

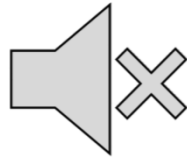


Using Non-Assessment Data for School Improvement: Early Warning Systems

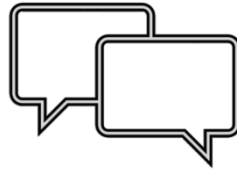
School Improvement & Planning Unit
REL Central

March 18, 2021

Housekeeping



Please keep yourself muted.



If you have a question for the group, please add it to the chat.



Please keep your camera on to support session engagement

Winter Webinar Series: Presenters & Introductions



Dr. Dan Jorgensen, Accountability Support Manager

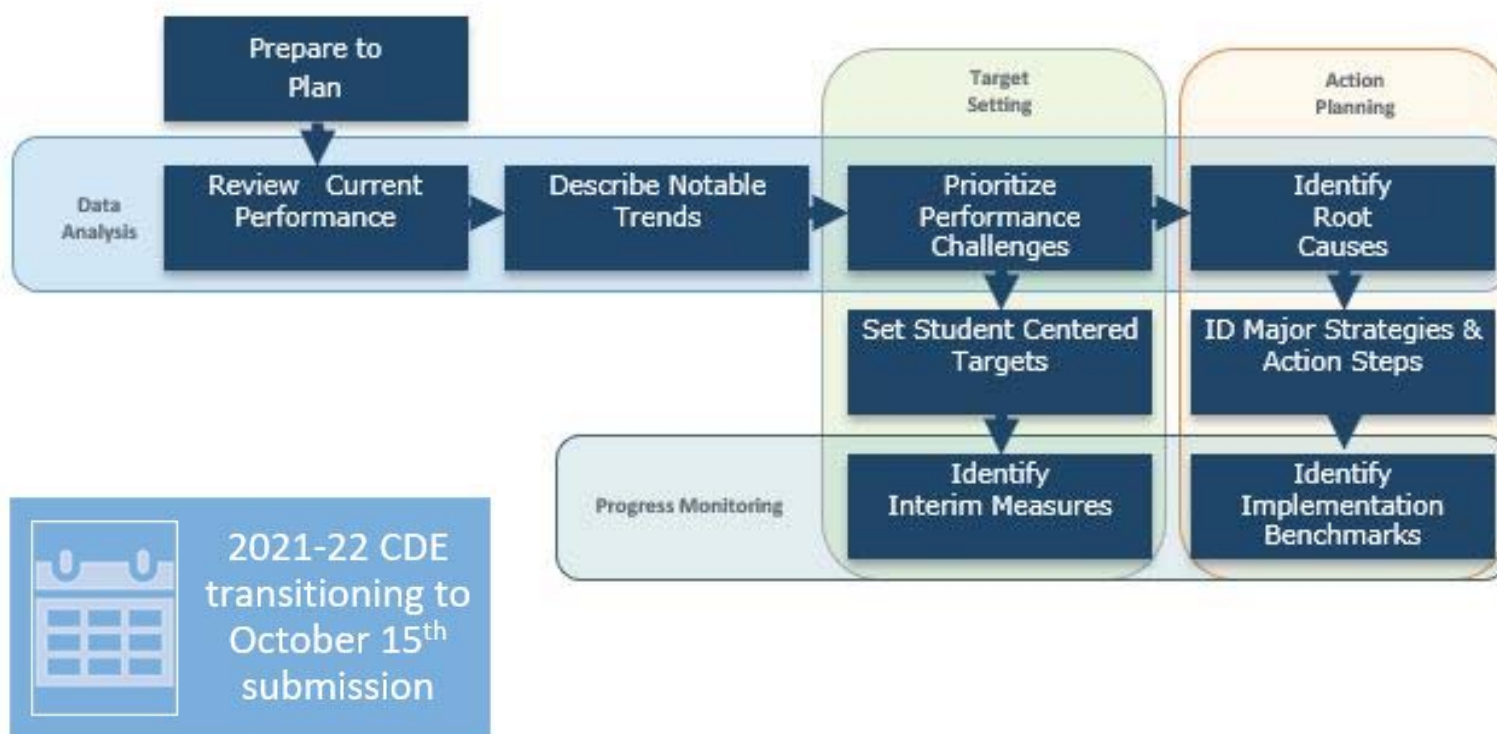
- School Improvement & Planning Unit, CDE

