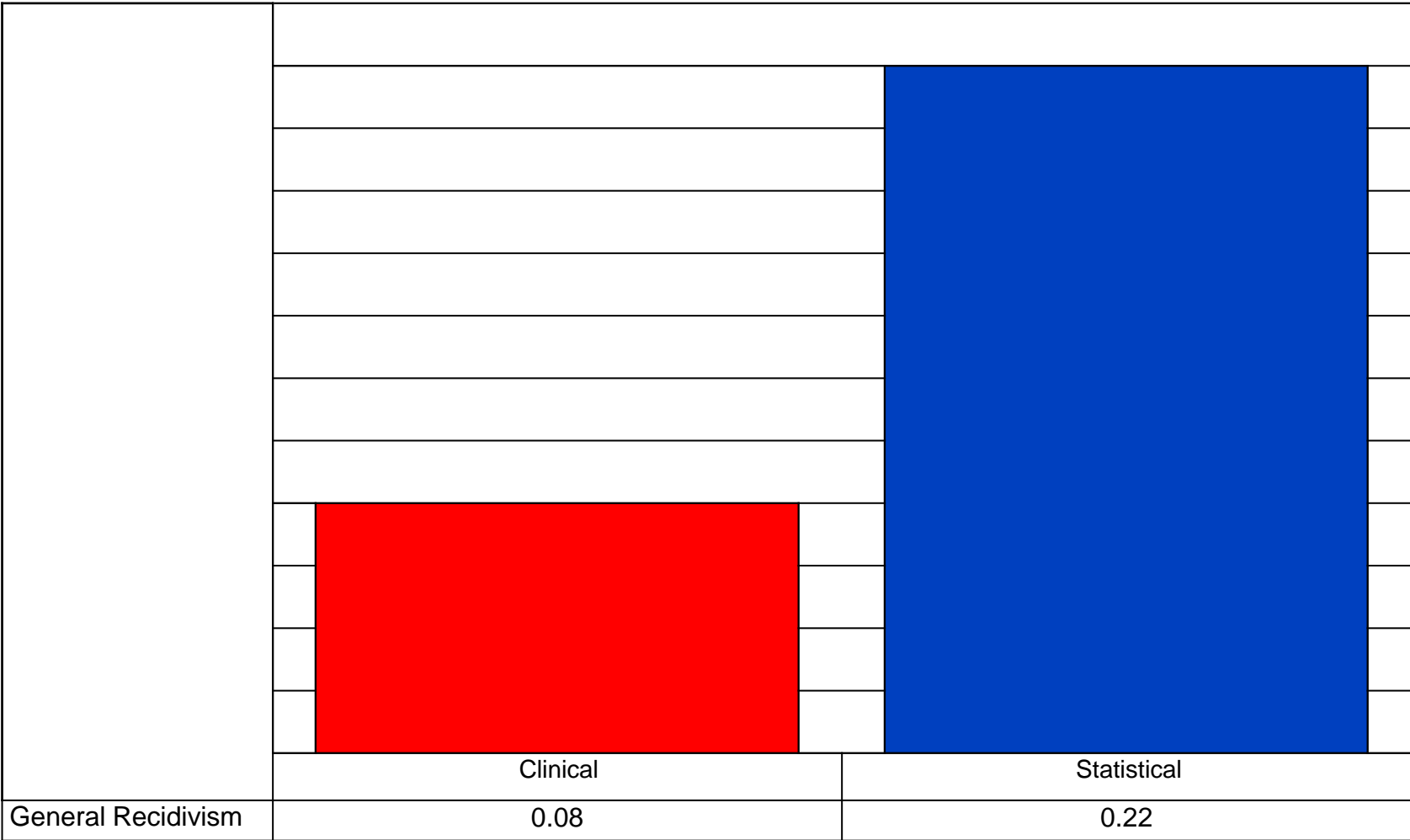
Goggin, C.E. (1994). Clinical versus Actuarial Prediction: A Meta-analysis . Unpublished manuscript. University of New Brunswick, Saint John, New Brunswick.

Why are risk algorithms used?

- To decrease subjectivity/bias in human decision.

- To aid judges in reserving detention only for actual high-risk defendants.

- To decrease pretrial incarceration overall

Strengths
Why use risk assessments?

- Data-driven tools have been shown improve the accuracy of public safety assessments.

- Dynamic risk-need tools clarify when and what kind of treatment is needed.

- Risk tools may provide a foundation for progressive reform.

Limitations
Why proceed with caution?

Probability vs. Perfection

- Risk assessment tools place individuals in categories that reduce uncertainty but do not perfectly predict the future;

- Risk assessment only accounts for factors measured in the specific tool.

