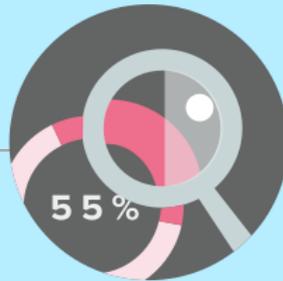


# Early Warning and Intervention: *Reaching Students Before Major Negative Events Happen*



**PRESENTED AT:**

Idaho Prevention and Support Conference  
Sun Valley, ID  
April 14, 2016

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## DR. MARIAM AZIN

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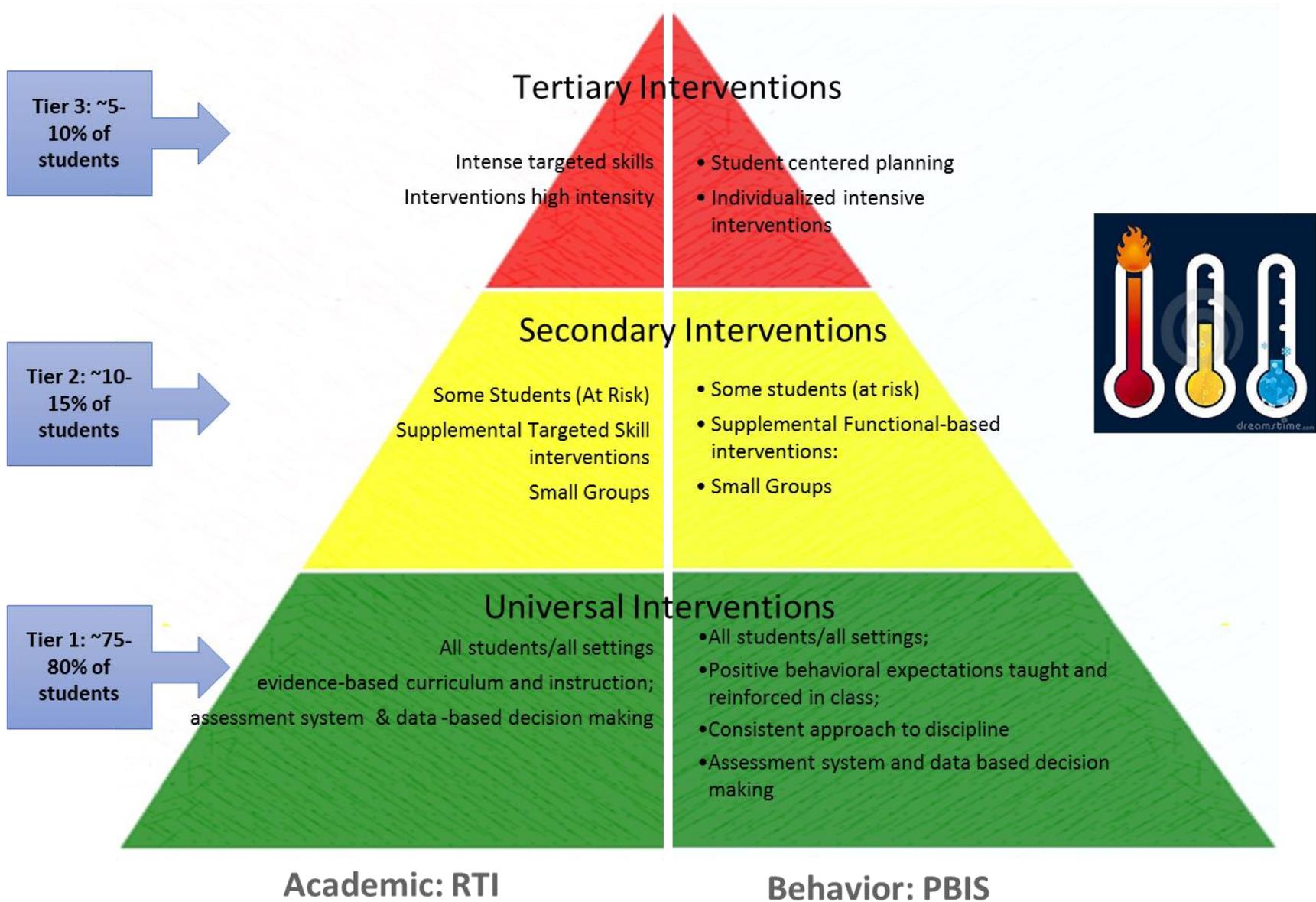
### RESEARCHER – APPLIED

- 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
  - 21<sup>st</sup> CCLC
  - School Climate Transformation Grants
  - PBIS/MTSS
  - Olweus/Bullying Initiatives
  - Dropout Prevention
  - Early Warning Systems

