



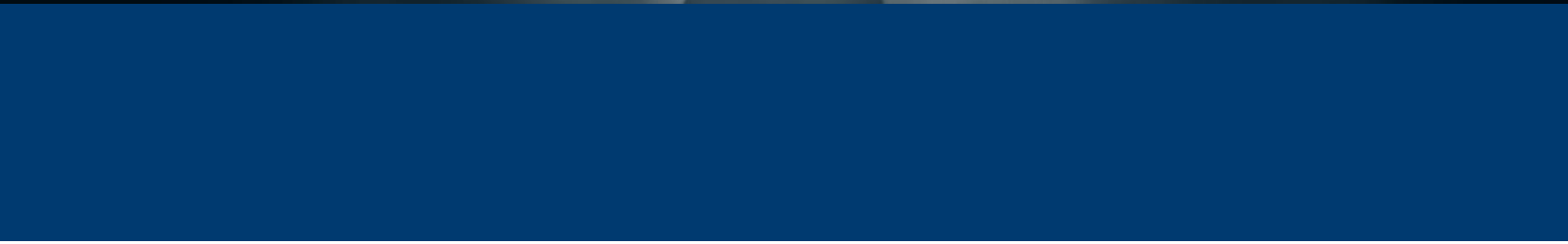
Advancing Evidence.
Improving Lives.

High School

Early Warning Intervention and Monitoring System Implementation Guide

Jenny Scala, Marie Husby-Slater, Rachel Chamberlain, and Kate McPhee

NOVEMBER 2023



Acknowledgments

This publication is based on prior EWIMS Implementation Guides and funded through GRAD Partnership for Student Success.

Contents

Acknowledgments..... ii

Introduction to the Early Warning Intervention and Monitoring System1

Making the Case for EWIMS4

The Seven-Step EWIMS Implementation Process9

Getting Started With EWIMS 12

STEP 1: Establish Roles and Responsibilities..... 16

STEP 2: Use an Early Warning Data Tool..... 21

STEP 3: Review Early Warning Data 24

STEP 4: Interpret Early Warning Data 27

STEP 5: Assign and Provide Interventions 32

STEP 6: Monitor Students and Interventions 38

References 48

Appendix A. EWIMS Glossary..... 54

Appendix B. Supporting Documents 56

Appendix C. Student Intervention Implementation Log..... 60

Appendix D. Long-Term Guiding Questions..... 61

[bookmark://_toc141366395/](#)[bookmark://_toc141366396/](#)[bookmark://_toc141366397/](#)[bookmark://_toc141366398/](#)



Introduction to the Early Warning Intervention and Monitoring System

An early warning intervention and monitoring system (EWIMS) is an evidence-based process for identifying, supporting, and monitoring students who show signs that they may not meet key educational milestones, up to and including graduating from high school (Faria et al., 2017). The EWIMS process provides a data-driven decision-making approach, referred to as the data inquiry cycle, to systematically identify students who are showing signs of being off track in school, match these students with appropriate interventions, and monitor their progress within those interventions. This cycle of data analysis and action is embedded within a continuous improvement process and is described in the following seven steps of the EWIMS process:

1. Establish roles and responsibilities.
2. Use an early warning data tool.
3. Review early warning data.
4. Interpret early warning data.
5. Assign and provide interventions.
6. Monitor students and interventions.
7. Evaluate and refine the EWIMS process.

It is important to emphasize that the EWIMS process does not identify students based on demographics (e.g., race/ethnicity, gender, status as an English learner) or other factors that are outside of the control of the student and school (e.g., disability needs, socioeconomic status, housing stability). Rather, EWIMS identifies those students that ***the system is not effectively supporting*** based on one or more ***research-based early warning indicators related to changeable behaviors and conditions***. These research-based early warning indicators include behaviors and conditions such as attendance rate or absenteeism, behavior concerns, course performance, or students' sense of belonging within a school. EWIMS pulls from data systems that can aggregate and disaggregate early warning indicator data (referred to as early warning data tools) and applies a data-based decision-making process to use these data effectively. The work of the EWIMS team is not confined to assigning individual students to interventions. Engaging in EWIMS work will likely uncover the need for system changes related to policy, practices, or adult behaviors.

This guide describes the setup and use of the EWIMS process based on data-driven decision-making research (see, for example, Balfanz & Byrnes, 2019; Bernhardt, 2004; Love, 2000; Mac Iver & Balfanz, 2022; and Schaffer & Bender, 2022.). The aim of this guide is to support school efforts to systematically identify high school students who are showing signs of being off track in school (an early indicator of risk for achieving key educational milestones like on-time graduation), match these students with appropriate interventions, and monitor students' progress within those interventions. This guide supports teams in developing mindsets, relationships, and practices that support the implementation of EWIMS.

The EWIMS process is a way to implement a [student success system](#) within a school or school district. Student success systems help organize school communities to better support students' academic progress, college and career transitions, and well-being. Student success systems integrate, extend, and increase the capacity of existing student support efforts. They build from the structure, process, and contextual factors of research-based frameworks, such as early warning systems (EWSs), on-track indicators, and multi-tiered systems of supports (MTSS). Student success systems combine four essential elements (i.e., supportive community relationships; holistic real-time actionable data; an adaptive analysis, response, and improvement system; and a shared set of student-centered mindsets) so that schools are empowered, in an inclusive way, to graduate all students on a pathway to postsecondary success.

EWIMS can be an integral part of implementing a student success system. EWIMS was developed as a process to take action using the valuable data identified through early warning systems. Over the last decade of experience implementing EWIMS, and coupled with new research emerging from the field (e.g., Immordino-Yang et al., 2019; Porter et al., 2023), we have expanded and updated our resources to incorporate these essential elements and strategies for making meaningful data actionable. The EWIMS guide includes the learnings from the GRAD Partnership and the framework for student success systems (GRAD Partnership, n.d.).

Throughout this implementation guide, you may be unfamiliar with a variety of terms that appear. Terms appear in boldface when first introduced. See [Appendix A. EWIMS Glossary](#) for definitions of these terms.

How to Use this Guide

The purpose of this High School EWIMS Implementation Guide is to provide school leaders and teams with a resource to help integrate EWIMS into existing school practices. The guide focuses on the team responsible for developing and carrying out EWIMS-related activities across the school, including developing the team and the systems and process needed to support collaboration within the team and across the school community. The guide begins with a review of the evidence base supporting EWIMS and related content. The guide lays out priorities for getting started with implementation by helping to assess and build from current practices. Most of the guide focuses on understanding each of the seven steps of the EWIMS process, and it includes activities, considerations, and questions to help ground those steps in practice.

Users do not need to read this guide from beginning to end. Instead, this guide is intended to serve as a resource for consultation throughout the EWIMS seven-step process on an as-needed basis. For instance, when the team is beginning to examine early warning data after the first grading period closes, team members will want to review Step 3 of the guide. Team members can use this document to learn more about upcoming steps, to review and revisit previous steps, or to answer any questions they may have. The team will be better prepared to develop action steps and implementation plans after reflecting on current practice and future goals in the High School EWIMS Implementation Guide.



Making the Case for EWIMS

It is extremely rare for a student to suddenly decide they do not want to graduate from high school. It is far more likely for a student to show signs of disengagement long before dropping out. Research has found that there are specific data points that are predictive of students moving in the direction of, or showing signs of risk for dropping out long before graduation. Specifically, research has identified early warning indicators that predict this risk, such as a decreased interest in school and a reduction in attendance across time (Balfanz, 2009). Allensworth et al. (2014) found that middle grade attendance and grade point average were the best indicators for identifying students in danger of failing ninth grade, earning low grades in high school, and not remaining on track in high school. EWIMS provides a structure and process to use research-based indicators as a starting point for data-based decisions that lead to actions for student support. The EWIMS process engages students, parents and caregivers, teachers, and the school community to understand and respond to student needs, and monitor how the system is working to successfully address those needs.

Building on Effective Practice

As a continuous improvement process based on research to increase the likelihood that students graduate from high school, EWIMS provides a way for educators to organize and readily use available early warning data to systematically identify students who are in danger of not meeting key academic milestones. Through the EWIMS process, students who display symptoms of risk can then be matched with appropriate interventions to help them get back on track for graduation (Heppen & Therriault, 2008; Jerald, 2006; Kennelly & Monrad, 2007; Mac Iver et al., 2019; Neild et al., 2007; Rumberger et al., 2017).

Data-based decision making itself is not a new concept in education, but what sets EWIMS apart from other processes? As a systemic and systematic approach, EWIMS allows educators to organize schoolwide efforts by identifying students who are showing signs of disengagement, supporting these students by assigning appropriate interventions, and monitoring their progress within the interventions. EWIMS increases educators' opportunities to optimize the use of an EWS (Allensworth & Easton, 2005, 2007; Dynarski et al., 2008) because it requires educator collaboration to turn data into actionable information.

Evidence Base for EWIMS

The What Works Clearinghouse's (WWC's) *Preventing Dropout in Secondary Schools* practice guide (Rumberger et al., 2017) recommends monitoring the progress of all students and proactively intervening when students show early signs of risk because of attendance, behavioral, or academic problems.