Type of Risk

- Many available tools do not classify individuals for critical outcomes such as failure to appear (FTA) or new violent offense;

- More specific outcomes can be difficult to predict

Culpability

- Risk assessment tools are silent on matters of moral culpability and legal proportionality.

Even "neutral" algorithms may result in disparities in outcomes such as bail or pretrial detention.

Why?

1. All algorithms produce errors
    - false positive: called high risk for an outcome that **doesn't occur**
    - false negatives: called low risk for an outcome that **does occur**

2. The **overall error rate** may be the same across groups, while the **error types** vary by groups
    - higher rates of **false positives** among black defendants may foster unfair outcomes

Implications

- Concerns regarding risk assessment and disparities are valid.
  - Disparities can exist even when algorithms are "neutral" in construction.
  - The drivers of disparities are "baked into" historical CJ data.
- Risk assessment holds potential—but only if tools are carefully implemented:
  - To sharply limit the range of cases where assessment results can lead to detention:
    - Very highest-risk cases only and/or violent cases only.
  - To inform the level of community-based supervision in other cases.
- Risk assessment is a tool, not a panacea:
  - Jurisdictions should employ risk instruments in policy environments oriented to the values of jail reduction and racial fairness.
  - Risk assessments should inform a decision to detain in, at most, a small fraction of cases.
  - Research on whether and how to use risk assessments should continue.

Using RNR Tools and Theory in Case Management

The Risk Principle and Case Management

- The risk principle tells us that we should <u>assess for risk</u> and vary the intensity of intervention (treatment & supervision) by risk level.

- <u>Higher risk</u>: Provide more intensive intervention.

- <u>Lower risk</u>: Intervention can be harmful. ***Why?***

  ► Interferes with work or school

  ► Increases contact with higher-risk peers

 ► Can stigmatize and produce psychologically damaging effects

Jail Increases Risk

- The harm of intensive intervention to lower-risk individuals is magnified when *jailing* them.
  - Jail is the most intensive and disruptive intervention of all; AND
  - The default in many jurisdictions.

- Research generally shows that incarceration increases the likelihood of re-arrest after release—but this relationship applies especially at <u>lower</u> risk levels.

Risk-Based Decision-Making in the Courtroom

- **<u>Minimal or low risk</u>:** *Off-ramp ASAP* (e.g., pretrial release; conditional discharge). Beware of net-widening!

- **<u>Moderate-to-higher risk</u>:** *Supervision or treatment* at appropriate intensity (e.g., supervised release pretrial and alternatives to incarceration post-adjudication).
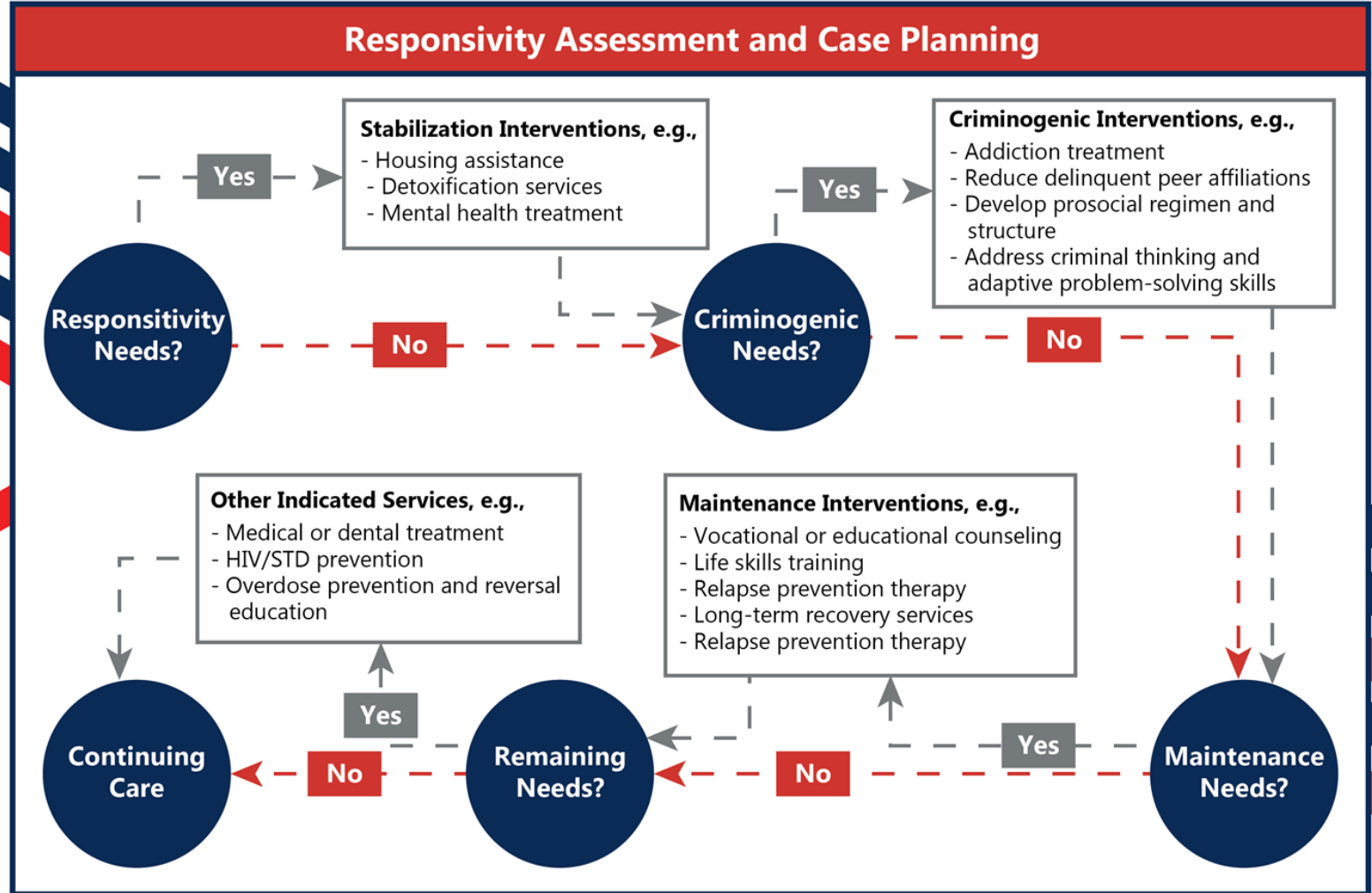
Responsivity Needs