Dr. Matt Eide, Senior Education Improvement Specialist

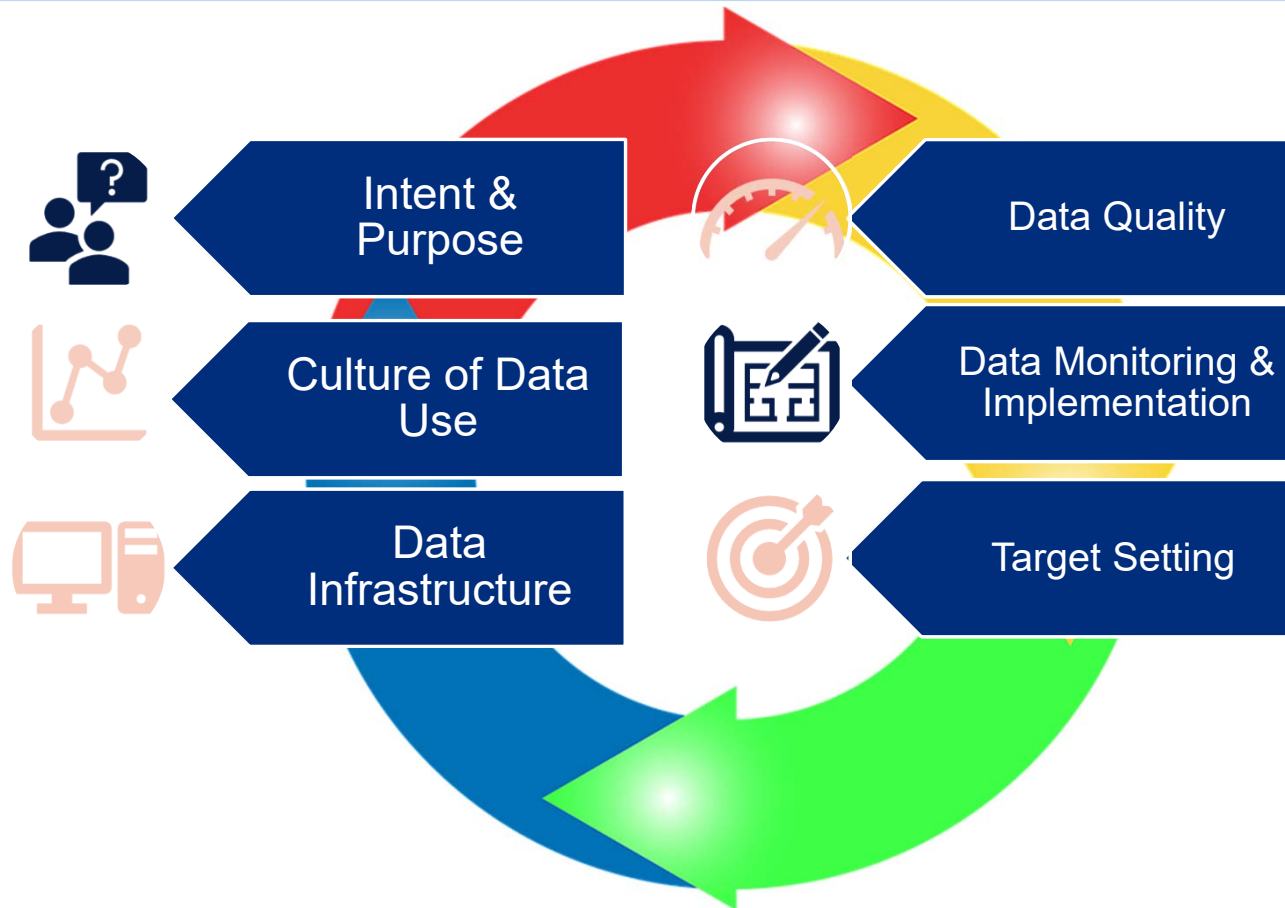
- REL Central

| |
|------------------------------------|
| Name, Title, District/Organization |
|------------------------------------|

UIP Planning: Where is the Non-Assessment Data?



Considerations for Data Use



<http://www.cde.state.co.us/uip/using-non-assessment-data-09-09-2020>



REL Central: Who We Are



The Regional Educational Laboratory (REL) Central at Marzano Research serves the applied education research needs of Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming.

REL Central: Colorado School Improvement Research Partnership

A partnership united by goals to support school improvement efforts throughout Colorado in order to improve student learning outcomes.

Areas of Focus



Program
evaluation



Cost
analysis

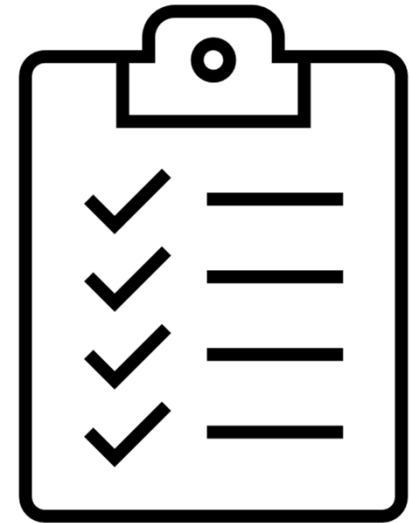


Data
use

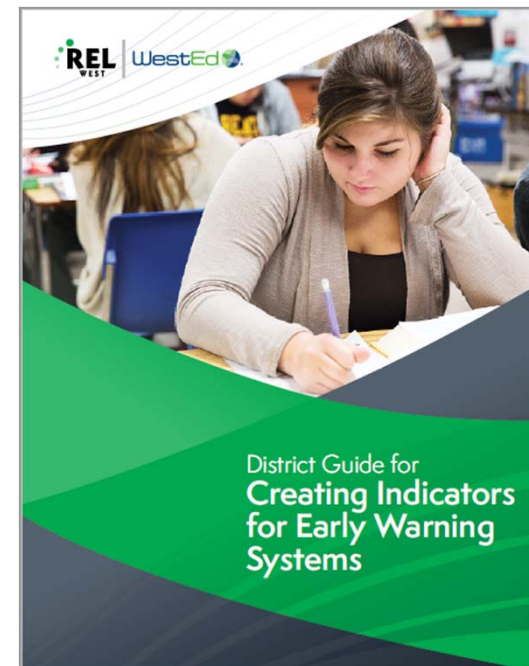
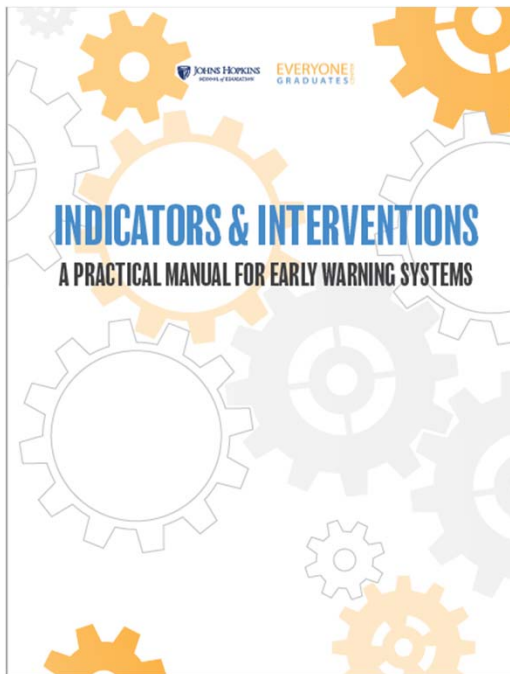
Objectives

Increase understanding of how to:

- Establish and train a team to use an early warning system (EWS).
- Identify accurate EWS indicators.
- Design and use EWS reports.
- Map appropriate interventions to student needs.
- Evaluate student progress and intervention effectiveness.