A 2017 randomized controlled trial demonstrated strong evidence that the EWIMS process could improve student outcomes by helping students get back on track for graduation in Grades 9 and 10 (Faria et al., 2017). In the study, 73 high schools were randomly assigned to implement EWIMS during the 2014–15 school year. After 1 year of implementation, schools that implemented EWIMS (experimental schools) reduced the percentage of students with chronic absences and course failures in experimental schools compared with schools that did not implement EWIMS (control schools). These results are encouraging because chronic absence and course failure are two key early warning indicators that students are in danger of not graduating on time. The study provided rigorous evidence that using a comprehensive EWS approach can reduce the percentage of students displaying key indicators of risk (Faria et al., 2017). Mac Iver et al. (2019) conducted a similar randomized controlled trial across 41 schools over 2 years and found that ninth grade students in schools using an early warning indicator model were significantly less likely than students in control schools to be chronically absent.

Early Warning Indicator Thresholds

Researchers have identified key early warning indicators, based on readily available data, in high school and the middle grades that can reliably and accurately identify youth who are most prone to academic failure (Allensworth & Easton, 2007). As cited above, Balfanz (2009) identified three key early warning signs for students in 6th grade: (1) failing grades in mathematics or ELA, (2) attending school less than 80% of the time, or (3) receiving unsatisfactory behavior grades in a core course. This study determined that students with at least one of these early warning indicators only had a 10%-20% chance of on-time graduation, and in fact fewer than one in four students included in the study with one of these warning signs graduated from high school within 5 years. Based on this finding and similar research findings, a set of attendance and academic indicators and **thresholds** have become generally accepted—at least as a good starting point—to establish a basic EWS. The EWIMS process uses these early warning indicators as the beginning of the data-based decision-making process (referred to as the data inquiry cycle) and also uses disaggregated data and data from human perspectives and school systems to engage in complete data analysis. Table 1 provides an overview of these early warning indicators supported by research for high school grades.

When Is a Student Showing Signs of Risk?

Early warning data and predictive indicators often talk about “students showing signs of risk,” “thresholds for risk,” and “flagging students.” All these terms describe the start of a student exhibiting a behavior indicating that the system is not adequately supporting the student’s needs. For example, a 10th grade student who has missed 9 days of school in the first 100 days of school passes the *threshold* indicated by data when they miss a 10th day on the 98th day of school. At that point, the student would be *flagged* as showing signs of risk according to an attendance indicator.

Table 1. Overview of Early Warning Indicators and Thresholds for High School

Early warning indicator	Grade range	Threshold
Attendance		
Instructional time lost	9–12	10% or more ^a
Behavior		
Behavior (e.g., referrals, suspensions, behavior grades)	9–12	Locally determined ^a
Course performance		
Grade point average	9–12	2.0 or lower on a 4.0 scale ^a
Course failures (any course)	9–12	One or more ^a
On-track indicator	9	Credit deficient for promotion to 10th grade AND one or more failures in core courses ^b

^aInformation obtained from Therriault et al. (2013).

^bInformation obtained from Allensworth and Easton (2005).

Locally Validated Thresholds

Although Table 1 summarizes commonly used early warning indicator thresholds, research has demonstrated that local validation and context are important when determining early warning indicators. Local validation is the process of analyzing local historical data for patterns in early warning indicator data to understand the thresholds for elevated signs of student risk within your specific context. A 2016 study found that the most accurate indicator thresholds of students being off track for high school graduation varied across three Ohio districts (Stuit et al., 2016). Other publications, including one by Li et al. (2016) have noted the importance of local validation. Many districts or schools start their EWS initiative using the early warning indicator thresholds described in Table 1. With more time and resources, districts may find value in determining **locally validated indicators** to ensure that their local data (and therefore context) reflect at what point students are identified as being in danger of not meeting key educational milestones.

Local validation is particularly important for behavioral data, including office referrals, detentions, and suspensions. Accurately identifying thresholds for behavior indicators is the most challenging aspect of this process because student discipline policies, definitions, and data collection vary widely by district. Districts interested in conducting a local validation should consult the Regional Educational Laboratory West guide, *District Guide for Creating Indicators for Early Warning Systems* (<https://www.wested.org/resources/creating-indicators-for-early-warning-systems/#>).

Additional Educational Milestones

AIR's original EWS work focused on supporting on-time high school graduation. As this work has grown and expanded, we now see early warning indicators, along with the EWIMS process, as a method to ensure that students are on track for meeting a variety of key educational milestones, such as graduating from high school. For example, in Massachusetts, early warning indicators were attached to specific educational milestones, including reading by the end of third grade, middle school readiness, high school readiness, and high school graduation. AIR examined early warning indicators to identify students' postsecondary readiness. AIR also examined EWIMS support of districts with large numbers of English learners in determining student readiness to succeed in the general education environment, and to determine the efficacy of programs to prepare those students for general education environments.

Evidence Base for Student Success Systems

Student success systems, such as EWIMS, create a cohesive system built in large part on the understanding of early warning systems and MTSS. At the same time that the research base on early warning indicators was being developed, another framework (MTSS) to identify and respond to student needs was spreading and deepening implementation in elementary schools. Although MTSS and early warning systems were developed in response to different needs and are meant to be implemented at different grade levels, they are highly aligned and consistent with each other. Separately, these frameworks support groups of students in specific grades and schools. Adapting district practices to create a student success system allows these frameworks to work together as part of continuous support from kindergarten (and sometimes prekindergarten) through high school graduation.

Student success systems were developed through research and lessons learned on these systems (EWS and MTSS), and by considering what is needed to move systems of student support and success into the future. Recent research focusing on the importance of relationships and mindsets within schools is what pivots student success systems toward the future. Supportive relationships with and among adults and students provide the foundation for student and school success. Studies show that students who have high-quality relationships with their teachers demonstrate high social-emotional competencies (Syvertsen et al., 2023), and be more academically motivated (Scales et al., 2022). When schools foster socioemotional development, students are more likely to thrive in high school and after they graduate (Porter et al., 2023). Similarly, these relationships are important for educators and their well-being. Individuals who enter the teaching profession often consider the connection with young people as a core value (Scales, 2013). A positive school culture may also affect teachers' emotional health and desire to remain in the profession (Grayson & Alvarez, 2008).

However, not all relationships are created equal. As Scales and colleagues (2022) report, students experience better outcomes when they are given agency in relationships at school and feel as though they belong. The Search Institute's Developmental Relationships Framework describes the elements of a strong relationship between students and adults—namely, express care, challenge growth, share power, provide support, and expand possibilities (Search Institute, 2023). Despite the importance of these relational elements, less than half of students feel they have shared power. In a recent study, as few as 47% of students shared that they rarely or only sometimes are given the opportunity for sharing power in relationships with adults (Chamberlain et al., 2020; Scales et al., 2022).



The Seven-Step EWIMS Implementation Process

We describe the seven steps in this guide as distinct processes, but each step is part of an entire system. Figure 1 illustrates this system, which guides users in making informed decisions based on early warning indicators and other relevant information.

EWIMS and Continuous Improvement

EWIMS is an EWS approach that offers schools a systemic strategy to identify, diagnose, monitor, and continually improve strategies that lead to students meeting key educational milestones (such as freshman transition, on-time graduation). The EWIMS cycle is an evidence-based approach for schoolwide implementation of data-based, tiered intervention frameworks (such as response to intervention [RTI] or MTSS). The purposeful design of EWIMS adapts to the specific context of a school (e.g., small schools, large schools) and integrates into existing school improvement and student support mechanisms. Undergirding the complete process is an emphasis on continuous improvement; the school will want to evaluate and refine the process across time to adjust practices and better meet its needs.

Time Frame

The EWIMS process is aligned with the academic calendar and implemented during the school year (though some activities may start before the first day of school and finish after the last day). Specific steps occur at defined periods, with many steps being recurring or continuous, so that the process of reviewing early warning data and identifying appropriate support strategies and interventions is timely and responsive to individual student needs. In the longer term, the process allows ongoing evaluation and revision across academic years to ensure that the EWIMS achieves maximum efficiency and efficacy in the local context. Table 2 provides an example of an EWIMS implementation process during a single school year.

