What is the R and the I in RTI: Interventions with Evidence and Determining Response

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Response to intervention programs for students at risk of emotional and behavioral problems are seen around the U.S. Identifying evidence based interventions and determining what constitutes “response” are questions that are sometimes overlooked in implementation plans. Whether you want to start a new program or refine an existing system, this session will provide valuable information about intervention and measuring response.

This session will briefly overview for context a three tier model using universal screening and assessment to identify risk, then spend the majority of the session discussing critical issues for intervention selection and measurement of response. For example – “Should all students at risk receive the same standardized programming?” or “How many measures of behavior are needed before confidently determining whether or not response occurred?”.

Session leader Kimberly Vannest will approach this topic based on both the empirical research and her experiences across states and districts, and the tens of thousands of students in these programs.
Context of a three tier model
Context is Always Important

horror movie
Only a few decades ago did we confirm that early signs of psychiatric disorders are present in children or that children experience mood disorders.

AND - In diseases like schizophrenia, for example, early identification of risk may make it possible to **intervene early and prevent the lasting disability** associated with this disease.

National Institute of Mental Health, 2012
Thus the move to universal screening, early identification of risk, and early prevention efforts is “newer” than some current models of disability identification and service delivery.
Self Evaluation

(a) a Leadership Team to actively coordinate implementation efforts;
(b) an organizational umbrella composed of adequate funding, broad visibility, and consistent political support;
(c) a foundation implementation, cadre of individuals, coaching support for local implementation, train teams, on-going evaluation; and
(d) demonstration schools

SCORE YOUR TEAM

1. Emerging
2. Evolving/Adapting
3. Solid – well formed
4. Growth, new developments
5. Applications to new areas within school or district
Critical issues for intervention selection
Problem

- Approximately 20% of our school age population experiences emotional and behavioral problems to the extent that they may qualify for some level of mental health services according to the U.S. Surgeon General.
- One in four pediatric visits are related to behavior.
- When children in schools have unaddressed social, emotional, and behavioral problems, they are unlikely to perform well academically and may contribute to a loss of instructional time for other students in classrooms.
- But early identification of risk, and simple prevention programming, can remediate problems before risk becomes Serious Emotional Disability (SED).
- Children who progress to the point of disabling condition experience the worst school and post-school outcomes of any group of children with school performance 2-3 grade levels below their peers and a 46% drop out rate.
Among all Americans, 36.2 million people paid for mental health services totaling $57.5 billion in 2006 (average per person was $1,591).

Biggest unmet needs, 1 in 2 will suffer, 1 in 17 currently have a serious mental illness.

Health systems in state and federal governments are working to rectify the issue but medicate coverage is a contentious issue.

About 1 in 6 of adults living just above poverty line, have mental health problems and less than 12% get adequate care.

In 2011 - 100 billion in lost productivity (National Alliance of Mental Illness)

Suicide is top 15 cause of death

Sources: NIMH, 2011 and Scientific American, March 2012
Big Picture

- Individualized Programming
  - Targeted Programming
    - Universal Programs
    - Universal Screening
    - Universal Curriculum
Ask yourself – “How do we get to tier two or early prevention efforts”?

- Is tier two intervention intended as prevention? Or
- Is tier two another name for pre-referral documentation?
- These are fundamentally different approaches to working with our population.
A systematic approach is called for

- Head Start staff under-identified children with behavioral or emotional problems as a group and, those children with the highest risk for poor academic readiness were MOST likely to be unidentified and untreated (Fantuzzo, Bulotsky, McDermott, Mosca, & Lutz, 2003).
Universal screening is a systematic way to identify risk

- Systematic Screening for Behavior Disorders (SSBD; Walker & Severson, 1992)
- Student Risk Screening Scale (SRSS; Drummond, 1993);
- Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) and
- **BASC-2 Behavioral and Emotional Screening System** (BASC-2 BESS; Kamphaus & Reynolds, 2007)
- Social Skills Improvement System (SSIS; Elliott, & Gresham, 2008)
Methods of screening

- Pass screeners to teacher to take home and return in a week
- Pass screeners during a faculty meeting to “do during the time allotted”
- Use a back to school event to answer questions and have parents complete screeners
- Have students complete in a home room class
- High school teachers can be selected by a particular hour of the day. (i.e. all teachers screen those students in their room at 9 am)
Methods of reviewing results

- After school meetings with teacher lists of students at risk
- Team or grade level meetings
- Individual teacher and “consulting team” meetings regarding each student
  - One sub rotates throughout the building for 15 minute meetings.
- Pay special or particular attention to teachers “at risk”
**Example Report**

In a Roster report, students are listed according to whatever level is chosen; in this case, the district level was chosen, and results are sorted within each school in the district.