Early Warning System Resources^{1,2,3}



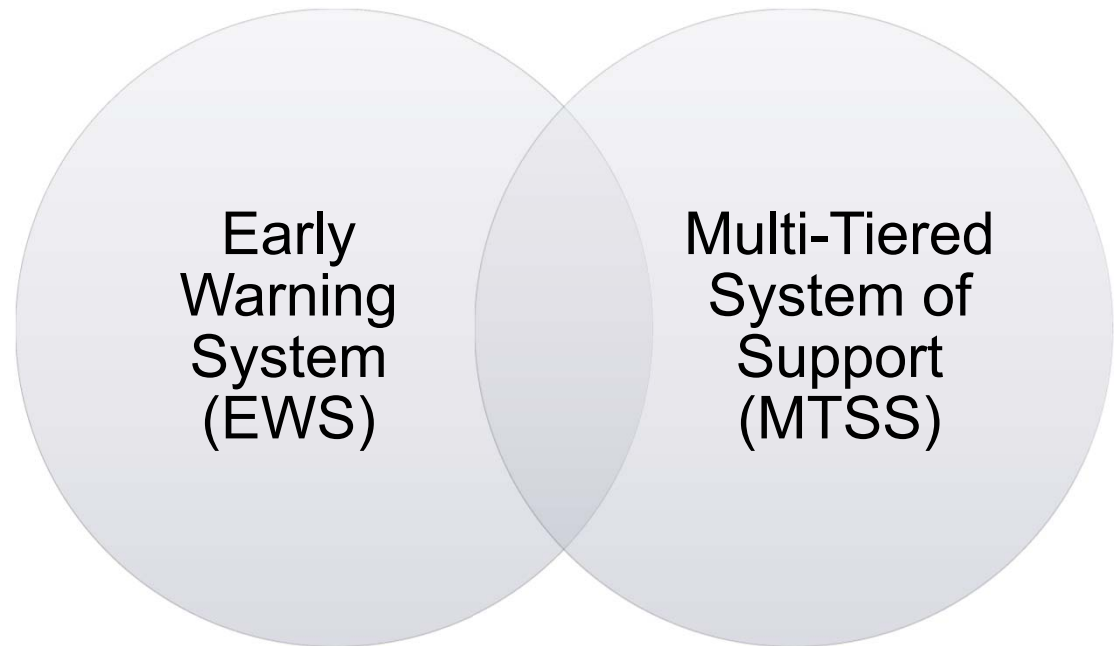
Five Components of an Early Warning System¹

1. Establishing and training a team to use the EWS.
2. Identifying accurate indicators.
3. Designing and using reports.
4. Mapping appropriate interventions to student needs.
5. Evaluating student progress and intervention effectiveness.



Early Warning System and Multi-Tiered System of Support

- **EWS** and **MTSS** are linked systems to identify and support students at risk of disengagement.



Establishing and Training a Team to Use an Early Warning System

Establishing a Team

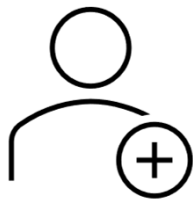
- Determine team structure and membership.
- Identify roles and responsibilities.
- Align meeting content to school/district objectives.
- Identify and address professional learning needs.

An early warning system is only as good as the human system that applies it.

—Robert Balfanz, PhD

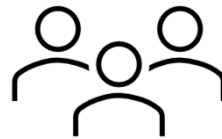


Team Structure and Membership²



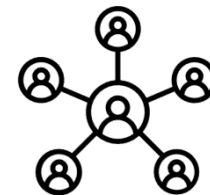
Ad Hoc Team

- Less than 25 students with an early warning indicator.
- EWS point person pulls in school staff and outside resources as needed.



Integrated School-Level Team

- 25–50 students with an early warning indicator.
- Teachers, counselors, social works, and administrators lead schoolwide and student-level interventions.



Distributed Teacher Teams

- More than 50 students with an early warning indicator.
- Grade-level or content-specific teacher teams identify students for tier I–III interventions.

Roles and Responsibilities

Responsibilities

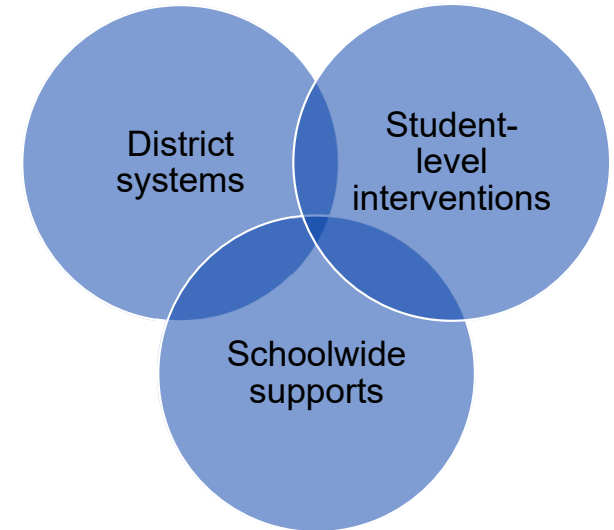
- **30,000 ft:** Identify schoolwide and/or districtwide trends.
- **15,000 ft:** Identify students at risk of disengagement and determine intervention levels.
- **The weeds:** Assign and implement interventions. Monitor progress and adjust interventions as needed.