Table 2. Example Schedule for Implementing an Early Warning Intervention Monitoring System

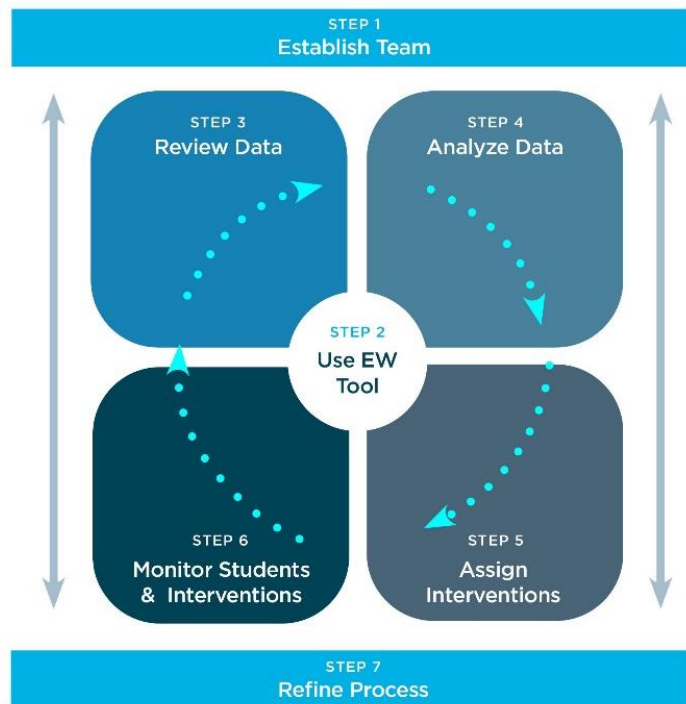
Schedule	Process (correlated to steps in this guide)
Before the start of the school year	<ul style="list-style-type: none"> Form/designate an EWIMS team and establish meeting norms (Step 1). Provide professional development to EWIMS team members about the implementation process (Steps 1 and 2). Convene the EWIMS team (Step 1). Set up the EWS Tool (Step 2). Review and interpret student needs based on data from the end of the previous year (Steps 3 and 4). Identify interventions for incoming students based on the identified needs (Step 5).

Schedule	Process (correlated to steps in this guide)
At the beginning of the school year	<ul style="list-style-type: none"> • Verify student information, especially enrollment status, and update student roster to reflect new enrollees, transfers in and out, and other classifications (Step 2). • Review the previous year’s data, including any additional information that is helpful for interpreting student needs (Steps 3 and 4). • Identify and implement student interventions or supports based on incoming risk indicator information, if available (Step 5).
After the first 20 or 30 days of the school year	<ul style="list-style-type: none"> • Update the student roster to reflect new enrollees, transfers in and out, and other classifications (Step 2). • Import students’ absences, if needed (Step 2). • Review and interpret student- and school-level reports (Steps 3 and 4). • Identify and implement student interventions (Step 5). • Monitor students’ responses to interventions in place or assigned at the beginning of the year (Step 6). • Revise students’ intervention assignments, as needed (Steps 5 and 6).
After each grading period	<ul style="list-style-type: none"> • Update the student roster to reflect new enrollees, transfers in and out, and other classifications (Step 2). • Import students’ absences, course failures, and behavior information (Step 2). • Review and interpret student- and school-level reports (Steps 3 and 4). • Identify and implement student interventions (Step 5). • Monitor students’ responses to interventions in which they are participating (Step 6). • Revise students’ intervention assignments, as needed (Steps 5 and 6).
At the end of the school year	<ul style="list-style-type: none"> • Update the student roster to reflect new enrollees, transfers in and out, and other classifications (Step 2). • Import or enter students’ absences, course failures, and behavior information (Step 2). • Review and interpret student- and school-level data (Steps 3 and 4). • Monitor students’ responses to existing interventions in which they are participating (Step 6). • Revise students’ intervention assignments for summer and the next academic year (Steps 5 and 6). • Evaluate the EWIMS process, using student- and school-level reports, and revise as necessary (Step 7).

The Data Inquiry Cycle

The data inquiry cycle begins every time the team looks at new early warning indicator data. The data inquiry cycle is composed of Steps 3, 4, 5, and 6 of the EWIMS process, or those steps where the EWIMS team will be examining student data, analyzing data to uncover underlying needs, assigning students to interventions, and monitoring student progress within those interventions. The majority of EWIMS team meetings will be dedicated to going through the data inquiry cycle, and the team will complete several data inquiry cycles throughout the school year.

Figure 1. Seven-Step EWIMS Implementation Process





Getting Started With EWIMS

Effective long-term implementation and sustainability requires focused and intentional efforts at the beginning of any new initiative. We recommend five specific actions for the initial setup of EWIMS: (a) establish an EWIMS team composed of the right staff, (b) determine your school's readiness to implement EWIMS, (c) participate in professional development on the EWIMS process and selected early warning data tool, (d) catalog the interventions available at your school by creating a complete intervention inventory, and (e) prepare the **early warning data tool** so that the team is ready to review students who are identified at the start of the school year. Descriptions of these five actions follow.

Consider School Connections

Information flows in many directions. Consider when and how the team can benefit from representation from outside the school:

- District support and resources
- Feeder middle schools
- School programs outside the school

Establishing an EWIMS Team

The EWIMS team must have a broad representation of staff. This representation includes having staff with a variety of roles (e.g., principal, vice principal, teachers, specialists, **interventionists**), skills and knowledge (data analysis, group facilitation, interventions), and strands of diversity that reflect your student body (e.g., staff with the same racial, cultural, religious, and linguistic backgrounds as students). An effective team also considers the attitudes and mindsets of the individuals responsible for carrying out the work. Team members understand the importance of engaging in work that reflects the four key components of a student success system: supportive community relationships; holistic real-time actionable data; an adaptive analysis, response, and improvement system; and a shared set of student-centered mindsets. The EWIMS team should include personnel who have the authority to make decisions about staff and students, who know a diverse assortment of students, and who have a diverse set of knowledge and skills. These individuals work together, and as a team, are responsible for carrying out EWIMS activities to ensure that students are identified and provided with support.

Figure 2. Establishing an EWIMS Team



The following key factors will ensure the success of the EWIMS team:

- Whether the EWIMS process is the responsibility of a new team or incorporated into the responsibilities of an existing team, it is vital that the EWIMS work be a priority of the designated team.
- The EWIMS team must receive professional development on EWIMS implementation and the use of the early warning data tool.
- The EWIMS team must have adequate time to implement the EWIMS process, including time to meet at least monthly to discuss the needs of students and provide them with supports.
- Finally, the EWIMS team must be using an early warning data tool with predictive analytics to identify students who are more likely to not graduate on time.

For additional factors that impact successful implementation, see [STEP 1: Establish Roles and Responsibilities](#).

EWIMS Readiness

We know that implementing a new initiative can be challenging. One way to proactively prepare for EWIMS is to consider how ready your school and staff are to implement a new initiative prior to adoption and implementation. Readiness to implement takes into consideration multiple factors, including an accurate understanding of the requirements of the initiative, the fit within your organization and culture (e.g., needs of your students, current initiatives within your building), staff's motivation and willingness to implement the initiative, staff's capacity including skills and knowledge, and organizational capacity to create an environment for successful implementation (Metz & Louison, 2019). Many publications and resources discuss how to get ready to implement, including the [National Implementation Research Network's Hexagon Tool](#) and the [Wandersman Center's Readiness Framework](#).

Participate in Professional Development and Ongoing Coaching

The EWIMS team must participate in professional development on EWIMS to gain an understanding of the seven-step process so they have the skills, knowledge, and confidence to implement it effectively. Professional development prepares the team to use the selected early warning data tool, interpret and understand early warning data, and understand the variety of interventions available at the school (which all team members may not be familiar with) and their use in the EWIMS process.

We recommend that the entire EWIMS team participate in professional learning so that everyone has a consistent understanding of the roles, responsibilities, and activities they will be engaging in during the school year. We also know that a one-time professional development session is not enough to support schools in this ongoing process. Continue reflecting on implementation and providing opportunities for job-embedded professional learning; coaching, peer-led sessions to reinforce concepts and skills, and observation and feedback of team practices.

Cataloging Student Interventions

To implement EWIMS, the team must be aware of the supports and interventions that are available to students who are showing signs of risk for not meeting key educational milestones. Before assigning individual students or groups of students to interventions, the EWIMS team should complete [Tool 2: Student Support and Intervention Mapping \(Appendix B\)](#). By creating a catalog of interventions, including information such as the availability of the intervention (e.g., the number of students who can be served at one time, resource limits), and important details for assigning students to that intervention (e.g., the focus of the intervention, the evidence base), the EWIMS team will gain a comprehensive understanding of the interventions that are available and how those interventions meet student needs.

Preparing to Use Your Data Tool

The early warning data tool allows users to identify and monitor students showing symptoms of risk throughout the school year using research-based early warning indicators, or [locally validated indicators](#) (see Table 1). An early warning data tool has many functions to facilitate data-driven decision making to help students. Implementing EWIMS does not require using a specific early warning data tool or provider. Your school or district may choose to purchase a tool from a vendor, develop an internal database and dashboard to use as a tool, or work with your student information system provider to explore add-on functions to your existing suite of services. Regardless of the early warning data tool you select or develop, it is essential that your tool include the functions below.

Functions to look for when selecting or developing an early warning data tool:

- Import or automatically update data from existing district and school data systems so that data are accurate and timely.
- Be accessible to members of the EWIMS team who need access to the tool and the data contained within; simultaneously protect student data and ensure data are only available to those staff who should have access.
- Customize the tool settings to reflect the local context (e.g., number of grading periods, race and disability categories, and other classifications).
- Integrate locally validated indicators of risk (and thresholds) to identify students who may need support.
- Capture the interventions to which teams have assigned students and monitor students' progress across time.
- Produce data displays and dashboards, including student-, school-, and district-level data summaries.
- Aggregate and disaggregate data by indicator, grade, and various factors and classifications.

