Who Benefits from Evidence-Based Treatment Policies? An Analysis of Moderators of Impact

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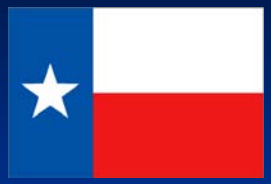
Goals of Today's Presentation

- Describe an evidence-based practice policy currently in place in Texas
- Present analyses examining child-level moderators of the impact of that policy
- Provide an illustration of using administrative datasets to conduct this type of research

Evidence-based practice policies

- At least 45 state mental health agencies are engaged in efforts to implement EBPs
- Little empirical data exist on the impact of these efforts
- Why study them?
  - "Implementation as usual"
  - Innovative or "good enough" approaches

Texas Resiliency and Disease Management (RDM)



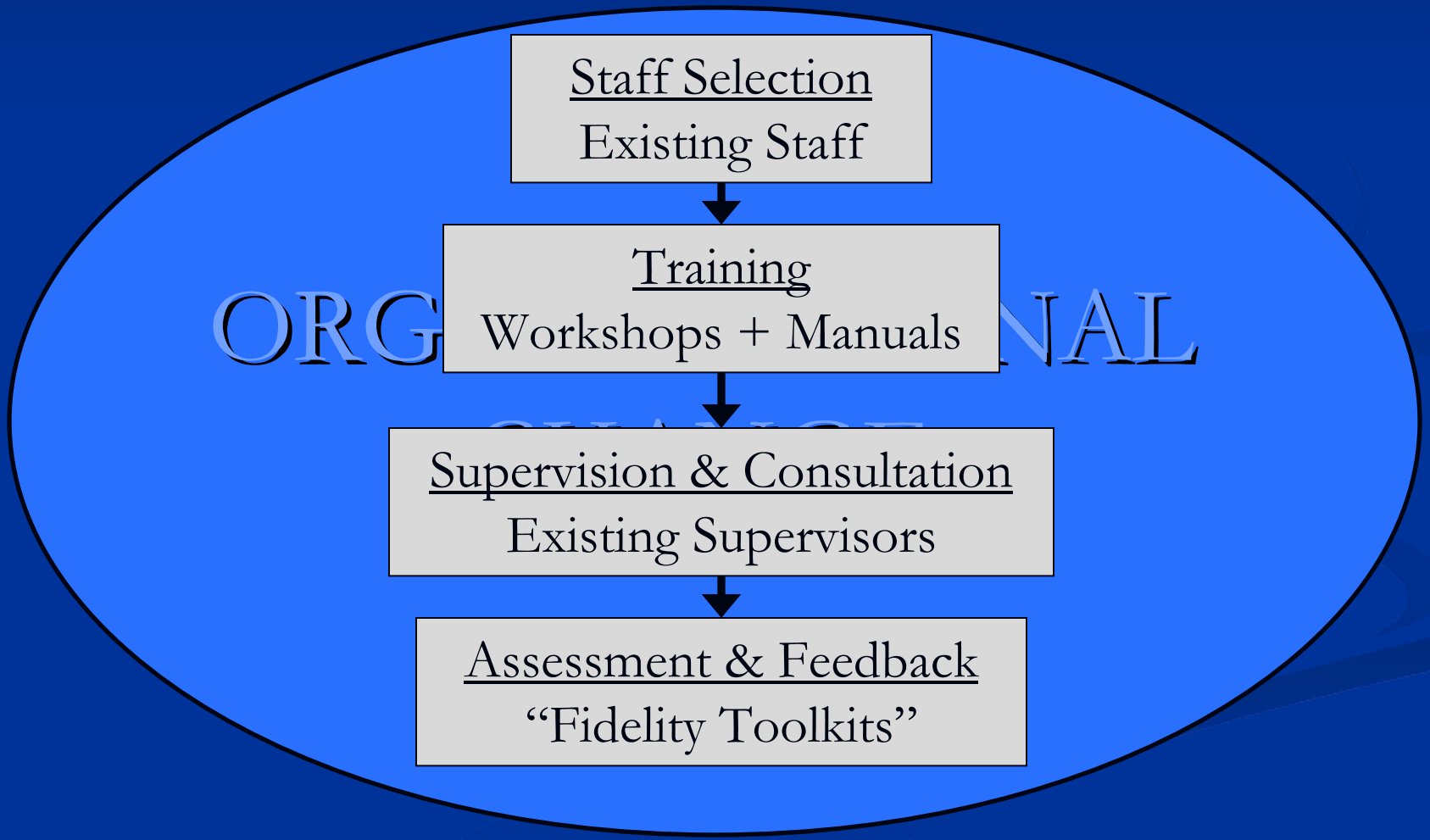
- 2002: Conferences to generate guidelines for system improvement
  - Recommended evidence-based practice
  - Planned to pilot in 4 centers
- 2003: Legislative mandate to reform public mental health system
  - EBTs mandated in all centers starting September 1, 2004
  - No increase in funding