# The Goal

*CONNECT STUDENTS SHOWING SIGNS OF RISK TO  
SUPPORT EARLY ON, BEFORE ISSUES ESCALATE OR  
MAJOR NEGATIVE EVENTS HAPPEN*

# Tiered Support Model



# SESSION OBJECTIVES

## 1) Explore the nature of “RISK” ...

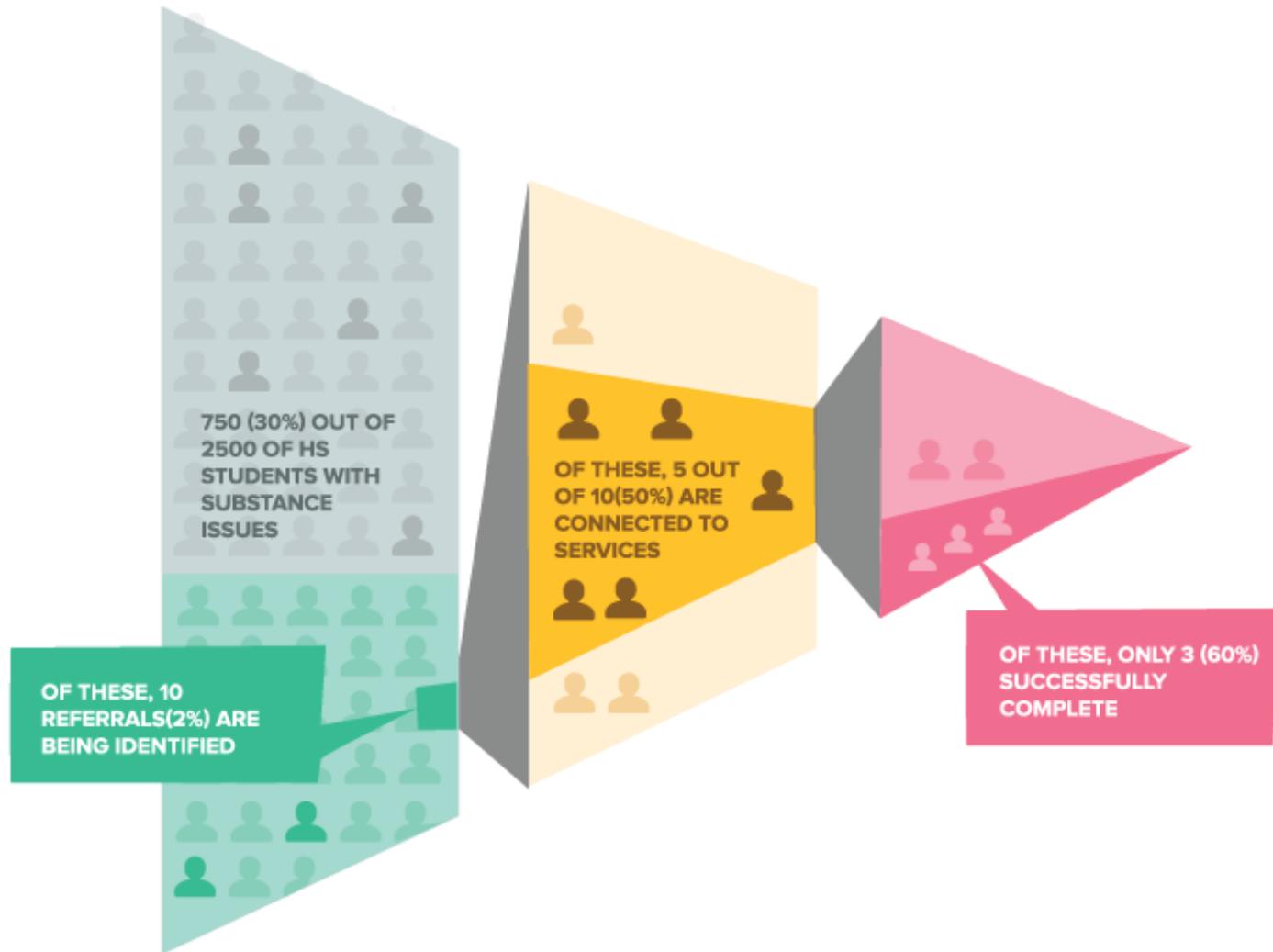
- ✓ **What** it is;
- ✓ **Why** it is important;
- ✓ **Where** it tends to manifest itself in educational settings; and
- ✓ **How** such information can appropriately be used & communicated to support students and promote positive student outcomes