Roles and Responsibilities

EWS roles depend on the team's structure and objectives.

- **Team facilitator:** Organizes, plans, and leads meetings.
- **Data coach/data lead:** Analyzes EWS data, develops reports, and supports interpretation.
- **District representatives:** Use trend data to advocate for changes to policy, practice, and resource allocation.
- **School representatives:** Teachers, counselors, social workers, administrators, and other staff responsible for implementing and tracking interventions.



Professional Learning Needs

- An EWS team's professional learning needs will depend on the structure and objectives of the team as well as its developmental needs.

Developing and
validating EWS
indicators

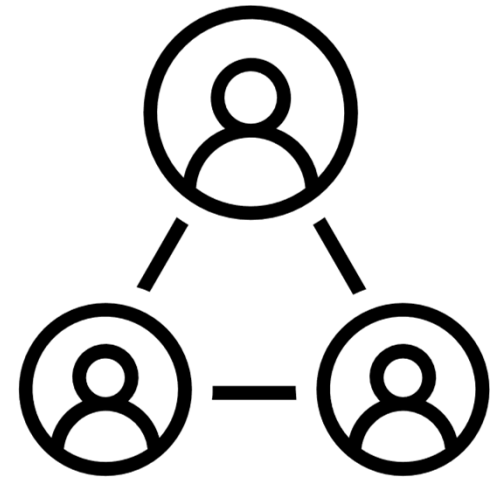
Analyzing and
interpreting EWS
data

Implementing
interventions within
a multi-tiered
system of supports

Discussion

In your small breakout groups, discuss:

- How has your school/district structured its EWS team?
If you do not have a team, what structures are you considering?
- What are your EWS team's professional learning needs?
- How has your school/district created a culture of data use?
- Where does your *human system* need to improve?



Identifying Accurate Early Warning System Indicators



Effective Indicators



Valid, reliable, and predictive



Meaningful and easily understood



Aligned with school/district priorities



Malleable and actionable

A
B
C

Common Indicators and Thresholds

| Indicator | Description | Threshold |
|----------------------------|---|--|
| AAttendance | Number of days absent and/or missed instructional time | 10% or more of missed instructional time ^{1,2,3} |
| BBehavior | Number of office referrals, in or out of school suspension. | Grade 6–9: more than 1 per quarter ^{1,2} Grade 9–12: locally determined ^{1,2} |
| C Course Performance | GPA, average grades in core courses, number of Fs. | GPA: 2.0 or lower ^{1,2,3} Course failure: 1 or more ^{1,2,3} |

Indicator and Threshold Considerations

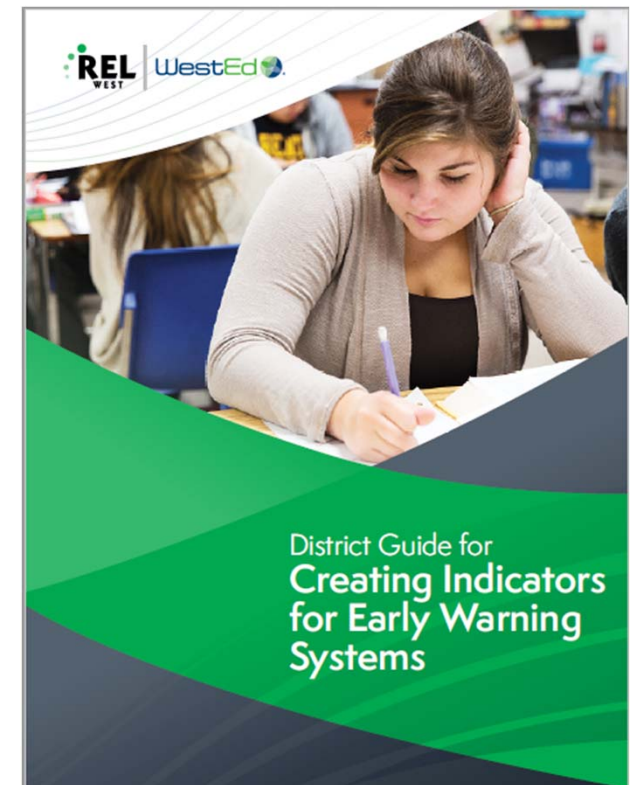
- Set thresholds using local data.
- Establish base indicators (e.g., ABC) and add additional indicators as necessary.
- Focus on malleable factors.
- Consider composite indicators such as the Total Quality Credit Indicator⁴ or the On-Track Indicator.⁵
- Use the indicators to tier student need.

Threshold Tier Examples¹

| Tier | A | B | C |
|-----------|----------------------------|-------------------------|------------------------------|
| Off track | 9 days in quarter | 2+ referrals in quarter | 1 or more Fs in core courses |
| Sliding | 5–8 days in quarter | 1 referral in quarter | 1 or more Ds in core courses |
| On track | 4 or fewer days in quarter | 0 referrals | No Ds or Fs |

Validating Indicators and Thresholds

- Use local data to identify indicators and set thresholds.
- Annually review the accuracy of the indicators and thresholds by analyzing historical data.
- Check the performance of indicators and thresholds against actual outcomes.
- Adjust thresholds as new data are acquired.
- Balance the sensitivity and specificity of indicators.