RDM approach to implementation

ORGANIZATIONAL CHANGES

- New assessment measures & databases
- Service utilization guidelines
- Contractual changes and changes to Medicaid payment policies

RDM approach to implementation



Children's EBTs chosen for RDM

- "Skills Training" for Externalizing Disorders
  - *Defiant Child/Teens* (Barkley, 1997; Barkley, Robin & Edwards, 1999)
  - *Skills Training for Children with Behavior Disorders* (Bloomquist, 1996)
- "Therapy" for Internalizing Disorders
  - *Coping Cat/C.A.T. Project* (Kendall, 2000; Kendall, Choudhury, Hudson & Webb, 2002)
  - *Taking Action* (Stark & Kendall, 1996)/*Adolescent Coping With Depression Course* (Clarke, Lewinsohn, & Hops, 1990)

Design

- Project designed in collaboration with the clinic
- Analysis of administrative data
- Interrupted time series design
  - 4 years of data pre-RDM and 2 years of data post-RDM
- Data extracted from:
  - Billing database
  - Assessment database
  - Human resources database

"Participant" Characteristics- Clients

- N = 4254 (3527 pre RDM and 727 post RDM)
- 63.3% Male
- 21.8% Caucasian, 37.0% African American, 39.3% Hispanic, 1.9% Asian/Other
- 41.7% Uninsured
- Diagnoses: 33.5% Disruptive Behavior, 38.0% ADHD, 17.1% Psychosis/Bipolar, 44.5% Depression, 8.4% Anxiety, 25.1% Other

"Participant" Characteristics-Clinicians (Total N ≈ 140)

- Degree
  - 22.9% bachelor's degree
  - 77.1% master's degree
- License Discipline
  - 24.0% social work
  - 76.0% counseling/psychology
- Length of Employment
  - M = 2.12; SD = 3.00; Range 0 – 17 years

Challenge: Selecting Outcomes

- Assessment package changed with RDM
- Parent reports missing at alarming, uneven rate
- Assessment was for clinical, not research purposes
  - Missing data
  - Timing of assessments

Measures- Outcomes

- Service use outcomes during first year of care:
  - Weeks in services
  - Public hospitalizations
  - Crisis center use
  - Readmissions after case closing
- Clinician-Rated Symptoms/Functioning at 90 day follow-up
  - School Behavior
  - Risk of Self Harm
  - Co-Occurring Substance Use
  - Juvenile Justice Involvement

Sample Rating Scale

Risk of Self-Harm

1. ***No Notable Limitations***
- ♦ No current suicidal ideation.

2. ***Mild Limitations***
- ♦ Fleeting suicidal ideation with no plan.

3. ***Moderate Limitations***
- ♦ Suicidal ideation or threats with no plan.

4. ***Serious Limitations (one or more of the following)***
- ♦ Ideation with intent, plan and means **with** adequate safety plan.
- ♦ Ideation with no plan but has a history of suicide attempts.

5. ***Extreme Limitations***
- ♦ Ideation with intent, plan and means **without** adequate safety plan.