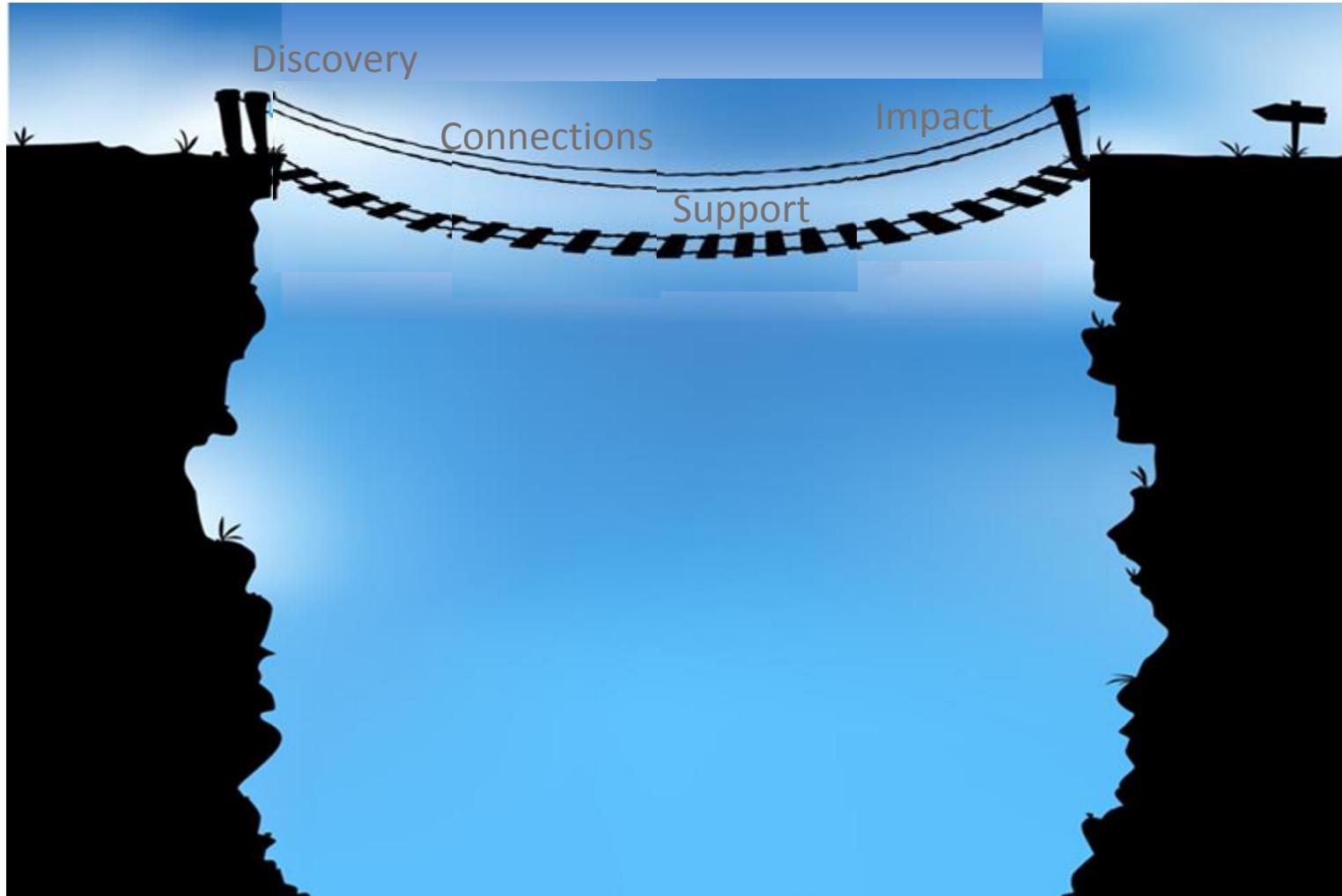
## 2) Key factors contributing to students not getting connected to support/intervention

## 3) Strategies for promoting early identification and intervention, including emergent research on “Early Warning” systems

# Increasing the Effectiveness of Intervention and Support



# Bridging the Gap



# Hands-on exercise:

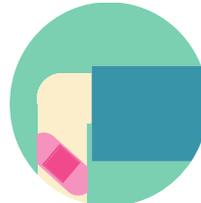
*Looking at data from the 2015 Idaho Youth Risk Behavior Survey*

# Contributors to lack of identification/connection



## UNCONNECTED DOTS

- Lots of signs – nobody putting it all together
- Perception “We know who our kids are”
- Inefficient access to data
- Lack of utilization of available data



## BURDENSOME / LACK OF TIMELINESS

- Six degrees of separation
- Time (burdensome paperwork, record keeping)



## CONFUSION/LACK OF UNDERSTANDING

- Lack of empowerment / role clarification
- Inconsistency in criteria used or vague criteria



## CONCERNS

### RE: USE OR MISUSE

- Disciplinary versus supportive approach
- Confidentiality & Stigma
- Something must be done



## SCHOOL CULTURE / POLICY / PROCESS

- Goals/Priority
- Gatekeepers/Only a few can report
- Concern over ‘appearances’



## SCHOOL/COMMUNITY PARTNERSHIPS

- Awareness/Understanding of Resources
- Relationships vs Need
- Communication & feedback

## ***What is “risk?”***

The dictionary refers to “**risk**” as the “likelihood that something unpleasant or unwelcome is going to happen.”