### Group Roster - District:

**North Primary**

**Date Range:** 01/03/2003-01/03/2006

**Classification:**
- Normal: 10-60
- Elevated: 61-70
- Extremely Elevated: 71 and higher

**Validity Index:**
- F: Index
- CI: Consistency Index
- RP: Response Pattern Index

**Validity Index Elevation:**
- A: Acceptable
- C: Caution
- E: Extreme Caution
- L: Caution-Low
- H: Caution-High

#### Extremely Elevated

<table>
<thead>
<tr>
<th>Student</th>
<th>Test Date</th>
<th>Form Type</th>
<th>Validity Index</th>
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#### Elevated

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#### Normal

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<th>Classification</th>
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</tr>
</tbody>
</table>

**Classification Key**

- A: Acceptable
- C: Caution
- E: Extreme Caution
- L: Caution-Low
- H: Caution-High

Results can be sorted alphabetically (student name), or by classification level (either ascending or descending).
Decisions about capacity options

- Triage and select a number of students to involve in a prevention program based on a conservative capacity assessment.

- Address needs of all students with “extremely elevated” risk levels
  - About 5%, 1-3% of whom will already be in special education services.

- Address needs of all students with “extremely elevated and elevated” levels of risk.
  - About 15%, 1-3% of whom will already be in special education services.
Decisions about service options

- Decisions about the degree of targeting in prevention programming is needed.
- Targeted to type of problem "generic" for all students at risk.

Pros and Cons
- We know a student is at risk but at risk for what?
- Depression looks different than aggression but both may have office discipline referrals for not following directions.
- Doing something may be better than nothing
- Can not tell responders from non responders unless prevention/intervention is targeted.

Example of a less targeted program:
- Some schools run all students at risk through a check in check out or behavior education program.

Example of a more targeted program
- Assigning individual students to one or more existing programs
  - Breakfast club (social skills group)
  - Before school programs
  - Child protective services referrals
  - Mentors
  - Community liaisons
  - Peer counseling
  - Study strategies
Ideally Prevention and Intervention should match the problem.
Ideally Prevention & Intervention plans use data.
Identify individual problems via rating scale

![Graph showing T-scores and percentiles for various behaviors and issues.](image)
Case Study Stuart

- The rating scale indicates Stuart has clinical elevation levels in hyperactivity, anxiety, and attention.
- Looking at interventions with effectiveness for these problem types a teacher or team can identify which strategies are a best fit for Stuart, the teacher, the campus and therefore have the highest probability of working AND being workable.
This multi-year research study yields the following Interventions with evidence for effectiveness (Vannest, Reynolds, & Kamphaus, 2008)

1. Advance organizers
2. Anger Management Skills Training
3. Behavioral Interventions
4. Choice
5. Class Wide Peer Tutoring
6. Cognitive organizers
7. Cognitive Restructuring
8. Cognitive-Behavioral Therapy
9. Computer-Assisted Instruction
10. Contingency Management
11. Daily Behavior Report Cards
12. Exposure-Based Techniques
13. Family Therapy
14. Functional Assessment
15. Functional Communication Training
16. Integrated Cognitive-Behavioral Therapy
17. Interdependent Group-Oriented Contingency Management
18. Interpersonal Therapy for Adolescents
19. Milieu Language Teaching
20. Mnemonics
21. Modeling
22. Modified Task Presentation Strategies
23. Moral Motivation Training
24. Multimodal Interventions
25. Multi-systemic Therapy
26. Opportunities to respond
27. Pacing
28. Parent Training
29. Peer Mediated Interventions
30. Peer tutoring
31. Peer-Mediated Conflict Resolution and Negotiation
32. Picture Exchange Communication System
33. Pivotal Response Training
34. Pre-correction
35. Presentation Strategies
36. Problem Solving
37. Procedural prompts and behavioral momentum
38. Replacement Behavior Training
39. Self instruction
40. Self mediated strategies
41. Self monitoring
42. Self-Management
43. Social Skills Training
44. Task Modification
45. Task Selection Strategies
46. Token Economy System
47. Verbal Mediation
48. Video Modeling
Which demonstrate evidence specific to problem types

Interventions for Aggressive Behaviors
1. Problem Solving Training
2. Cognitive Reconstructing
3. Verbal Mediation
4. Social Skills Training
5. Peer Mediated Conflict Resolution and Negotiation
6. Replacement Behavior Training

Interventions for Anxious Behaviors
1. Exposure-Based Techniques
2. Contingency Management
3. Modeling
4. Family Therapy
5. Integrated Cognitive-Behavioral Therapy

Interventions for Somatization
1. Behavioral Interventions
2. Multimodal Cognitive-Behavioral Therapy