Measures- Moderators

- Sex
- Age
- Ethnicity
- Insurance status
- Diagnosis
- Intake severity on symptoms/functioning ratings

Analyses

- Two-Level Hierarchical Linear Modeling
- Propensity scores
- Other Control variables
  - Weeks in services
  - Time to follow-up
  - Intake values on the outcome measure

Analyses

- Examined mean differences between pre- and post-RDM groups
  - Tested interactions between group and the moderators
- Included parameters for trends over time to control for general changes in outcomes that were occurring independent of RDM and changes in those trends (all ns)

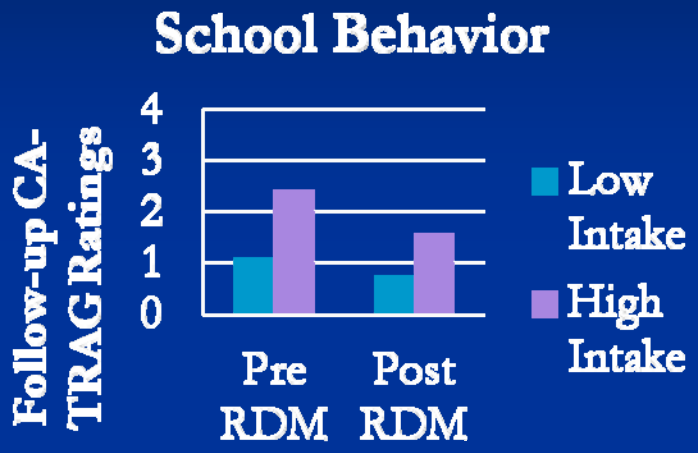
Previous Analyses: Main Effects of RDM

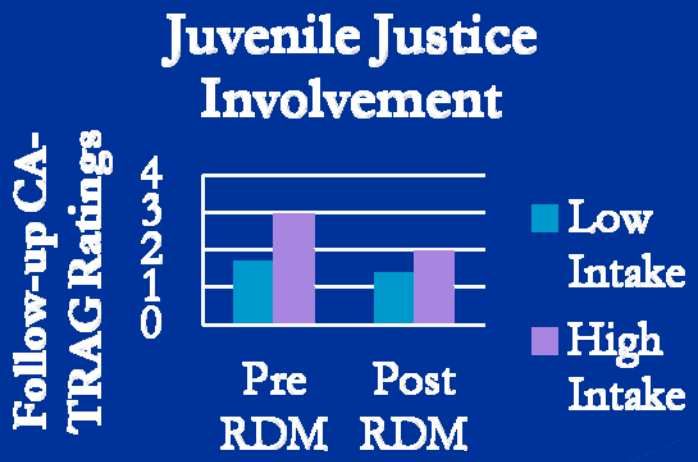
- Relative to youths treated pre-RDM, Post-RDM Youths were:
  - .27 Points Lower on Danger to Self ($p < .001$)
  - .14 Points Lower on Substance Abuse ($p < .001$)
  - In treatment for 11 more weeks ($p < .001$)
  - Less likely to be hospitalized ($p < .001$; pre-RDM nearly 5X more likely to be hospitalized)

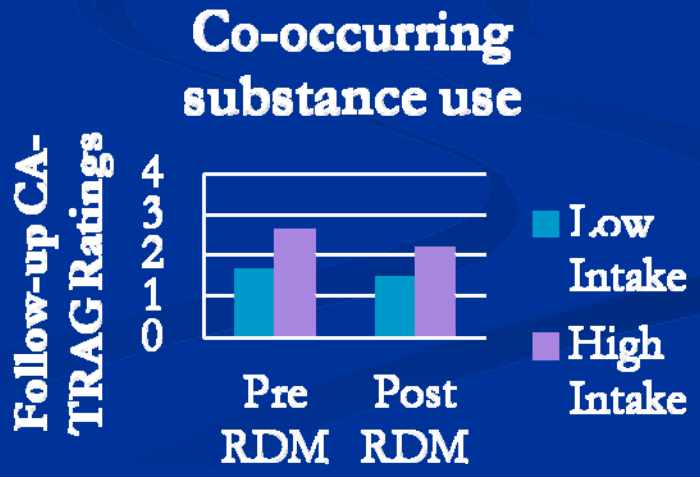
Moderator Results

- Many statistically significant ($p < .01$) findings
  - Some not very clinically meaningful (e.g., group differences of .1 points on a 5 point scale)
  - Some also not falling into clear patterns
- Here, will highlight findings that were:
  - Clinically meaningful
  - Clear patterns