The term ‘**at-risk**’ is often used to describe students or groups of students who are considered to have a higher probability of failing academically or dropping out of school.

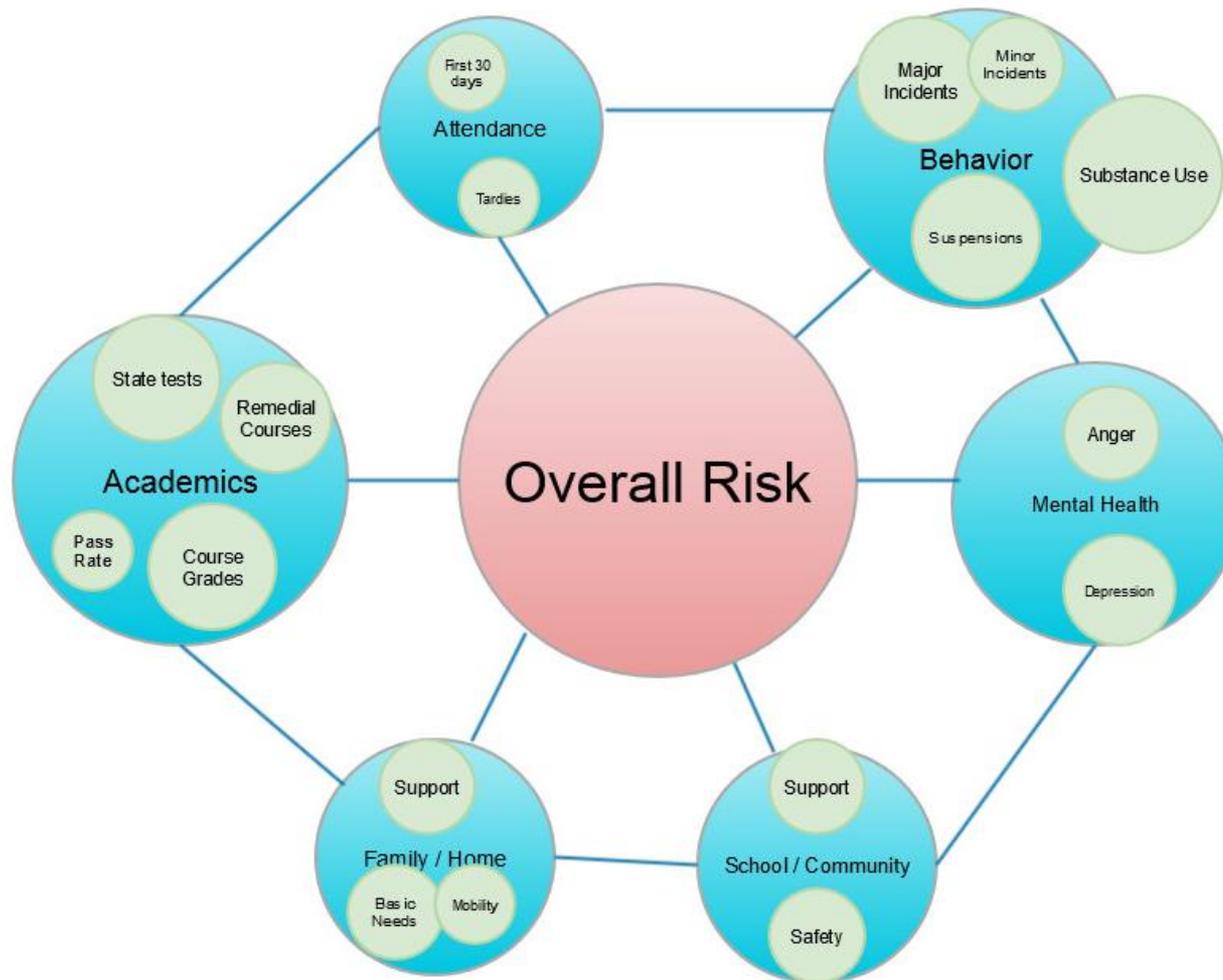
*“At-risk” is a concept that reflects a chance or a probability – it does not imply certainty. Risk factors raise the chance of poor outcomes, while protective factors raise the chance of good outcomes.*

*Plethora of potential factors that could adversely affect the educational performance and attainment of some students ...*

academics  
behavior  
social-emotional  
substance use  
mental health  
home factors  
life circumstances  
basic needs  
demographics  
etc...