To successfully use an early warning data tool, each EWIMS team needs the following: (a) access to the selected early warning data tool or the generated reports/data visualizations, (b) one or more trained staff members who are knowledgeable about the early warning data tool displays and features, (c) a mechanism for importing and updating data regularly, (d) a process to ensure that data are reviewed regularly, and (e) a plan to ensure adherence to appropriate confidentiality requirements when developing reports and sharing information (including internal and external participants). This process will ensure that the data in the tool are current so that the EWIMS team can access the necessary data visualizations.



STEP 1: Establish Roles and Responsibilities

During Step 1, school leaders and district staff will establish the EWIMS team. The EWIMS responsibilities may be assigned to a new team or incorporated into an existing team, such as the MTSS team, the student support team, the school improvement team, or the school leadership team. Regardless of how the team is organized, they should have the time and capacity to carry out the roles and responsibilities related to implementing EWIMS. In this guide, we will reference the EWIMS team for ease in describing the seven-step process.

The key activities for Step 1 are as follows:

- Establish an EWIMS team, including roles, responsibilities, and integration or collaboration with other teams (see the [Getting Started With EWIMS](#) section).
- Establish a team meeting schedule for the year that allows for monthly meetings at a minimum, common meeting routines, and expectations.
- Establish communication and feedback methods for EWIMS team activities.
- Catalog all available supports and interventions (see the [Getting Started With EWIMS](#) section).

Anticipated Outputs of Step 1

1. An established EWIMS team with identified roles and responsibilities that allow the team to review student data in the early warning data tool and make timely decisions
2. A meeting calendar with dedicated time for the EWIMS team to meet at least once per month to review student data
3. Established common meeting routines and expectations that allow the EWIMS team to be efficient and productive
4. Established communication and feedback methods that inform all individuals and teams at the school about the EWIMS process so that they can provide input or feedback, where applicable
5. An intervention catalog that allows the EWIMS team to know what interventions are available, assign appropriate interventions to students, and identify gaps in available interventions

Revisit Step 1 as part of the team's continuous improvement process (Step 7) to ensure that the composition of the EWIMS team and the meeting frequency meets the school's needs. As the year progresses, you may realize that the composition of the team needs adjustment to ensure that the team has knowledge of students' cultural and linguistic backgrounds and is capable of making timely and appropriate decisions based on student data. You also may realize that the team needs to meet more or less frequently based on the number of students who are identified, their needs, and available interventions.

Key Activities

Establish an EWIMS team and Participate in Professional Learning on the EWIMS Process

If your school has not yet established an EWIMS team, see more information in the [Getting Started With EWIMS](#) section. If you have an EWIMS team already, ensure that the team has members who have (a) the authority to make decisions, (b) the expertise to access and analyze student data, (c) knowledge of diverse student populations plus available interventions and resources in the school and community, and (d) an understanding of the mindsets to engage in EWIMS work. The EWIMS team should determine the roles that will help them be efficient and effective. Individuals can then take responsibility for filling these roles, which may include the following:

Relationships Are Key

Team members need the time to develop student-centered mindsets and behaviors to collaborate effectively.

- **Facilitator.** The facilitator guides the group through the agenda while making sure that everyone has an opportunity to participate.
- **Timekeeper.** The timekeeper monitors the time and provides regular updates to make the group aware of where they are in terms of planned activities.
- **Scribe.** The scribe is responsible for recording the group's ideas, decisions, and recommendations.
- **Presenter.** The presenter is the person leading the current topic. The presenter may change as the team discusses different students displaying early warning indicators of risk.

Prior to beginning the EWIMS process, the EWIMS team considers how the work of the EWIMS team is a change in behavior and mindsets from current practice. As the team assembles members and plans how members will engage as a team, ensure those plans integrate student-centered mindsets and are based on what has been learned from any professional development sessions that were held previously (for more information about this, see the [Getting Started With EWIMS](#) section). Team members should be in agreement on approaching the EWIMS work from a place of serving equity and acknowledging and leveraging student strengths, and that the purpose of EWIMS is to respond to student need using predictive data.

Establish a Team Meeting Schedule for the Year, Common Meeting Routines, and Expectations

The EWIMS team should meet regularly, at least monthly, throughout the year—ideally twice a month or every other week. In terms of the meeting schedule and timing, at least one meeting to review student needs should be held (a) before the start of school, (b) after the first 20 or 30 days of school, and (c) shortly after the end of each grading period.

Relationships Are Key

Team routines and expectations should support developing shared mindsets and positive relationships.

During the first meeting (which should occur prior to the start of the school year), the team collaboratively establishes common meeting agreements and routines that will guide all EWIMS meetings. Meeting norms help to build a strong community among the team, ensure students are at the center of the work, and create shared expectations for engaging as a team. The EWIMS team will brainstorm and determine their shared expectations together, such as the following:

- Prior to each meeting, all team members will review the next steps from the previous meeting to ensure the completion of team assignments.
- Each team member will review student data ahead of time and come prepared with questions.
- Team members will be present and active participants during EWIMS meetings.
- All team members commit to working norms that establish a respectful, supportive atmosphere, encourage sharing and listening to diverse perspectives, assume good intentions of their colleagues, and center serving students within conversations.
- Differences in perspective will not be considered resolved until everyone on the team, and those who will be affected (e.g., the student’s other teachers), understands the reasoning.
- At the end of each meeting, each EWIMS team member will leave with commitments for actions to be completed prior to the next meeting.
- Expect to adjust processes throughout the year to better address the needs of team members.

Throughout the year, reviewing and discussing the information available in your early warning data tool is essential to team activities. The meeting(s) convened prior to, or at the start of, the new school year should focus on identifying incoming students with indicators of risk and discussing applicable intervention strategies. During the school year, the EWIMS team meets at least monthly and sometimes more frequently, which will allow the team to develop a consistent routine, discuss issues as they arise, monitor students’ progress, and reflect on the team’s processes throughout the year. At the end of the school year (and possibly the end of semester), the EWIMS team meets to discuss ways to improve support for students showing symptoms of risk and the operation of the EWIMS team (Step 7).

Establish Communication and Feedback Methods Between the EWIMS Team and Other School Staff

Because the EWIMS team consists of a small number of individuals compared with the entire school and larger school community (including students and parents/caregivers), it is important that clear communication methods exist for keeping others informed of the team's

work. Communication will be especially important for staff who will be making changes to their teaching practices or delivering interventions because of the team's decisions, and for parents/caregivers and students who will be impacted. For example, the team may decide that a student should receive a particular intervention; before assigning the student, the team may need to communicate with the student's guidance counselor to determine availability within the student's schedule and communicate with the interventionist to determine if there are available openings. These steps should occur before discussing the identified need, the intervention, and the students' goals with the student and parent/guardian. To ensure that all stakeholders are informed and implement interventions as intended by the EWIMS team, consider the following questions:

- What communication structures already exist in the school? Could any of these include information about the work conducted by the EWIMS team?
- How will the EWIMS team communicate with and gather feedback and input from staff external to the team about students who are struggling, intervention plans, feedback on student progress, and the team's general communication?
- How will the EWIMS team communicate with and engage students and parents/guardians throughout the EWIMS process? What strategies and supports need to be in place to effectively engage those individuals?
- Should we invite other individuals (staff, students, parents/guardians) to participate in an EWIMS team meeting? How will the team coordinate with those staff members?

Catalog All Available Interventions

If the EWIMS team has not yet cataloged the interventions and supports available at the school, see the [Getting Started With EWIMS](#) section and [Tool 2: Student Support and Intervention Mapping](#) (Appendix B). This catalog should document every support and

intervention available at the school and district, as well as information that will assist the team in determining if an intervention is appropriate based on a student's needs (e.g., the focus of the intervention, the evidence base, the number of students who can be served at one time,

Relationships Are Key

Communication and feedback plans and methods create opportunities to build positive relationships with school staff, students, and their parents/guardians.

Relationships Are Key

Developing a comprehensive catalog of interventions requires and builds collaboration across the school community.

the number of students currently assigned). If the district has a districtwide intervention catalog, it may be a valuable tool in starting the schools own catalog. Developing the catalog provides an opportunity to examine whether interventions are student centered and how well available interventions meet student needs, including students' perceptions of whether interventions meet their needs. The school may also engage community members and partners as interventionists and supports (such as community mentoring and after-school programs) and should consider how to integrate those assets as well. The EWIMS team will need to update the intervention catalog throughout the year whenever an intervention is added or removed.

GUIDING QUESTIONS FOR STEP 1

1. What type of professional development does the EWIMS team need to be prepared to carry out EWIMS activities?
2. What school and district stakeholders should be on the EWIMS team (e.g., district administrators, school principal, counselors, teachers, support staff, technology specialists)? Can the EWIMS process be carried out by an existing team? Should there be more than one team?
3. If integrating EWIMS into an existing team, how will you ensure that the team has sufficient time to complete EWIMS implementation and responsibilities? What needs to change within the existing team to embed EWIMS?
4. Who will be responsible for the early warning data tool?
5. Does the EWIMS team have sufficient authority to make decisions about students and interventions based on early warning data?
6. How is the EWIMS team communicating with and engaging individuals and other school teams to ensure successful implementation? What does it look like to include students and parent/guardians in this work?
7. How frequently should the EWIMS team meet? How long should team meetings be? What are the team roles and meeting norms?
8. How will the EWIMS team communicate with the rest of the school and how will the EWIMS team receive input from the rest of the school?
9. What mindsets do the team members (and the school community at large) bring to EWIMS and how will those impact the team's ability to engage with EWIMS? Consider factors like belief in data-based decision making, having an equity focus, engaging students and parents in meaningful discussions, having a culture of agency versus a culture of compliance, and strengths-based approaches?
10. What additional resources does the team need (e.g., access to student records, professional development)? What constraints do you have that may impact the team meetings?
11. Do you have a list of all available interventions in the school, organized by focus area and tiered level of support? How will you continue to update this list?