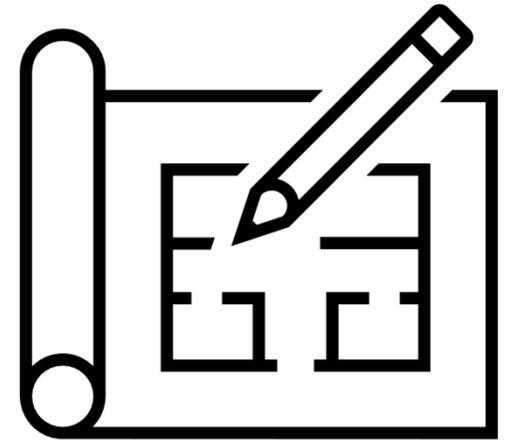


Designing and Using Early Warning System Reports



Design Considerations

- Consider your audience and design reports for use at 30,000 ft, 15,000 ft, or in the weeds.
- Design reports that facilitate easy, reliable, and accurate interpretations.
- Use flags and color coding.



Early Warning System Report Examples²

| | | | | | | | | | | Yr | | | | | | 2015 | | | | | | Q1 | | | | | | 2015 | | | | | |
|--------|-------|-----------|-----------|---------|------|-----|-----|------|------|--------|------|-----|------|-----|-----|------|------|-------|------|-------|------|------|-----|-----|--|--|--|------|--|--|--|--|--|
| | | | | | | | | | | CCR -> | | 60% | 58% | 47% | 37% | 43% | 52% | | 100% | 50% | 25% | 30% | 22% | 26% | | | | | | | | | |
| | | | | | | | | | | EWI -> | | 11% | 42% | 9% | 21% | 9% | 7% | | 0% | 14% | 15% | 9% | 10% | 4% | | | | | | | | | |
| ID | Enrll | LastName | FirstName | Grd Lvl | Gndr | ELL | Eth | SPED | EWI1 | Att | Bhvr | ELA | Math | Sci | Soc | EWI2 | Att2 | Bhvr2 | ELA2 | Math2 | Sci2 | Soc2 | | | | | | | | | | | |
| 391938 | Y | Robinson | Howard | 05 | M | N | H | Y | 0 | 94% | 5 | C | D | C | B | 0 | 99% | 1 | C | C | B | | | | | | | | | | | | |
| 244308 | Y | Evans | Jerry | 06 | M | N | H | N | 0 | 95% | 0 | B | A | B | | 0 | | | | | | | | | | | | | | | | | |
| 237902 | Y | Gutierrez | Monica | 05 | F | N | H | N | 0 | 95% | 0 | A | B | B | A | 0 | 100% | 0 | B | A | A | | | | | | | | | | | | |
| 398713 | Y | James | Sally | 05 | F | N | H | N | 0 | 95% | 5 | B | C | B | B | 0 | 100% | 0 | D | C | C | A | | | | | | | | | | | |
| 289962 | Y | Walsh | Tammy | 05 | F | N | M | N | 0 | 98% | 1 | B | D | B | A | 0 | 100% | 0 | C | B | A | A | | | | | | | | | | | |
| 314014 | Y | Rodriguez | Bobby | 05 | M | N | H | Y | 2 | 98% | 20 | F | A | C | B | 1 | 100% | 10 | C | D | C | D | | | | | | | | | | | |
| 244530 | Y | Mitchell | Peter | 05 | M | N | H | Y | 0 | 92% | 4 | C | D | B | B | 0 | 100% | 2 | D | D | C | | | | | | | | | | | | |
| 339424 | Y | Guerrero | Tasha | 06 | F | N | H | N | 3 | 91% | 46 | F | F | F | F | 2 | 100% | 9 | F | D | C | D | | | | | | | | | | | |
| 308895 | Y | Garrett | Cecilia | 06 | F | N | H | N | 0 | 94% | 2 | B | B | B | | 0 | 100% | 0 | D | A | C | B | | | | | | | | | | | |
| 383708 | Y | Sanchez | Eugene | 05 | M | Y | H | N | 0 | 100% | 0 | D | C | C | B | 0 | | | | | | | | | | | | | | | | | |
| 301677 | Y | Campbell | Andrew | 05 | M | N | H | N | 0 | 95% | 2 | C | C | B | B | 0 | 99% | 1 | C | B | B | | | | | | | | | | | | |
| 290867 | Y | Baker | Jose | 06 | M | N | H | N | 0 | 97% | 5 | B | B | | B | 0 | 99% | 0 | B | C | C | B | | | | | | | | | | | |
| 311271 | Y | Bryant | Jeremy | 05 | M | Y | H | N | 3 | 99% | 46 | F | F | F | F | 1 | 100% | 3 | F | B | D | B | | | | | | | | | | | |
| 234373 | Y | Schultz | Jan | 06 | F | N | H | N | 0 | 98% | 5 | B | B | A | | 0 | 100% | 0 | B | B | | B | | | | | | | | | | | |
| 293779 | Y | Patterson | Ronald | 05 | M | N | H | N | 0 | 98% | 0 | C | B | D | B | 0 | 99% | 0 | B | B | C | C | | | | | | | | | | | |
| 274415 | Y | Osborne | Lena | 05 | F | N | H | N | 0 | 96% | 0 | A | A | A | B | 0 | | | | | | | | | | | | | | | | | |
| 390365 | Y | Henderson | Donald | 06 | M | N | H | N | 1 | 95% | 12 | C | D | C | C | 0 | 100% | 2 | C | D | B | B | | | | | | | | | | | |
| 235128 | Y | Green | Erin | 06 | F | N | H | N | 0 | 93% | 2 | C | D | D | B | 0 | 100% | 0 | D | C | | C | | | | | | | | | | | |