# Risk – A Highly Interrelated & Multidimensional Construct

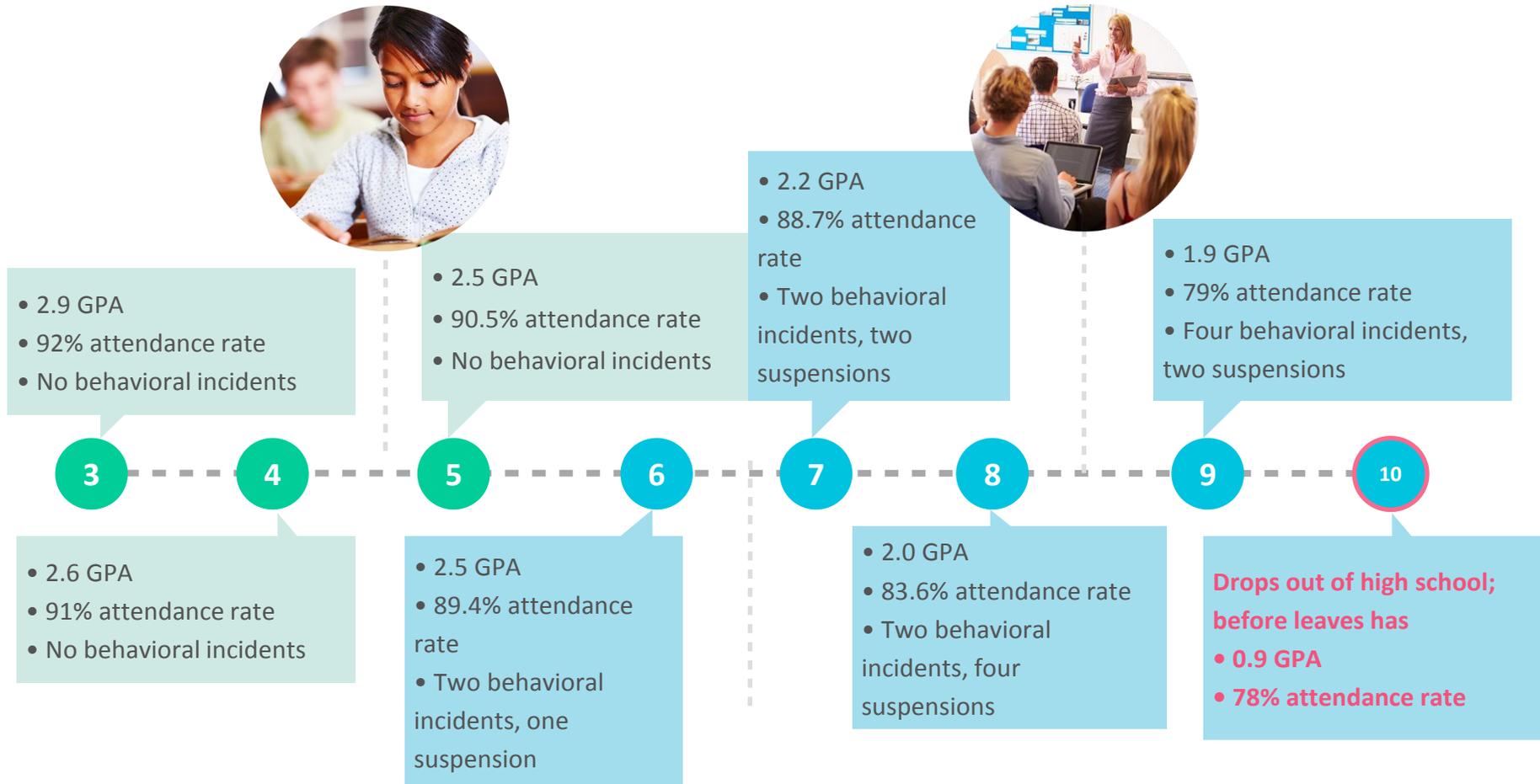
*Areas of risk for students are strongly interrelated, including: academic risk/stronger likelihood of dropping out, behavioral risk, mental health, violence, and substance abuse*



# Hands-on exercise:

*Exploring our conceptions of what 'risk' is*

# Diary of a Teenage Dropout: Summative Data



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 10<sup>th</sup> grade.