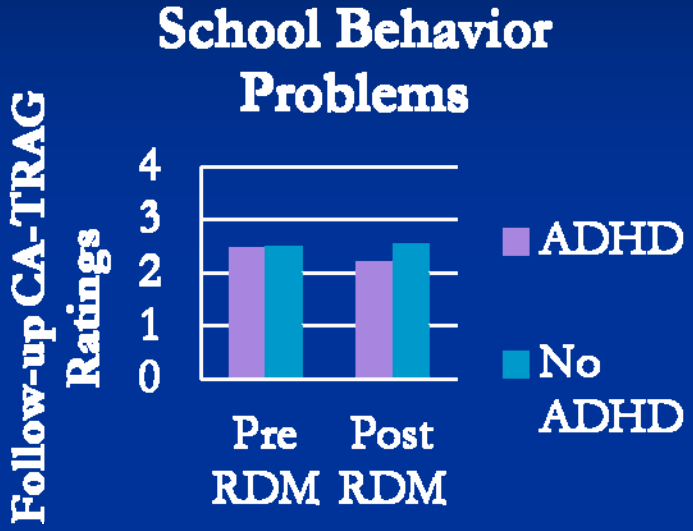
Finding 1: RDM associated with better outcomes for higher severity clients

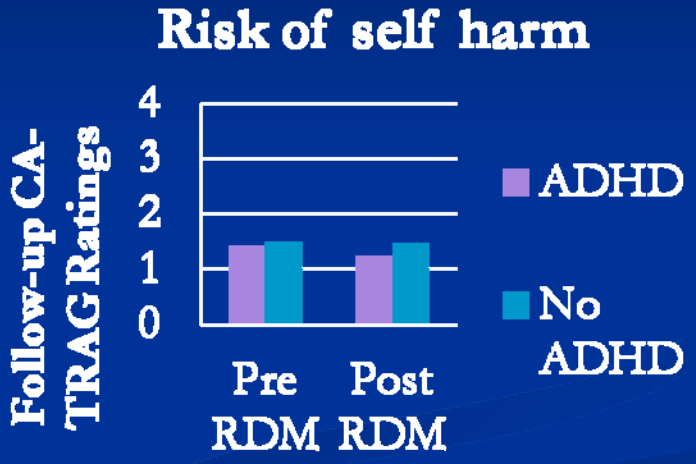




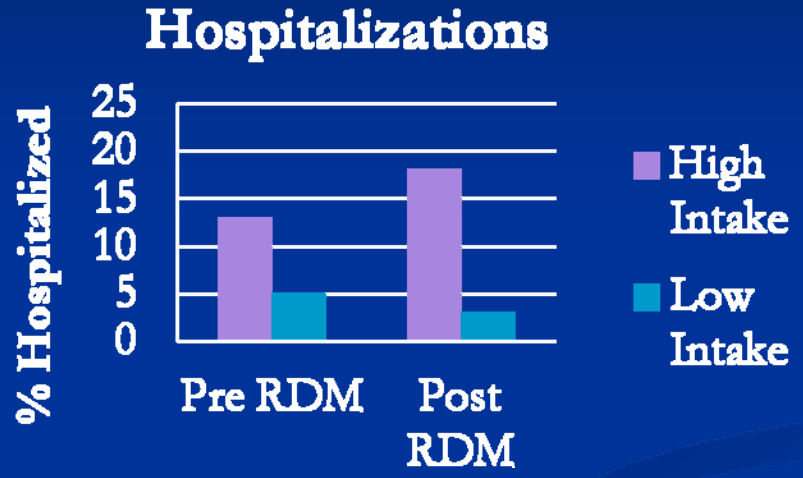


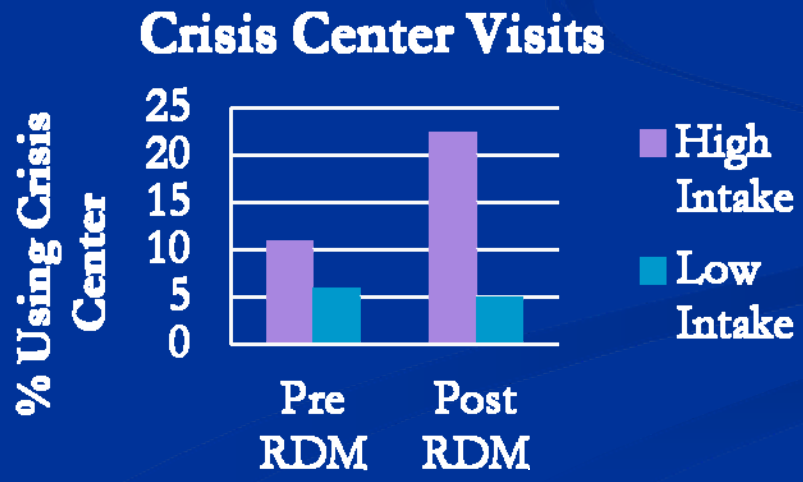