STEP 2: Use an Early Warning Data Tool

During Step 2, the EWIMS team uses an early warning data tool to identify students showing signs of risk for not graduating from high school. A robust early warning data tool uses readily available student data on validated early warning indicators for attendance, course performance, behavior, and student agency/school connectedness to identify students who are more likely to miss key educational milestones so that they can be matched with appropriate supports and interventions. Districts or schools may develop their own early warning data tool, create an extension or specific view within an existing system, or identify and use a vendor-developed tool.

The key activities for Step 2 are as follows:

- Use and navigate the early warning data tool.
- Designate an individual (e.g., a school or district technology specialist) who will be responsible for the data tool and student data. Provide access rights within the early warning data tool to appropriate staff.
- Access student data and reports (data displays or summaries).

Anticipated Outputs of Step 2

1. An understanding of the use and basic features of the selected early warning data tool and early warning indicator reports by all team members
2. A designated individual who is responsible for regularly uploading student data so that the early warning data tool remains current
3. An updated early warning data tool with the latest student data
4. Student data and reports provided to EWIMS team members in advance of each meeting

Key Activities

As a result of the following key activities, the EWIMS team will be able to navigate and use the early warning data tool to identify students who are showing signs of risk for not graduating from high school.

Use and Navigate the Early Warning Data Tool

For the EWIMS team to use the early warning data tool to properly identify and support students who display indicators of risk, all team members will need to receive training on how to navigate the tool. Many early warning data tool vendors provide support to help train staff on how to use their tool. It is important to reiterate that students are not identified for showing indicators of risk due to their race/ethnicity or other demographic information; rather, students are identified by demonstrating one or more mutable early warning indicators. The EWIMS team

will want to subsequently examine students who have been identified by race/ethnicity, English learner status, and disability status in order to see if there are broader trends, such as whether a disproportionate percentage of students who are English learners have been identified for showing symptoms of risk. The district can assist in coordinating this training for participating schools across the district for greater resource efficiency.

Designate an Individual Responsible for Student Data

So that student data are usable by the EWIMS team, the data within the early warning data tool must be up to date. Therefore, someone at the school or district should be the data lead, responsible for reviewing the data within the tool to ensure that it is current and troubleshooting any issues that may arise. The frequency of data review will vary by tool, but at a minimum, will include reviewing available data for incoming eighth graders and students new to the school. This process should include uploading students' previous intervention plans, if available. Depending on the tool, attendance data may need to be uploaded within the first 20 or 30 days, as well as after the close of each grading period. Similarly, some tools may require uploading of the final grades at the end of each grading period. Other tools will not require direct data uploading because this process occurs automatically from the school's student information system. In this case, review the data regularly (monthly for attendance data, after each grading period for academic performance data) to ensure currency and accuracy. The quality of data in the early warning data tool directly impacts the decisions made by the EWIMS team, so this is a vital role!

Provide and Maintain Access Rights

To protect student information, the early warning data tool should grant appropriate access rights. Specifically, teachers should have access to data only for the students within their classrooms; they do not need access to data for every student in the building. Similarly, interventionists should have access rights to data for the students they are servicing, not other students at the school. An exception to this rule is the EWIMS team and school administration. These groups should have access to data for all students within the school so that they can examine data to identify broader trends within specific student populations, grade levels, subject areas, or across the entire school. Being thoughtful about the access that different stakeholders will need within the early warning data tool will allow everyone to review the data they need to make decisions.

Access Student Data and Reports

Prior to every EWIMS team meeting, a designated individual will need to ensure that the team has the necessary data summaries or visualizations for the students or groups of students that will be discussed. These data summaries or visualizations will vary depending on the purpose of the meeting. Generally, the data used by the team will need to be aggregated by indicator and disaggregated by relevant factors (such as grade, counselor/academy, IEP status, language proficiency, free and reduced-priced lunch status, race/ethnicity, and other issues related to school goals or structures). All team members should have access to these visualizations prior to the meeting so that they have time to review them before the meeting. The visualizations needed will vary depending on which step of the EWIMS cycle the team is currently in and the time of year, but they may include the following:

- **Data visualizations for each early warning indicator after each grading period.** These visualizations will identify the percentage of students at various risk levels so that the EWIMS team can examine trends across time.
- **Individual student-level data summaries.** For students displaying indicators of risk, individual student-level summaries will provide the EWIMS team with a snapshot of which early warning indicator(s) the students have been identified for as well as any interventions that are in place or have been tried previously. These summaries will be useful when the team identifies students who need additional support.

During each EWIMS meeting, the team will review data summaries and visualizations (Step 3) to identify next steps.

GUIDING QUESTIONS FOR STEP 2

1. What databases or systems house the student data needed for the tool? How will those sources interact with the early warning data tool?
2. Who will be responsible for ensuring data from the school's student information system is integrated with the early warning data tool? How will they make sure the early warning data tool is current and up to date (such as monitoring data syncs or manually entering data)?
3. Who will develop reports for the EWIMS team?
4. How frequently will early warning indicator data be updated or available? How will this impact how frequently data can be reviewed?
5. With whom will you share data from the tool? How will you protect student confidentiality, as required by district, state, and federal policies?
6. What key features or data displays should EWIMS team members understand and be able to navigate within the tool?



STEP 3: Review Early Warning Data

Early warning data are reviewed in Step 3 to identify students who are displaying symptoms of risk. During Step 3, the team begins to look at data to understand patterns across early warning indicators, including attendance, behavior, student engagement, and course performance within the school.

The key activities for Step 3 are as follows:

- Review early warning data on students who are identified.
- Explore patterns in student-level data, student groups, and school-level data.
- Identify additional data or information needed to answer additional questions.

Relationships Are Key During the Data Inquiry Cycle

People act on early warning data to see results, and strong relationships with the school community, students, and parent/guardians will help in selecting and gathering additional data for Step 4.

Anticipated Outputs of Step 3

1. Identification of individual students who show signs of risk for not being on grade level and/or not graduating from high school
2. An understanding of patterns across groups of students and time, which allows the EWIMS team to begin to consider the allocation of student support or interventions for students who are identified
3. ***In preparation for Step 4:*** Identification of the type of additional information that will be needed to better understand possible underlying reasons that specific students were identified for specific early warning indicators
4. ***In preparation for Step 4:*** Assignment of responsibilities to gather additional information and data on specific students and student characteristics

Revisit Step 3 regularly—any time new data are available throughout the school year for both short- and long-term trends.

Key Activities

Review EW Data

The early warning data tool can yield a great deal of information. Step 3 helps users break down this information into manageable pieces that the EWIMS team can sort, organize, and prioritize for taking action. Arranging the data in manageable ways allows the team to identify students who show symptoms of risk and develop questions to further investigate the underlying causes for students' symptoms of risk (see [Step 4](#)). To review early warning data, team members begin by examining which groups and individual students are (and are not) identified for attendance, behavior, and course performance indicators of risk. It is important to understand that early warning indicators differ from student demographics and designations (e.g., special education, English learners, late enrollment). Student demographics and designations are not predictive of student success or timely promotion and are not early warning indicators. Examining early warning indicator data is the starting place for engaging in EWIMS; however, integrating and understanding data on the relationship between students who show signs of risk and data disaggregated by demographics and other factors can be critical in the analysis process (as well as in ensuring that supports address student needs later on).

Based on this initial data review, the team strategizes ways to prioritize student needs. The EWIMS team can then organize and sort students who are showing similar symptoms of risk into groups based on the early warning indicators for which they are identified (i.e., attendance, behavior, course performance, or any combination).

Explore Data Patterns

The EWIMS team may want to sort student characteristics to look at group patterns and see whether larger issues need to be addressed. Exploring data patterns is about understanding what the early warning indicator data are saying. For example, are English learners or students with disabilities displaying more indicators of risk than the general education population? Is there a specific grade or subject area where the pattern of risk is different than the others? If so, the team will want to engage in a deeper analysis of the groups of students affected to determine the root cause and put in place additional supports for these students. Focusing on what the data say first sets the stage for a data-based decision-making process that is centered on student needs when the team engages in deeper analysis.

Identify Additional Information Needed

Although the early warning data tool yields a great deal of information, those data will not be enough to understand why students are showing signs of risk or ensure those students are assigned to interventions and supports that meet their needs (Step 4). While reviewing early warning indicators, the team should document additional data sources needed to make decisions about next steps. These data include data from additional school systems (attendance breakdown, grading details, etc.), human insights (student, their family, and their teachers), and may include student work samples, **progress monitoring** data, observations, and other information (see [Table 3](#) in Step 4). Prior to the next EWIMS meeting, assign specific team members the task of gathering these data sources and sharing them with the team so that everyone has a chance to review and come prepared to discuss.