# Diary of a Teenage Dropout: One Student Data



- 2.9 GPA
- 92% attendance rate
- No behavioral incidents

3

4

- 1.7 GPA
- 93% attendance rate
- Two minor behavioral incidents

- 2.3 GPA
- 92% attendance rate
- No behavioral incidents, one suspension

5

6

- 2.5 GPA
- 91% attendance rate
- 13 behavioral incidents, two suspensions

- 2.8 GPA
- 95% attendance rate
- Five behavioral incidents, one suspension

7

8

- 1.6 GPA
- 89% attendance rate
- Six behavioral incidents, one suspension

- 2.0 GPA
- 77% attendance rate
- Nine behavioral incidents, one suspension

9

10

**Drops out of high school**

# Diary of a Teenage Dropout: District "A"



- 95% attendance rate
- 1 minor behavioral incident
- 35<sup>th</sup> percentile rank – state reading assessment

4

5

- 95% attendance rate
- 1 minor behavioral incident
- 37<sup>th</sup> percentile rank – state reading assessment

- 93% attendance rate
- 2 minor behavioral incidents
- 34<sup>th</sup> percentile rank – state reading assessment
- 1 suspension

6

7

- 90% attendance rate
- 4 minors
- 34<sup>th</sup> percentile rank – state reading assessment
- 2 suspensions
- District assessment reading score - 41

- 89% attendance
- 4 minors
- 2 suspensions
- District assessment reading score- 41
- 34<sup>th</sup> PR – state reading assessment

8

9

- 87% attendance
- 4 minors
- 2 suspensions
- 1.73 GPA
- 70% course pass rate
- District assessment reading score - 32

- 84% attendance
- 4 minors, 2 suspensions
- District reading assessment-27
- 31<sup>st</sup> PR – state reading assessment
- 90% attendance – first 30 days

10

11

- Drops out of high school; before leaves has**
- 77% attendance**
- 86% attendance – first 30 days**
- District reading assessment - 22**

# Diary of a Teenage *Graduate*: District "A"



- 97% attendance rate
- 0 minor behavioral incident
- 54<sup>th</sup> percentile rank – state reading assessment

4

- 97% attendance rate
- 0 minor behavioral incident
- 54<sup>th</sup> percentile rank – state reading assessment

5

- 96% attendance rate
- 0 minor behavioral incidents
- 55<sup>th</sup> percentile rank – state reading assessment
- 0 suspension

6

- 95% attendance rate
- 1 minor
- 55<sup>th</sup> percentile rank – state reading assessment
- 0 suspensions
- District assessment reading score - 69

7

- 95% attendance
- 1 minor
- 1 suspension
- District assessment reading score- 71
- 56<sup>th</sup> PR – state reading assessment

8

- 94% attendance
- 1 minor
- 0 suspensions
- 3.27 GPA
- 70% course pass rate
- District assessment reading score - 67

9

- 94% attendance
- 1 minor
- District reading assessment-58
- 56<sup>th</sup> PR – state reading assessment
- 96% attendance – first 30 days

10

## **On Track To Graduate**

- **90% attendance**
- **96% attendance – first 30 days**
- **1 minor**
- **District reading assessment – 55**
- **2.92 GPA**

11

## ***“Risk” – some common elements:***

- **It virtually *always* shows up before a major negative event happens:**  
While there are not direct measures readily available for some key dimensions of risk, it eventually and virtually *always* starts to show up in information readily available to schools.
- **One size does not fit all:** “Risk” differs tremendously across grade levels – the profile of what is risky for a 3<sup>rd</sup> grader is much different, and more subtle, than that of a risky 10<sup>th</sup> grader;
- **Multi-dimensionality of risk (multiple domains/multiple indicators!):**  
Risk tends to manifest itself in subtle ways at first, typically within a single domain. If unaddressed, however, risk factors spread in breadth, intensity, and frequency over time;
- **Critical windows for intervention:** Dropping out is ultimately the end result of a long process of disengagement with roots in the elementary grades. Notably, the **middle school years** consistently emerge as **pivotal** in the **student’s trajectory**.

## *Observed patterns when we've looked longitudinally at students who eventually drop out...*

- **Attendance** is highly important across all grade bands – it is in the top 10 predictors across 100% of districts;
- **Academic indicators** add A LOT – they typically take on increasing importance as of the 4<sup>th</sup>/5<sup>th</sup> grade onward as more information becomes available;
- We see a lot of variability in the relative importance of behavior – main issue is quality of underlying data. Implication: **better behavioral data (e.g., minors!) = better identification early on;**
- **Local settings are important:** Dramatic increases in % accuracy when predictive models trained locally or according to “similar” types of districts;
- As of 7<sup>th</sup> grade and continuing upward into the **higher grade levels**, **suspensions/expulsions** takes on **greater importance** in predicting likelihood of dropping out;
- 9<sup>th</sup> grade – GPA, pass rate are always very important predictors;
- If a student makes it to 12<sup>th</sup> grade, their likelihood of graduating increases substantially.

*Given the nature of risk and how it typically shows up in educational settings, what are the implications for:*

- Early warning and detection
- Communication
- Promoting the timely and appropriate use of such information?