Finding 2: RDM was associated with better outcomes for youths with ADHD



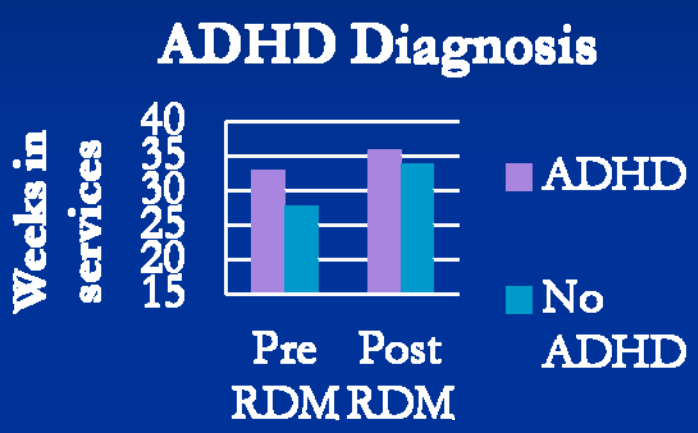


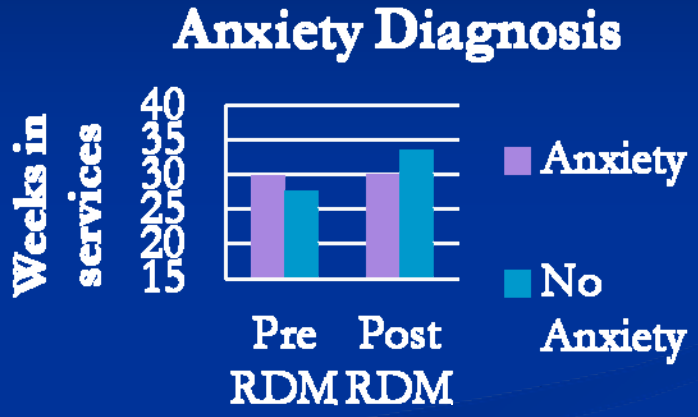
Finding 3: RDM Associated with Worse Outcomes for Youths with Co-Occurring Substance Use