Interventions for Academic Problems:
1. Advanced Organizers
2. Presentation Strategies – Structuring
3. Presentation Strategies – Time
4. Presentation Strategies – Responding
5. Peer Tutoring
6. Class Wide Peer Tutoring
7. Cognitive Organizers
8. Mnemonics
9. Self-Monitoring
10. Self-Instruction
11. Reprocessing Strategies

Interventions for Attention Problems
1. Contingency Management
2. Daily Behavior Report Cards
3. Modified Task-Presentation Strategies
4. Self-Management
5. Class Wide Peer Tutoring
6. Computer Assisted Instruction
7. Multimodal Interventions

Interventions for Problems with Adaptability
1. Functional Behavior Assessment
2. Pre-correction
3. Procedural Prompts and Behavioral Momentum
4. Self Management Training
5. Cognitive Behavior Management

Interventions for Conduct Problems
1. Token Economy System
2. Interdependent Group-Oriented Contingency Management
3. Anger Management Skills Training
4. Problem-Solving Training
5. Social Skills Training
6. Moral Motivation Training
7. Parent Training
8. Multimodal Interventions
9. Multi-systemic Therapy

Interventions for Depression
1. Cognitive Behavioral Therapy
   - Psycho-educational
   - Problem-Solving Skills Training
   - Cognitive Restructuring
   - Pleasant Activity Planning
   - Relaxation Training
   - Self-Management Training
   - Family Involvement
2. Interpersonal Therapy for Adolescents

Interventions for Hyperactive Behaviors
1. Functional Assessment
2. Contingency Management
3. Parent Training
4. Self-Management
5. Task Modification
6. Multimodal Interventions

Interventions for Functional Communication
1. Functional Communication Training
2. Picture Exchange Communication System
3. Video Modeling
4. Mileu Language Teaching
5. Pivotal Response Training

ISBN/Product code: 30570

You may identify one strategy that will work across problems

<table>
<thead>
<tr>
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<th>Attention</th>
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<tbody>
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<td>2. Daily Behavior Report Cards</td>
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</tr>
<tr>
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<td>7. Multimodal Interventions</td>
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You may identify a strategy that matches the skills of the team

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<td></td>
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<td>7. Multimodal Interventions</td>
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You may identify a strategy that matches resources, current programming or philosophy

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<tr>
<td></td>
<td></td>
<td>7. Multimodal Interventions</td>
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</table>
Classroom example

- Teacher “A” identified 3 students with elevated levels of risk.
- She decided to target the problem with an intervention.
- She took data on student problem behavior for a week before starting and several weeks of intervention.
- Here is example data.
Teacher intervention of token economy implementation

Top 5%

Typical classroom behavior

Lowest 5%

Should be off campus

Darryl Car.
Consistent and comprehensive grade programming can change the atmosphere.
If 20% of our student population is struggling with social emotional, behavioral issues – academics will be affected.

- We know a reciprocal relationship exists between achievement and behavior.
- Academic performance has consistently been shown to be inversely related to problem behavior that begins early in a child’s development (Brier, 1995; McEvoy & Welker, 2000).
Critical issues for measurement of response
Measurement of response assumes

- Accurate measures
  - Reliability
- Measures of both intervention use and student response.
- Clear understanding of “current conditions”
  - What is happening in the “baseline”
Evidence Based Interventions

- Work... when applied.
- Improve when “steps” are used
- Require treatment integrity or fidelity of implementation.
- 5-9 data points are needed prior to determining a practice’s efficacy with a child.
- Environmental supports and challenges with the barriers to consistent implementation are a fundamental problem with realizing treatment effects.
“Should all students at risk receive the same standardized programming?”

- Consider your capacity.
- Poor programming for many is probably worse than strong programming for few.
- Create institutionalized systems for
  - Training in intervention
  - Teacher expectations (not just students)
  - Monitoring and coaching of best practices
  - Reviews of system and outcomes.
How many measures of behavior are needed before confidently determining whether or not response occurred?

- 5 at minimum, depending on the reliability and sensitivity of your measure but,
- 9 is better.
  - Less chance occurrence, more likely to see range or variability, more confidence in data.
Let's discuss these 5 levels, range variability immediacy.
Professor Herman stopped when he heard that unmistakable thud -- another brain had imploded.
A systematic approach

- Universal Screening to identify risk
  - National norms to reduce overrepresentation
  - Multiple raters to reduce bias
  - Validity indices to ensure accuracy
- Behavior Ratings to target “type” of problem
  - Externalizing and internalizing
  - Broad-band approach - If you only have a hammer, everything looks like a nail.
- Evidence Based Interventions
  - Targeted to problem type to maximize response
  - Teachers or implementers trained to capacity and professional expectations by the school or district
- Monitoring
  - Intervention implementation
  - Student response
  - Multiple data points
Thank you.

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