GUIDING QUESTIONS FOR STEP 3

What do you notice about the data—which students are showing symptoms of risk and for which early warning indicators?

12. What early warning indicators shows the highest number of students being identified?
13. Do students who are showing symptoms of risk early in the school year continue to show signs later in the year? Are they identified for the same or different reasons?
14. What are the demographic characteristics (e.g., disability, disadvantaged status, English learner status) of students who are identified and not identified? Are there other school characteristics or groupings to consider (academies, assigned counselor, etc.)
15. What are key features or data displays that EWIMS team members should understand and be able to navigate within the tool?



STEP 4: Interpret Early Warning Data

During Step 4, the EWIMS team engages in a deeper analysis of data on students and groups of students who were identified as showing symptoms of risk (Step 3) to identify root causes and inform decisions about supports and interventions that meet students' underlying needs ([Step 5](#)). The EWIMS team builds on the review of the early warning data (Step 3) by looking more closely at the characteristics of students who have been identified. As a part of this process, teams examine additional data not included in the early warning data tool, such as data from additional school systems (attendance breakdown, grading details, etc.), human insights (student, their family, and their teachers), and may include student work samples, **progress monitoring** data, observations, and other information (see the [Gather Additional Data](#) section for additional information) Team conversations in which the team engages in deeper analysis can shed light on the reasons that a student or groups of students are displaying signs of risk. By gathering data from a variety of sources, the team will be better able to determine supports and interventions that respond to student needs (Step 5).

Relationships Are Key During the Data Inquiry Cycle

Digging into root causes is all about collaboration, and strong relationships among the team and others are the core to effectively engaging with data to uncover student needs, and, in particular, to engage students in the process.

The key activities for Step 4 are as follows:

- Identify and gather supplemental data for students displaying symptoms of risk.
- Interpret data to *hypothesize* about the root causes for the student or group of students identified.

Anticipated Outputs for Step 4

1. A better understanding of reasons that individual students and groups of students are being identified
2. Identification of individual and common needs among groups of students

Regularly revisit Step 4 whenever new students are displaying indicators of risk or when previously identified students are not responding to the intervention(s) put in place by the EWIMS team.

Key Activities

Gather Additional Data

The early warning data tool will identify students who display indicators of risk, but that information by itself will not be enough to assign students to interventions. To properly determine the underlying reasons why a student or a group of students is identified, the EWIMS team will need to collect additional supplemental data.

Additional information on these data sources, including what information can be learned, is in Table 3.

Table 3. Additional Data Sources

Data type	What data will tell you
Annual state assessment data	Although annual state assessment data will not be available for students in all grades, including these data (where applicable) can provide the EWIMS team with information on the student's achievement levels in each tested subject and how that student performed compared with students across the state. These data can identify areas where a student is succeeding and areas where a student needs additional support. It also is helpful to compare the student's results to the previous administration, if those data are available.
Benchmark or formative data	If your school administers a regular formative or benchmark assessment, and these results are not integrated into the early warning data tool, examining a student's results can provide the EWIMS team with information on how the student is performing compared with their peers, standards that the student has mastered, and standards that need to be retaught.
Conversations with the student	Having conversations with the student provides the EWIMS team with important qualitative data about what the student is thinking/feeling during instruction, if any external factors are impacting the student at school, and more.
Conversations with the student's family	Having conversations with the student's family will provide the EWIMS team with important qualitative data about any external supports the student may already be receiving, external factors that may be impacting the student at school, if the student is displaying similar behaviors at home, and more.
Diagnostic data	Diagnostic data can help the EWIMS team better understand a student's specific skill needs and strengths or environmental events that predict a student's problem behavior. Diagnostic data can be collected through formal (e.g., standardized tools through publishers) and informal (e.g., error analysis of progress monitoring data, review of student work samples) approaches. For students with behavioral incidents, diagnostic assessment occurs through functional behavioral assessment and more informal measures such as checklists to identify the function of the behavior.

Data type	What data will tell you
English learner status and IEP	The EWIMS team should know if a student has an IEP or is an English learner. For students with IEPs, the team should be familiar with each student’s plan and examine each student’s measurable goals. For English learner students, the team should examine results from the most recent ACCESS test to understand the student’s proficiency levels in the domains of listening, speaking, reading, and writing.
Previous school academic data	A student’s academic performance in earlier grades and elementary school, such as course failures, state assessment results, and previous intervention plans, can provide the EWIMS team with valuable information about the student’s strengths and foundational gaps that may need to be addressed.
Prior course performance	A student’s prior course performance can provide the EWIMS team with valuable information on the sequence of courses that the student has taken and how the student did academically in prior courses. Because many courses build on one another in content, knowing the sequence of courses can be particularly important to determine any foundational or skill gaps.
Social-emotional learning or school climate data	If your school collects social-emotional learning or school climate survey data that can be deidentified, these data can provide you with valuable information about a student’s experiences with school staff and peers, level of classroom engagement, feelings of social connection, growth mindset, perceptions of school safety, and more. The information that is available will vary by survey measure.
Student observations	Observing a student working in the classroom can provide the EWIMS team with valuable information about the student’s progress, understanding, attitude, level of engagement, cooperation, strengths, and challenges.
Student work samples	A formative analysis of student work (e.g., end-of-unit assessments, exit tickets) will provide the EWIMS team with information about the student’s understanding of concepts and skills.
Teacher/ additional staff conversations	Interviewing the student’s teachers will provide the EWIMS team with information about the student’s strengths/challenges; previous interventions and individual student plans, supports, or scaffolds that the teacher put in place; behavior; and the level of engagement across subjects. You can gather information across teachers to see if trends emerge. Also, teachers from cultural and linguistic backgrounds similar to that of the student should be included in EWIMS team conversations. Teacher attitudes, behaviors, and beliefs may also influence perceptions of students and student behaviors and can help to understand context.

Interpret Data to Hypothesize the Root Cause

After gathering and triangulating additional data, the team should follow a data analysis process (or protocol) to discuss individual students or groups of students to generate a hypothesis about root causes for the student or students identified. The team should be able to use what is learned from the analysis to identify common and individual needs among students. The meeting to hypothesize underlying causes and student needs will likely take more time than a typical EWIMS meeting. It is important to plan enough time to discuss findings and determine potential causes for a student or a group of students displaying symptoms of risk.

The needs that are uncovered during these discussions are used to identify appropriate intervention strategies ([Step 5](#)), and monitor students' responses to these interventions ([Step 6](#)).

Root-Cause Analysis and EWIMS

Although early warning indicators alert you to where there may be a concern, a root cause is your best hypothesis about the underlying cause (or causes) that must be addressed to solve the problem or prevent the issue from re-occurring. Conducting root-cause analysis in EWIMS bridges from exploring patterns in student-, group-, and school-level data (in Step 3) to matching students to specific supports and interventions (in Step 5) so that the selected intervention addresses the student's need. Root-cause analysis helps you understand "why" a student (or students) are showing signs of risk and to determine which of those potential causes is the most likely to support student success. Understanding that a student (or a group of students) has been identified by an early warning indicator is not enough to ensure the assigned intervention will meet their needs. Conducting a root-cause analysis helps you understand why that early warning indicator was not met so that the underlying cause can be addressed.

For example, the EWIMS team at a high school identified a pattern of increased course failures for freshman biology across all teachers compared with prior years. To better understand what was happening, team members spoke with the biology teachers. They learned that there were no significant changes to the scope and sequence, curriculum, or grading of student assignments that could account for the course failures. After collecting additional supplemental data, the team realized that the recent change in the high school science sequence meant that some prerequisite biology standards were not taught prior to students entering biology. If the EWIMS team did not conduct this root-cause analysis, they likely would have assigned students to biology tutoring or another Tier 2 academic support, but that additional support would have become an annual requirement for students in biology. The result of the root-cause analysis meant that the biology teachers added foundational content that students needed to be successful. The EWIMS team revisited this a year later and noted that the number of students failing biology was significantly lower than the prior year. With schools often challenged by

limited resources, including staffing capacity, determining how to efficiently address root causes is an important function of the EWIMS team.

GUIDING QUESTIONS FOR STEP 4

1. Are there data patterns among the groups of students who are identified for any specific indicator(s) of risk? For example, among groups of students, are certain classes missed or are grades lower in certain subjects? For individual students, is there a day or time of day when the student is absent?
2. How might the conditions or policies at the school affect students who are showing symptoms of risk? Are there attendance, grading, or behavior policies that disproportionately identify certain students?
3. Looking across multiple grades, are students failing certain courses, flagged at specific grade levels, or both? What changes could improve outcomes for students in these course(s) or grade(s)?
4. What are the strengths of each student or a group of students? Are students engaged in school (cross-check with other information, such as teacher and counselor reports)?
5. Can more information be gathered from students about the reasons they are exhibiting symptoms of risk (e.g., students do not find classes engaging, students have responsibilities at home causing them to be absent, student have fallen behind in their course work)?
6. Based on your analyses, is there anyone who is not currently on the EWIMS team who needs to be included (e.g., previous teachers, parents, guidance counselors, curricular and instructional personnel)?
7. What are the most prominent needs at the school and district levels that emerge from the data analysis? How will you prioritize these needs?