- In case management you first need to address the symptoms that will interfere with attendance and engagement in treatment.

- Responsivity needs can include:
  - Mental illness
  - Homelessness/residential instability
  - Detoxification needs

Criminogenic Needs

- Criminogenic needs are the needs that relate to risk level.

- Addressing criminogenic needs reduces the participants risk of re-offense.

Maintenance Needs

- These must be addressed for long term maintenance of treatment gains.

- Maintenance needs include:
  - Vocational
  - Educational
  - Life skills
  - Relapse prevention
  - Long-term case planning

CRITIQUES OF RISK NEED TOOLS

So what is the downside?

In practice, the RNR model relies on risk assessment. Risk assessments can cause problems if they aren't implemented well.
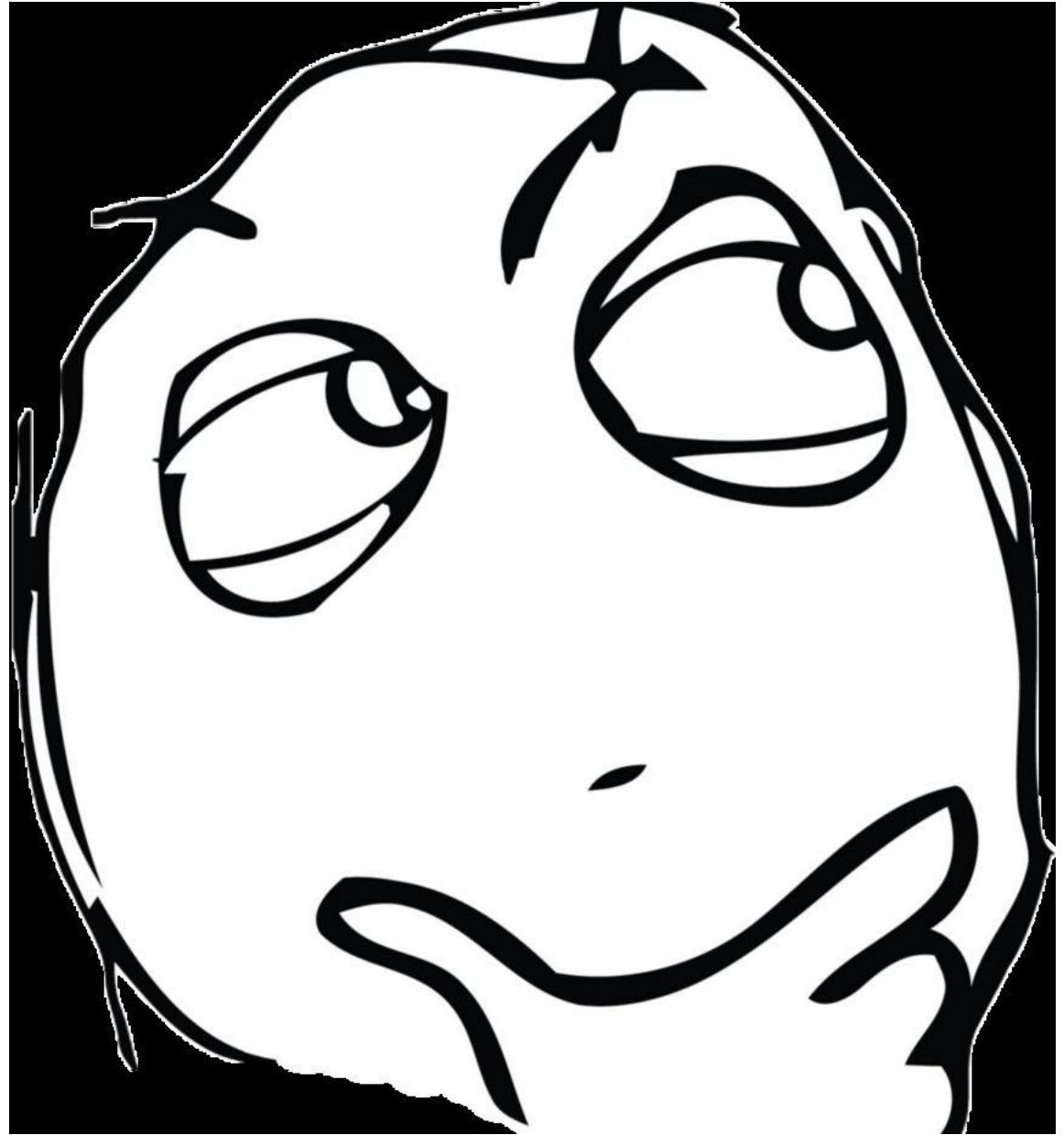
Implementation Matters!