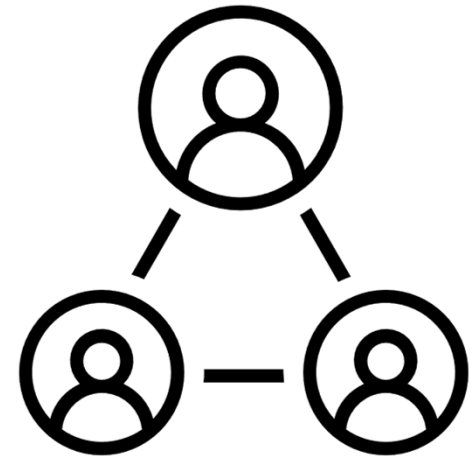
Early Warning System Report Examples⁴

| On Track Status Cycle 2 | | | | | ATTENDANCE | | | | | | BEHAVIOR | | | GRADES | | | | | |
|-----------------------------------|------------------------------------|-----------------------|-------|----------------|------------------------|----------------------|-------------------------|-----------------|---------------------|----------------------------------|------------------|------------------|--------------------------------|-------------------|-------------------|---------------------------|--------------------|--------------------|----------------------------|
| Last Name on track status Cycle 2 | First Name on track status Cycle 2 | movement on/off track | Grade | Official Class | Days Absent Prior Year | Prior Year Attd Rate | Attendance Rate Cycle 1 | Days Absent YTD | Attendance Rate YTD | Movement on/off track Attendance | Behavior Cycle 1 | Behavior Cycle 2 | Movement on/off track Behavior | ELA Grade Cycle 1 | ELA Grade Cycle 2 | movement on/off track ELA | Math Grade Cycle 1 | Math Grade Cycle 2 | movement on/off track Math |
| XXXXX | XXXXX | — | 8 | 831 | 41 | 77 | 79 | 20 | 76 | — | S | S | — | 85 | 80 | — | 98 | 99 | — |
| XXXXX | XXXXX | — | 8 | 821 | 6 | 97 | 98 | 4 | 95 | ↓ | N | N | — | 75 | 70 | — | 70 | 65 | ↓ |
| XXXXX | XXXXX | — | 8 | 811 | 11 | 94 | 95 | 6 | 93 | — | N | N | — | Missing | 70 | — | 65 | 65 | — |
| XXXXX | XXXXX | — | 8 | 803 | 6 | 97 | 98 | 2 | 98 | — | S | S | — | 75 | 80 | — | 70 | 85 | — |
| XXXXX | XXXXX | — | 8 | 811 | 14 | 92 | 98 | 3 | 96 | — | N | N | — | 75 | 75 | — | 70 | 65 | ↓ |
| XXXXX | XXXXX | ↓ | 8 | 811 | 6 | 97 | 95 | 3 | 96 | ↑ | N | U | ↓ | 65 | 65 | — | 65 | 55 | ↓ |
| XXXXX | XXXXX | ↑ | 8 | 831 | 11 | 94 | 98 | 4 | 95 | ↓ | N | S | ↑ | 65 | 75 | ↑ | 85 | 85 | — |
| XXXXX | XXXXX | — | 8 | 812 | 179 | 0 | 83 | 15 | 82 | — | N | N | — | 90 | 85 | ↓ | 65 | 70 | ↑ |
| XXXXX | XXXXX | — | 8 | 162 | 26 | 86 | 84 | 11 | 87 | — | N | N | — | 75 | 75 | — | 63 | 62 | — |
| XXXXX | XXXXX | — | 8 | 803 | | | | 1 | 90 | — | S | S | — | | 1 | — | | 1 | — |
| XXXXX | XXXXX | — | 8 | 812 | 7 | 96 | 100 | 1 | 99 | — | S | S | — | 89 | 85 | — | 85 | 90 | ↑ |
| XXXXX | XXXXX | — | 8 | 803 | 1 | 99 | 98 | 1 | 99 | — | N | N | — | 65 | 70 | ↑ | 70 | 70 | — |
| XXXXX | XXXXX | — | 8 | 812 | 13 | 93 | 100 | 1 | 99 | — | N | N | — | 65 | 65 | — | 70 | 75 | — |
| XXXXX | XXXXX | — | 8 | 162 | 26 | 86 | 70 | 25 | 70 | — | S | N | ↓ | 55 | 65 | ↑ | 65 | 65 | — |
| XXXXX | XXXXX | — | 8 | 801 | 8 | 96 | 95 | 3 | 96 | ↑ | N | N | — | 80 | 80 | — | 85 | 80 | — |
| XXXXX | XXXXX | ↓ | 8 | 801 | 10 | 94 | 98 | 4 | 95 | ↓ | S | N | ↓ | 80 | 70 | — | 85 | 97 | ↑ |
| XXXXX | XXXXX | — | 8 | 811 | 1 | 99 | 100 | 1 | 99 | — | N | N | — | 80 | 65 | ↓ | 80 | 70 | — |
| XXXXX | XXXXX | — | 8 | 831 | 17 | 91 | 63 | 19 | 77 | — | U | N | ↑ | 85 | 85 | — | 80 | 85 | — |
| XXXXX | XXXXX | ↓ | 8 | 821 | 11 | 94 | 88 | 9 | 89 | — | N | U | ↓ | 65 | 65 | — | 65 | 65 | — |
| XXXXX | XXXXX | — | 8 | 821 | | | | 0 | 100 | — | | N | — | | 65 | — | | 65 | — |
| XXXXX | XXXXX | ↑ | 8 | 803 | 13 | 93 | 95 | 1 | 99 | ↑ | U | N | ↑ | 80 | 80 | — | 80 | 80 | — |
| XXXXX | XXXXX | ↓ | 8 | 803 | 39 | 78 | 91 | 7 | 92 | — | N | U | ↓ | 70 | 70 | — | 70 | 75 | — |

Discussion

In your small breakout groups, discuss...