STEP 5: Assign and Provide Interventions

During Step 5, the EWIMS team assigns interventions and research-based strategies to students who are showing signs of risk. Interventions are evidence-based programs that target the specific skills or content gaps of students. Interventions can target academics, behavior, social-emotional skills, or attendance challenges. Many schools also use evidence-based strategies to create their own interventions, such as schema-based instruction to support students experiencing difficulty with word problems. Strategies that are not packaged into formal programs like interventions still use practices supported by research. Whether your school uses an intervention or a strategy, knowing the evidence base (and if the research was conducted with a similar student population to yours) can be important in terms of the results achieved.

Relationships Are Key During the Data Inquiry Cycle

The EWIMS team works with anyone in the school community involved in assigning and carrying out interventions. Consider engaging teachers, interventionists, and students and their parents/guardians need to be

In Step 5, the EWIMS team builds on the data collected in Step 4 and uses that data to systematically provide support to identified students using a tiered approach. As part of this process, the EWIMS team considers the underlying root causes for students showing signs of risk and assigns students to appropriate—and available—academic and/or behavioral interventions. The EWIMS team also considers whether current interventions and supports meet the needs of students displaying indicators of risk.

The key activities for Step 5 are as follows:

- Use complete, up-to-date intervention catalog to assign student interventions (see [Tool 2: Student Support and Intervention Catalog Mapping](#) [Appendix B]).
- Assign students to specific supports and interventions based on need.
- Develop and communicate the intervention plan to all relevant stakeholders.

Anticipated Outputs for Step 5

1. A complete intervention catalog that allows the EWIMS team to know what interventions are available, assign appropriate interventions to students, and identify gaps in available interventions
2. Students who are showing symptoms of risk based on student needs identified in Steps 3 and 4 (documented for each individual student in the early warning data tool) are assigned to interventions
3. A communication strategy for the implementation plan that will be shared with relevant stakeholders

Step 5 is revisited during each EWIMS team meeting. During this time, the team will examine both new students displaying early warning indicators of risk as well as students previously assigned to interventions who are not responding to the support put in place by the EWIMS team (Step 6).

Key Activities

Complete and Maintain Intervention Catalog

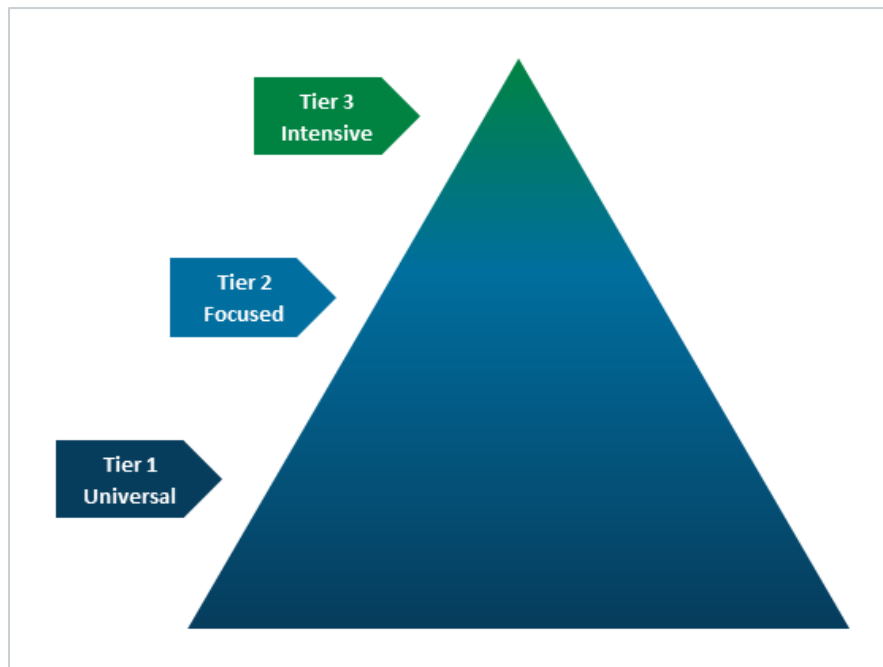
If your school has not yet cataloged all the interventions available, see more information about this in the [Getting Started With EWIMS](#) section. In addition, [Tool 2: Student Support and Intervention Mapping \(Appendix B\)](#) guides the development of a catalog of interventions. If you have a catalog, review it as it is being used to ensure that it is current; intervention availability and need changes over time. Now that the team has a better understanding of student needs from Steps 3 and 4, consider whether gaps exist in the available supports and interventions for groups of students or individual students. If there are students whose needs are not currently being addressed, the EWIMS team will want to collaborate with the district to explore additional options.

Assign and Provide Interventions

Schools and districts increasingly organize specific strategies or supports into tiers based on the intensity of the interventions. Generally, these models have a three-tiered intervention system. As displayed in Figure 3, EWIMS relies on a systemic intervention system with tiers of response: Tier 1 interventions are applied to all students in a grade level or subject area (universal), Tier 2 interventions are moderately intensive and are targeted to small groups of students with common needs (focused), and Tier 3 interventions are the most intensive and are applied to a small subset of individual students with the highest level of need (intensive). It is important to note that although interventions or supports are tiered by the level of intensiveness, the tiers do not describe students in similar terms (i.e., there are no Tier 3 students, only students who

need a Tier 3 support to address a specific skill deficit). Further, students who require more intensive supports do not necessarily need them in all subjects or skill areas; universal supports may address most of their need, with Tier 2 or 3 supports needed for a specific skill or skills. Teams that consider needs and impact related to Tier 1 look beyond classroom instruction. School systems, policies, practices, and the behaviors of the adults within those systems can also influence which indicators show higher numbers of students with signs of risk, intentionally or unintentionally. Universal supports should look at whether the policies and structures that are in place support student success, *and* if the practices and adult behaviors in the building are leading to those structures and policies being implemented fully. As the example on page 31 shows, these influences outside the classroom may need to be adjusted to improve student outcomes.

Figure 3. Multitiered System of Support Tree



The early warning data tool may have the capacity for the EWIMS team to monitor and adjust students' assignments to supports and interventions in the intervention catalog, as well as monitor their movements through tiers ([Step 6](#)). In general, the early warning data tool assumes that in schools using a tiered approach, all students have access to Tier 1 interventions. In cases where the EWIMS team identifies more than 80% of students in the school for a specific indicator of risk within a common grade, subject area, or subgroup, the

team might want to consider adding additional interventions within Tier 1 to help all students.¹ Otherwise, students who are identified are then eligible for Tier 2 or Tier 3 interventions, or both, based on the EWIMS team assessment. Because the EWIMS process helps identify students early, student needs may be met by other, less intensive types of supports.

Although the process relies heavily on data collected during Steps 3 and 4 to inform action, ultimately, the team members are charged with using their professional judgment to recommend specific student supports and interventions. To ensure that each placement is appropriate and effective, the team continually monitors individual student response to assigned interventions ([Step 6](#)) and, when needed, revises student placement after revisiting Steps 3 and 4.

Develop and Communicate the Intervention Plan

If your school has not yet created a communication plan, please see the [Step 1 activity](#) Establish Communication and Feedback Methods Between the EWIMS Team and Other School Staff. Because the EWIMS team consists of a small number of staff compared with the entire school, it is important that there are clear communication methods for keeping staff informed of the team's decisions, especially staff who work directly with the students.

In Step 5, communication is particularly important for the following reasons:

- **To ensure space or availability of support for the students in the intervention selected by the EWIMS team.** Before assigning a student to an intervention, the intervention provider (who may be the interventionist, a special education or English as a second language teacher, a guidance counselor) confirms there is space to add another student. The EWIMS team may need to coordinate services across interventions and having multiple options available can help ensure availability to meet all student needs. Inviting the intervention provider to the EWIMS meeting will make this process more efficient.

¹ For example, if 80% or more of students are failing the same mathematics course, the team will need to engage in a root-cause analysis process ([Step 4](#)) to identify the underlying cause. Although there could be many causes, one worthy of consideration is the prerequisite coursework needed to be successful. Are students expected to have mastered certain standards, which they may not have had access to previously? If so, a broader change to the progression of courses across the school may be needed.

- **To ensure that the student’s teachers are aware that the student is participating in the intervention (if appropriate).** Once the EWIMS team has confirmed the availability of and assigned an intervention, the student’s teachers must be informed of the assigned interventions. Depending on the intervention, teachers may need to make changes to meet the student’s needs. For example, students may require more frequent check-ins, more practice opportunities, or added behavioral strategies to help them address self-regulation and motivation. However, there may be instances when sharing a student’s intervention with all staff is not appropriate, such as in the case of counseling. Having a clearly established communication plan will help the EWIMS team make these determinations and ensure that all relevant staff receive updates.
- **To ensure that the EWIMS team receives feedback from relevant staff with connections to the student.** Communication between the EWIMS team and other school staff is not unidirectional; the EWIMS team needs to gather feedback from the school community, including students and their parents/guardians, on an ongoing basis. Regular communication helps build collaborative relationships and including students and their families helps to ensure the work stays centered on students. Once an intervention has been assigned and is being implemented, the EWIMS team should check in with staff to understand how the student is progressing and determine if a modification or a new intervention is needed (Step 6).