Risk assessment is not self-executing
> The practitioner must interpret the implications of the assessment in the therapeutic context

Follow the risk & need principles
> Insufficient or unmatched treatment in high-risk individuals can increase recidivism
- Overtreating low-risk individuals can increase recidivism

Track your progress
> Risk assessment outcomes are sensitive to the context and population
- Risk assessment can exacerbate racially disparate outcomes (more important in pretrial contexts)

Remember, RNR is a therapeutic justice model, not a sentencing framework
> Incarceration increases risk and is not an evidence based treatment
> In practice, RNR reflects the values of the program team

Bringing it all back home

THREE PRINCIPLES FOR EFFECTIVE IMPLEMENTATION

#1
Place Value on Transparency

- Eschew secret algorithm and black boxes!
  - Risk assessment items, weighting, and scoring should be openly disclosed and thoroughly explained.

- Transparency supports buy-in and sustainability.

- Transparency is key to maximizing accuracy and equity of the tool.

#2
Maximize Accuracy & Equity

- Jurisdictions are advised to maximize the accuracy of risk assessment, with particular attention paid AUC statistics.

  - Poor performance may result in no real recidivism reductions and exacerbation of bias.

- Local validation is key. Shopping off the rack is contraindicated.

  - Evaluation should focus on predictive accuracy, predictive equity *and* racial/ethnic disparities.

#3
Judicious Implementation

Design or select risk assessment instruments with the utmost care...BUT pay equally careful attention to how they are implemented, including:

- Clearly articulated goals;

- The importance of legally proportionate decision-making;

- The need to negotiate risk-based system responses with all stakeholders;

- The intersection between community resources and assessment practice.

All Risk Assessments Make Mistakes!

- The crux of the current debate is about the KINDS of errors made.

- Classification errors can have serious real-world consequences.

ProPublica's COMPAS Analysis

- 2016 analysis of the COMPAS tool.

- Found that the tool disproportionately label black defendants who did not go on to be charged with a new crime as high-risk.

- This unfairly exposed these individuals to punitive criminal justice consequences

Center for Court Innovation NYC Analysis

- Research project that drew on real world data, but did not inform real pretrial decisions.

- 175,000 anonymized NYC defendants and an assessment tool created for this analysis.

- Reviewed the types of errors that were made by the assessment tool.

CCI Analysis Conclusions

- The current "business-as-usual" approach to pretrial decision making feel short of achieving the goals of pretrial reformers.

- Concerns regarding the potential for risk assessments to perpetuate racial disparities are real.

- While the persistence of disparities is concerning, it is not an argument for abandoning the use of risk assessments in pretrial decision-making

Moving Forward

"Too often the debate over risk assessments portrays them as either a technological panacea, or as evidence of the false promise of machine learning.

The reality is they are neither.

Risk assessments are tools with the potential to improve pretrial decision-making and enhance fairness.

To realize this potential, the onus is on practitioners to consider a deliberate and modest approach to risk assessment, vigilantly gauging the technology's effects on both racial fairness and incarceration along the way."

Thank you!

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