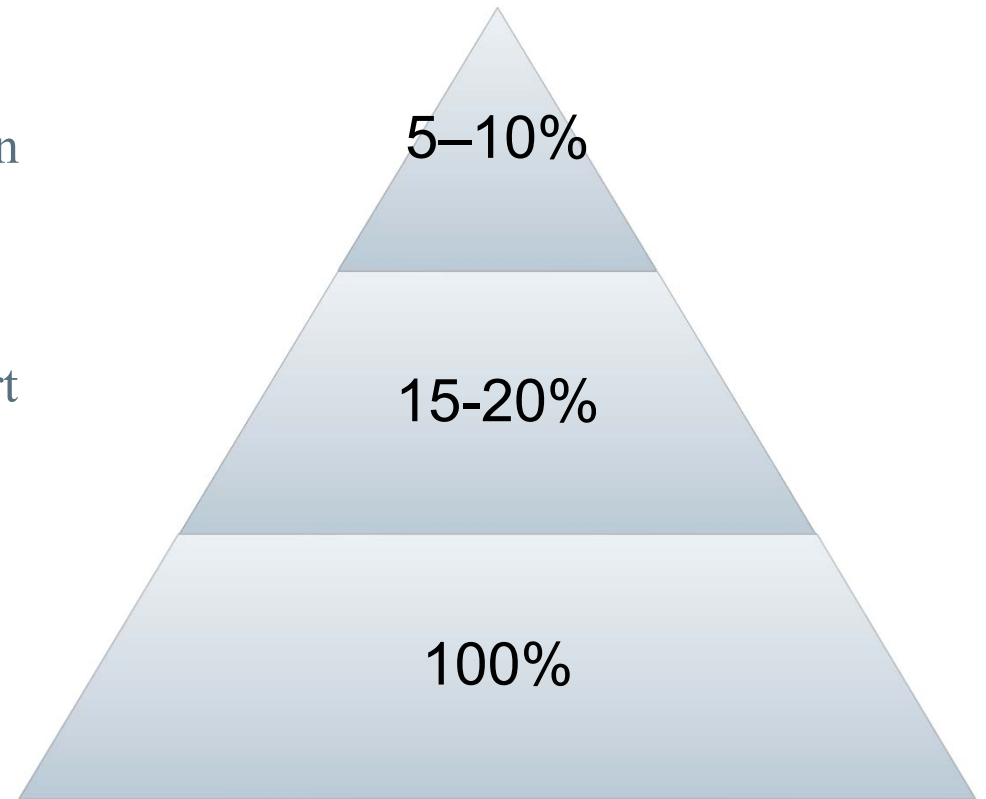
- What indicators does your school/district use *or* is your school/district considering?
- What indicator data are available in your school/district?
- What resources and capacity does your school/district have to collect and report indicator data?



Mapping Appropriate Interventions to Student Needs



Multi-Tiered System of Support

- **Tier III:** Intensive *individual* intervention and support.
- **Tier II:** Targeted intervention and support for *groups* of students.
- **Tier I:** Preventative support available to *every* student in the school.





Mapping Interventions¹

- Catalog existing interventions and align to MTSS tiers and EWS indicators.
- Identify intervention and support gaps.
- Develop a menu of Tier I–III interventions and supports.

| TYPE OF INTERVENTION | FOCUS AND EXAMPLES OF INTERVENTIONS | | |
|---|---|--|---|
| | ATTENDANCE | BEHAVIOR | COURSE PERFORMANCE |
| SCHOOLWIDE (all students)  | <ul style="list-style-type: none"> • Respond to every absence • Create a culture that encourages attendance • Positive social incentives for good attendance • Data tracking by teacher teams | <ul style="list-style-type: none"> • Teach, model, and expect good behavior • Positive social incentives and recognition for good behavior • Data tracking by teacher teams | <ul style="list-style-type: none"> • Research-based instructional programs • In-classroom support to enable active and engaging teaching • Data tracking by teacher teams |
| TARGETED (15–20 percent of students)  | <ul style="list-style-type: none"> • Brief daily check by adult after two or more unexcused absences in a month • Investigation and problem solving by attendance team | <ul style="list-style-type: none"> • Involve behavior team following two or more office referrals • Simple behavior checklist student takes from class to class, checked each day by an adult • Mentor assigned | <ul style="list-style-type: none"> • Elective extra-help courses—tightly linked to core curriculum—that preview upcoming lessons and fill in knowledge gaps • Targeted, reduced class size for students whose failure is rooted in social or emotional issues |
| INTENSIVE (5–10 percent of students) | <ul style="list-style-type: none"> • Sustained one-on-one attention and problem solving • Appropriate social service or community support | <ul style="list-style-type: none"> • In-depth behavioral assessment • Behavior contracts with family involvement • Appropriate social service or community supports | <ul style="list-style-type: none"> • One-on-one tutoring |

Source: Mac Iver & Mac Iver, 2009 (as cited in the guide).

Mapping Interventions¹

| TYPE OF INTERVENTION | FOCUS AND EXAMPLES OF INTERVENTIONS | | |
|--|---|--|---|
| SCHOOLWIDE (all students)  | ATTENDANCE <ul style="list-style-type: none"> • Respond to every absence • Create a culture that encourages attendance • Positive social incentives for good attendance • Data tracking by teacher teams | BEHAVIOR <ul style="list-style-type: none"> • Teach, model, and expect good behavior • Positive social incentives and recognition for good behavior • Data tracking by teacher teams | COURSE PERFORMANCE <ul style="list-style-type: none"> • Research-based instructional programs • In-classroom support to enable active and engaging teaching • Data tracking by teacher teams |
| TARGETED (15–20 percent of students)  | <ul style="list-style-type: none"> • Brief daily check by adult after two or more unexcused absences in a month • Investigation and problem solving by attendance team | <ul style="list-style-type: none"> • Involve behavior team following two or more office referrals • Simple behavior checklist student takes from class to class, checked each day by an adult • Mentor assigned | <ul style="list-style-type: none"> • Elective extra-help courses—tightly linked to core curriculum—that preview upcoming lessons and fill in knowledge gaps • Targeted, reduced class size for students whose failure is rooted in social or emotional issues |
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Source: Mac Iver & Mac Iver, 2009 (as cited in the guide).