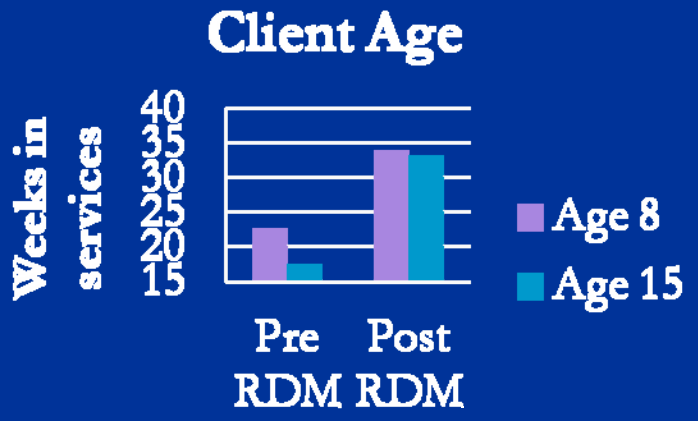


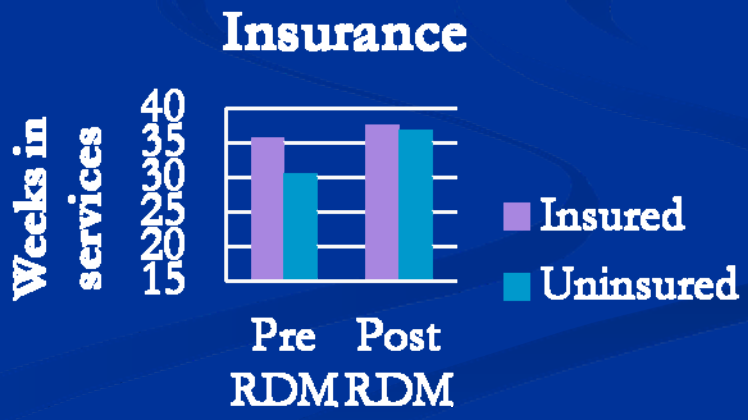


Finding 4: Changes in episode length were moderated by several child characteristics

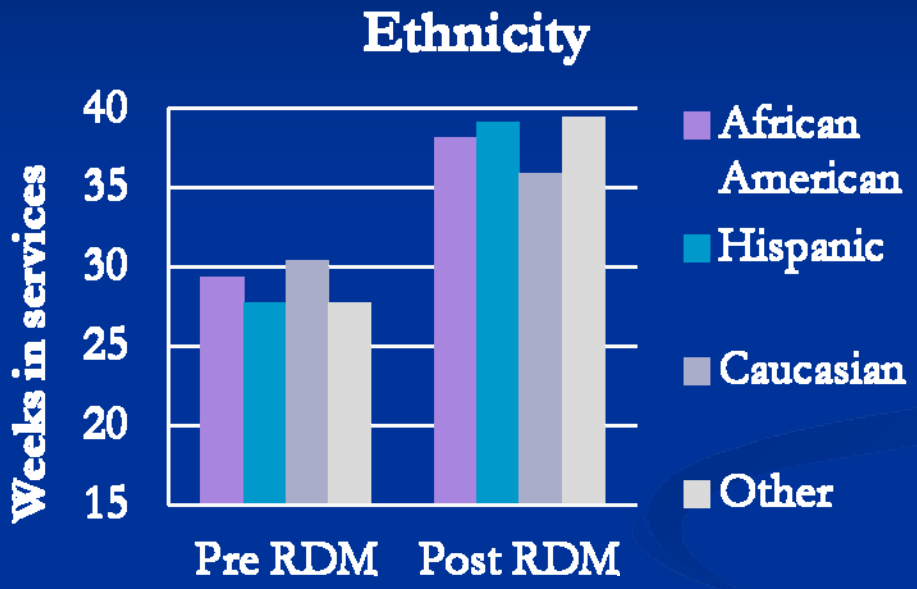








Moderation of Episode Length



Ethnic Group	Difference between Pre and Post RDM
African American	8.80 weeks
Hispanic	11.37 weeks
Caucasian	5.78 weeks
Other	11.73 weeks

Interpretation of Findings

- This major overhaul of a state mental health system resulted in small changes in outcomes, with the exception of hospitalizations
- Change seemed most beneficial for more severe youths
- Better outcomes for youths with ADHD unexpected
  - Could reflect more benefit for skills trainer therapists
  - Could reflect less disruption for that group

Interpretation of Findings

- Worse outcomes for youths with co-occurring substance use
  - Less flexibility under RDM?
- Several youth characteristics associated with length of episodes of care, but not outcomes
  - Could reflect benefit of RDM: Better engagement
  - Could reflect negative impact: Taking longer to obtain same outcomes
  - Could reflect mediation- need for additional analyses

Next Steps

- Multivariate analyses to tease apart correlated moderators
- Therapist-level moderators
- Partner with MHMRA to interpret the results

Implications

- Studying policies provide naturalistic opportunity to study implementation
- Administrative datasets can provide data with large sample sizes, although challenges are many
- Interpretation can be tricky, and requires close partnership with stakeholders

Thank you!

- And thanks to…
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