# Evolution of Early Warning Systems...

## First Generation: Traditional Checklist Model

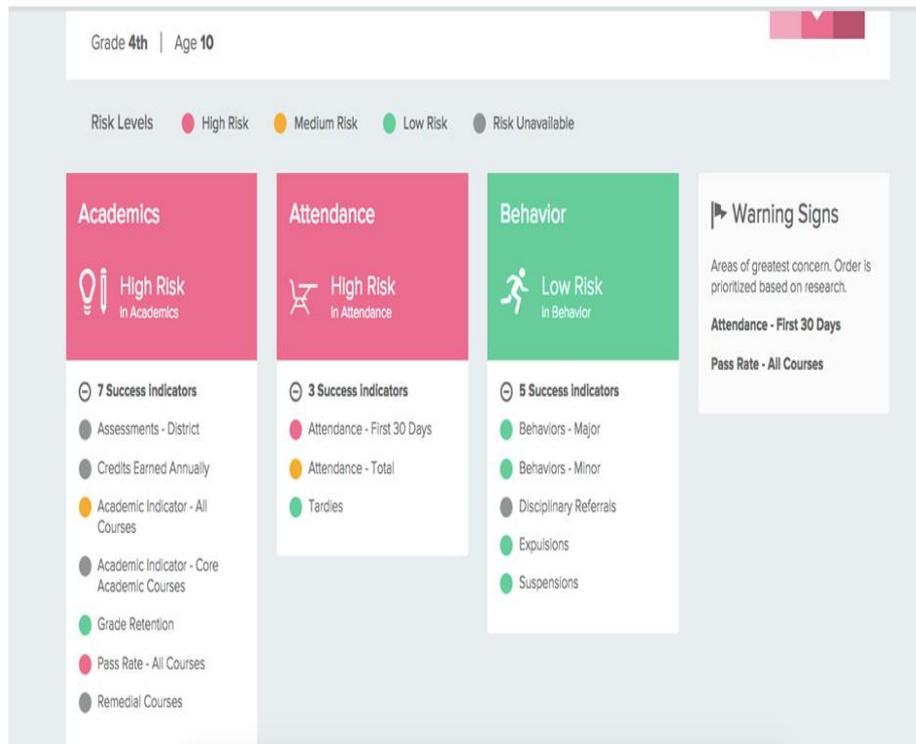
Indicator	Value
First 20/30 days absence rate	10%
Grading period absense rate	10%
Annual absence rate	10%
GPA	2.00
# of course fails (per grading period)	1
# of fails (annual)	2
# of credits earned (annual)	4
Major behavioral incidents (per grading period)	
Major behavioral incidents (annual)	

### Characteristics

- Focus on proactive rather than reactive
- Research-based
- Systematic, consistent criteria
- Threshold-based (dichotomous yes/no)
- Primarily applicable to higher grade levels (8<sup>th</sup>/9<sup>th</sup> 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...