Intervention Implementation Considerations

- **Champions.** Assign a “champion” to manage implementation.²
- **Families.** Engage families in the process of implementing and monitoring interventions.
- **Discretion.** Use professional judgment when determining appropriate interventions.
- **Discipline.** Exercise intervention discipline. Not all students require a Tier III intervention.
- **Tier I.** Use EWS data to evaluate the effectiveness of Tier I instruction and support.



Evaluating Student Progress and Intervention Effectiveness



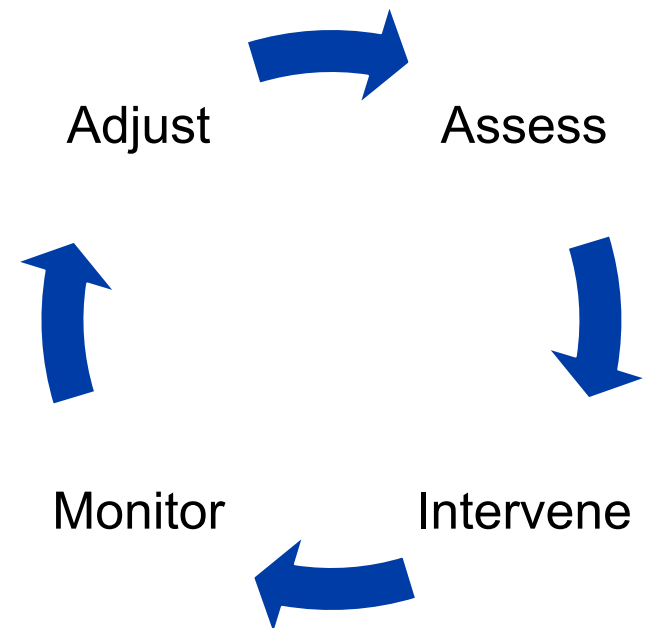
Evaluating Student Progress

Track student progress data on:

- Interventions and supports assigned to students.
- Frequency and intensity of student participation.
- Student performance on flagged indicator(s).

Regularly review data to:

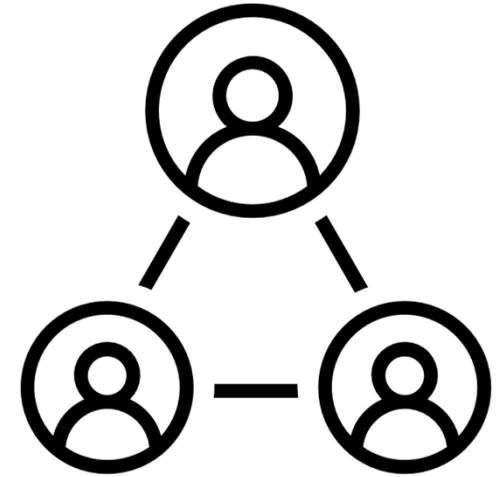
- Review implementation quality.
- Modify intervention and support plan.
- Adjust tiering.



Discussion

In your small breakout groups, discuss:

- What is included in your school/district's menu of interventions? Are there any important gaps?
- How does your school/district use early warning indicator data to monitor the effectiveness of interventions?



Questions?

References

1. Frazelle, S., & Nagel, A. (2015). *A practitioner's guide to implementing early warning systems* (REL 2015–056). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest. <https://eric.ed.gov/?id=ED552306>
2. Balfanz, R., Hall, D., Verstraete, P., Walker, F., Hancock, J., Waltmeyer, M., Muskauskis, L., & Madden, T. (2019). *Indicators & interventions: A practical manual for early warning systems*. Everyone Graduate Center, Johns Hopkins University. http://new.every1graduates.org/wp-content/uploads/2020/06/20190918_EGC_EWSManual_Final2.pdf
3. Li, Y., Scala, J., Gerdeman, D., & Blumenthal, D. (2016). *District guide for creating indicators for early warning systems*. REL West at WestEd. <https://www.air.org/sites/default/files/downloads/report/District-Guide-for-Creating-Indicators-for-Early-Warning-Systems-2016.pdf>
4. Gallup-Black, A., & Sackman, R. (2015). *From data to success: Using early warning indicators to shape interventions for students in the middle grades*. FHI 360.

Thank You

Please visit our website and follow us on Twitter for information about our events, priorities, and alliances, and for access to our many free resources.

ies.gov/ncee/edlabs/regions/central/index.asp

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Or contact us at RELCentral@MarzanoResearch.com

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Accountability | Improvement Planning Support

Please contact us for support, training and technical assistance

– Dan Jorgensen at: Jorgensen_d@cde.state.co.us

We can provide personalized assistance for your **school and district accountability and support needs** regarding:

- ❖ School and District Performance Frameworks
- ❖ Request to Reconsider Process
- ❖ Alternative Education Campuses
- ❖ Student Achievement and Growth
- ❖ Data Literacy
- ❖ Improvement Planning
- ❖ Board Governance



✓ http://www.cde.state.co.us/uiip/uiip_training



Using Non-assessment Data: Upcoming Webinars

| Topic | Date/Time |
|---------------------------|---------------------------------|
| Social Emotional Learning | Wednesday, March 31st, 10-11:30 |



To register, please visit:
www.cde.state.co.us/uip/uip_training