Early Warning & Intervention: 
Reaching Students Before Major Negative Events Happen

National Dropout Prevention Center
Clemson University
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Today’s Presenter

RESEARCHER – APPLIED

• 20+ years of work experience in the field of research and evaluation;

• Multiple research studies reviewed by the What Works Clearinghouse (WWC) -- all receiving the highest quality ratings possible.

• Principal investigator on numerous national, statewide, and local evaluation efforts related to at-risk learners, such as;

  • Federal SS/HS grants
  • Project Aware
  • School Climate & Safety
  • 21st CCLC
  • School Climate Transformation Grants
  • PBIS/MTSS
  • Dropout Prevention
  • Early Warning Systems
The Pipeline: Ways of Falling through the Cracks

- 750 (30%) out of 2500 of HS students with substance issues
- Of these, 5 out of 10 (50%) are connected to services
- Of these, only 3 (60%) successfully complete

Of these, 10 referrals (2%) are being identified.
ACTIVITIES

Strengthening early identification & connection to services of at-risk youth

- Early Warning & Identification
- Referral & follow-up
- Evidence-based interventions (TIERED)
- Ongoing Monitoring

INITIAL OUTCOMES

- Early, accurate identification of youth at-risk
- Increased access & connection to services & support
- Monitoring of services received/ increased implementation fidelity

INTERMEDIATE OUTCOMES

- Improvement in student academic performance
- Improvement in school attendance
- Reduction in frequency/severity of behavioral infractions
- Reduction in suspensions/expulsions
- Improvement in student well-being

LONG-TERM OUTCOMES

- Increased Grad Rates
- Safe Schools
- Improved Academic Performance
- Reduced Violence
- Positive School Climate
- Positive student outcomes & student well-being

Moderating Variables & Factors

(Potentially influencing outcomes)

- Effective, evidence-based interventions in place
- School policies/culture (zero tolerance, support)
- School philosophy/culture regarding early, proactive intervention
Diary of a Teenage Dropout: Summative Data

3. 2.9 GPA
   92% attendance rate
   No behavioral incidents

4. 2.6 GPA
   91% attendance rate
   No behavioral incidents

5. 2.5 GPA
   90.5% attendance rate
   No behavioral incidents

6. 2.0 GPA
   83.6% attendance rate
   Two behavioral incidents, four suspensions

7. 2.2 GPA
   88.7% attendance rate
   Two behavioral incidents, two suspensions

8. 1.9 GPA
   79% attendance rate
   Four behavioral incidents, two suspensions

9. Drops out of high school; before leaves has
   0.9 GPA
   78% attendance rate

The data contained in this figure is based on analyses of 35,683 students and represents the profiles of students, at each grade level, who eventually dropped out in 10th grade.
Tiered Support Model

**Academic: RTI**

**Behavior: PBIS**

**Universal Interventions**
- All students/all settings
- Evidence-based curriculum and instruction
- Assessment system and data-based decision making
- Positive behavioral expectations taught and reinforced in class
- Consistent approach to discipline
- Assessment system and data-based decision making

**Secondary Interventions**
- Some students (at risk)
- Supplemental functional-based interventions:
  - Small Groups

**Tertiary Interventions**
- Intense targeted skills
- Interventions high intensity
- Student centered planning
- Individualized intensive interventions

**Tier 1:** ~75-80% of students

**Tier 2:** ~10-15% of students

**Tier 3:** ~5-10% of students
Evolution of Early Warning…

First Generation: Traditional Checklist Model

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 20/30 days absence rate</td>
<td>10%</td>
</tr>
<tr>
<td>Grading period absense rate</td>
<td>10%</td>
</tr>
<tr>
<td>Annual absence rate</td>
<td>10%</td>
</tr>
<tr>
<td>GPA</td>
<td>2.00</td>
</tr>
<tr>
<td># of course fails (per grading period)</td>
<td>1</td>
</tr>
<tr>
<td># of fails (annual)</td>
<td>2</td>
</tr>
<tr>
<td># of credits earned (annual)</td>
<td>4</td>
</tr>
<tr>
<td>Major behavioral incidents (per grading period)</td>
<td></td>
</tr>
<tr>
<td>Major behavioral incidents (annual)</td>
<td></td>
</tr>
</tbody>
</table>

**Characteristics**
- Focus on proactive rather than reactive
- Research-based
- Systematic, consistent criteria
- Threshold-based (dichotomous yes/no)
- Primarily applicable to higher grade levels (8th/9th grade and above)
- Limited to a few indicators
- One size fits all
- Communication – often spreadsheets
- Accuracy – better than before, but still limited (e.g., ‘false positives’)

Evolution of Early Warning cont…

Next Generation: Predictive analytics

Further Developments

- Research-based & data driven – based on patterns of risk that have historically been associated with an increased likelihood of dropping out in your setting
- Multiple indicators/multiple domains
- Greater accuracy
- Earlier identification
- Customized/flexible - takes into account differences across districts/grade spans
- Advances in communication of early warning information:
  - Risk as a continuum
  - Different levels
### Indicators (Timeframe is Prior 12 months)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data</th>
<th>Checklist Model</th>
<th>Predictive Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance Rate</td>
<td>91.0%</td>
<td>No</td>
<td>Moderate</td>
</tr>
<tr>
<td>First 30 Day Attendance Rate</td>
<td>80.0%</td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Tardy Rate</td>
<td>3.7%</td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Suspensions</td>
<td>1</td>
<td>No</td>
<td>High</td>
</tr>
<tr>
<td># of Major Behavioral Incidents</td>
<td>0</td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td># of Minor Behavioral Incidents</td>
<td>2</td>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td>Academic Indicator (GPA)</td>
<td>2.80</td>
<td>No</td>
<td>High</td>
</tr>
<tr>
<td>Courses Passed</td>
<td>100.0%</td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>State Assessment: Math*</td>
<td>Slightly Below</td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>State Assessment: Reading*</td>
<td>Far Below</td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>State Assessment: Science*</td>
<td>Below</td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>State Assessment: Social Studies*</td>
<td>Below</td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Grade Retention</td>
<td>No</td>
<td></td>
<td>Low</td>
</tr>
</tbody>
</table>

**Overall Risk is High**

Real Life Example:

“Jack” 5th Grader
Early Warning & “At-Risk”: What it is and what it is not

“At-risk” is a concept that reflects a chance or a probability – it does not imply certainty.

Risk factors raise the chance of poor outcomes, while protective factors raise the chance of good outcomes.

The purpose behind early warning is to promote early intervention & support so as to alter a negative trajectory that may be emerging.
Early Warning: Key Characteristics

- Accurate
- Early
- Multi-dimensional
- Personalized & adaptive
- Research-based
- Useful/user-friendly communication of information
  - Risk as a ‘continuum’ & different ‘levels’ of risk
  - Differentiation is key (e.g., yields manageable #’s of students)
- Connected to action
- Built-in referral & follow-up
- Ongoing monitoring of changes/patterns over time
Contact Information

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