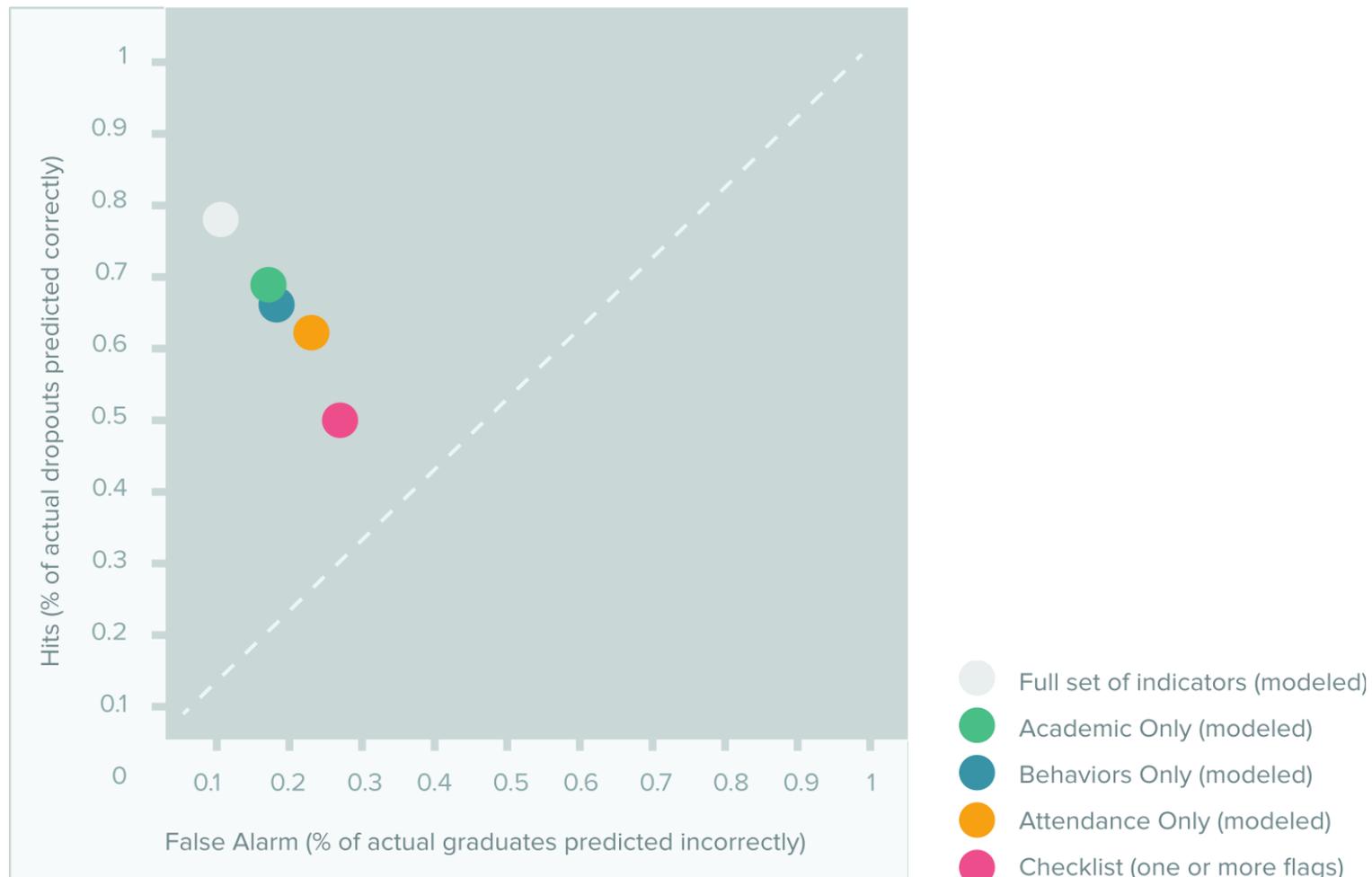
## Next Generation: Predictive analytics



## 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

## Second Generation: Predictive Models



Real Life  
Example: "Jack"  
5<sup>th</sup> Grader



Overall Risk is  
*High*

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

# What happens next?

Welcome! Get started by **Adding a Provider.**

Early Warning > Tools > Referral Management > Tamalpais High School

## Referral Management

[+ New Referral](#)

Referrals Care Providers

[Advanced Filters](#)

### Status Breakdown

**Open Referrals** 7

Copy explaining what you're looking at and what you need to do. Copy explaining what you're looking at and what you need to do.

[Open Your First Referral](#)

**New Referrals** 7

**Receiving Services**

- Internal Resource: 12
- External Provider: 7

**Services Paused** 2

**Services Received** 19

[FILTER LIST](#)

### Referral List

Student ID	Student Name	Last Updated	Category	Referred to	Status	
9983	Adam Johnson	xx / xx / xxxx	Physical Abuse		Open	<a href="#">Open</a>
4937	Dale Coleman	xx / xx / xxxx	Mental Health		Open	<a href="#">Open</a>
9346	Cohen Guzman	xx / xx / xxxx	Mental Health	Dr. Drake	8	<a href="#">Open</a>
3422	Buckley Robinson	xx / xx / xxxx	Substance Abuse	Dr. Stew	1	<a href="#">Open</a>

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# *Early Warning: Key Features Needed*

- ✓ Accurate
- ✓ Early
- ✓ Multi-dimensional
- ✓ Personalized & adaptive (grade spans/local settings)
- ✓ 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

# Early Warning – Logic Model

## ACTIVITIES

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

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

• STUDENT LEVEL • SCHOOL LEVEL • DISTRICT LEVEL

## 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



*Thank you!*

# Things to be aware of...

- **VARIABILITY**  
Variability across individuals in identification, referral, response and criteria used;
- **ANY NOTICEABLE CHANGES IN BEHAVIOR**  
Good at identifying kids that act out, more likely to miss the kids who act in.
- **EARLY WARNING SIGNS MAY OR MAY NOT INDICATE A SERIOUS PROBLEM**  
Just want to check out any concerns.
- **STAFF USE EARLY WARNING FOR ID AND REFERRAL PURPOSES ONLY**  
The appropriate trained service providers/professionals should investigate further.
- **DO NO HARM**  
Intent is to get help for a child early. Not to be used in a punitive manner, stereotyping, etc.
- **CONFIDENTIALITY AND PROCESS**  
Information appropriate to the role, appropriate consent & referral procedures, security of technology environment