GUIDING QUESTIONS FOR STEP 5

1. What interventions are currently implemented in the school and district? How successful do they seem to be at keeping students in school or getting them on track? What type of ongoing assistance is available to implement supports and interventions with fidelity?
2. What structures (e.g., flexible scheduling) exist to support students participating in interventions?
3. What trends in the data identify the immediate need for specific types of interventions (e.g., attendance monitors, professional development for teachers on evidence-based instructional strategies, opportunities for extended learning beyond the school day)? Would any groups of students benefit from participating in a similar intervention?
4. What level of support (Tier 1, 2, or 3) is needed? How do interventions and supports provide a continuum of increasing intensity based on student needs? What additional approaches can be used to coordinate services and prioritize the allocation of resources?
5. Do the characteristics (e.g., disabled, economically disadvantaged, English learner status) of the students identified inform intervention decisions? Are there other ways to inform intervention decisions?
6. How are decisions about interventions and students assigned to interventions communicated to other school staff?



STEP 6: Monitor Students and Interventions

During Step 6, the EWIMS team sets goals for improvement with students and monitors the progress of identified students to see if the assigned intervention is helping them make progress toward goals. For example, do students have improved attendance, are students showing fewer inappropriate behaviors, or are students passing more classes after participating in the intervention? In this step, the EWIMS team reviews data to monitor student progress and intervention implementation to evaluate the impact of interventions.

Relationships Are Key During the Data Inquiry Cycle

When people are carrying out interventions and supports (and participating in them), they need to be involved in setting goals and understanding progress.

The key activities for Step 6 are as follows:

- Determine the fidelity of intervention delivery.
- Set student goals.
- Monitor if students are making progress toward goals.
- Communicate intervention status.
- Determine an intervention's effectiveness and whether any change is needed.

Anticipated Outputs for Step 6

1. Knowledge of how to examine intervention fidelity to ensure the program is implemented as intended
2. Creation of student goals
3. Knowledge of how to measure individual student progress and make decisions about continuing, reassigning, or terminating interventions for students who are identified
4. Communication with appropriate stakeholders about student needs, the impact of existing interventions, and the need for additional interventions, if applicable
5. Knowledge about the general effectiveness of interventions, based on progress monitoring data

Step 6 is a regular part of the EWIMS team's routine and should appear as a regular item on the agenda. During this time, the team revisits students who have been identified to ensure that interventions are implemented with fidelity and are working for students (e.g., students are showing signs of meeting their goals). If a student is not responding to the intervention, the EWIMS team revisits Steps 4 and 5 to determine changes to improve support for students.

Key Activities

Determine Intervention Fidelity

To know whether an intervention is having the desired impact, the EWIMS team must first determine how the intervention should be delivered and if it is possible to deliver the intervention with fidelity given the school's current resources (e.g., scheduling, staffing). In other words, the EWIMS team must determine the level of implementation fidelity. Formal intervention programs already have elements of fidelity defined, and some programs may have fidelity tools to help educators ensure that they are implementing the programs with fidelity and quality. As teams think about fidelity, it is important to consider multiple components that may impact intervention delivery, including duration, adherence, quality of delivery, program specificity, and student engagement (Dane & Schneider, 1998; Gresham et al., 1993; National Center on Intensive Intervention, 2019; O'Donnell, 2008).

Elements of Fidelity

1. **Duration:** Is the student receiving the intervention for the correct length of time according to research? How often does the student receive the intervention? Did any factors prevent the student from receiving the intervention as intended?
2. **Adherence:** Is the interventionist implementing all components of the intervention in the way intended based on research?
3. **Quality of delivery:** How well is the intervention being delivered? Are good teaching practices being used (e.g., is the teacher engaged and animated in delivery)?
4. **Program specificity:** Is the intervention well defined? Does the intervention differ from other interventions we have in place at the school?
5. **Student engagement:** Is the student engaged and involved in the intervention?

The EWIMS team must first determine if an intervention is being implemented as designed before deciding whether the intervention is working for students. For example, a student was assigned to an intervention for 30 minutes three times per week; however, a series of snowstorms resulted in multiple school closures, so the student received the intervention only once per week for 2 of the 4 planned weeks. The EWIMS team should take this contextual information into account when determining next steps for this student. As another example, some students were assigned to a small-group intervention. One student was demonstrating inappropriate behavior and disrupting the whole group. When this happened, the interventionist had to stop teaching to redirect the student. In this instance, all students were impacted because they were not receiving the full intervention. If this situation becomes a pattern across time, it could negatively impact all students in the small group. In both examples, the cause of students' nonresponse to the intervention could be that the intervention is not a match for their needs or an intervention is not being implemented

consistently. Examining fidelity will allow the EWIMS team to make informed, data-based decisions about next steps for individual students and overall interventions.

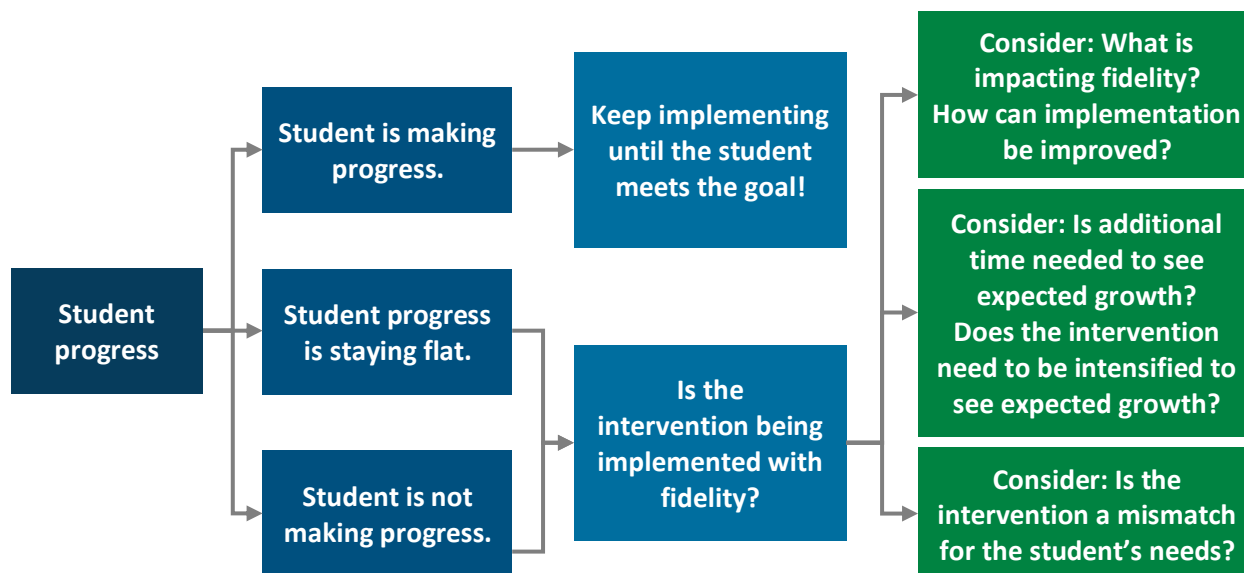
Set Student Goals

Once students have been assigned to interventions, there needs to be a target for what that intervention should help the student achieve. The EWIMS team works with interventionists and teachers, parents/guardians, and students to set aspirational targets for students to achieve that address student needs and build on student strengths. Setting goals that are SMART (i.e., specific, measurable, attainable, realistic, and timebound) defines student success in achievable and tangible terms that can help set measurable indicators for progress monitoring. Students should be involved in the process of setting targets and monitoring progress toward meeting their goal, which is an important metacognitive skill. Lastly, the team should decide when to reconvene to examine the student’s progress. Growth takes time, so do not rush this process!

Monitor Student Progress

When monitoring student progress, the EWIMS team is examining students who were previously *identified* and assigned to an intervention to determine if they are back on track in terms of attendance, course performance, or behavior. This analysis is important because schools have finite resources, and they want to make sure that they are using these resources efficiently. The EWIMS team will evaluate student progress using the monitoring plan that was created with the student. Figure 4 walks you through a decision tree that outlines considerations for the EWIMS team based on a student’s progress within an intervention.

Figure 4. Progress Monitoring Decision-Making Tree



If a student is making progress within the intervention, then continue the intervention until the student meets the goal determined at the start of the intervention. Once the student meets the established goal, ramp down services for the student so they can exit from the intervention to accommodate another student. The EWIMS team should continue to monitor this student in case they begin to show indicators of risk again so the team can intervene quickly. If the student is not making progress, the team should determine if the intervention is being implemented with fidelity. The team also should consider how the student can have an active role in monitoring their own progress and what supports the student will need to take on that ownership.

As described earlier, if the intervention is not implemented with fidelity, it will be difficult to determine next steps. The team should examine the five elements of fidelity, speak with the interventionist, and examine any notes included in the student's intervention plan (this may be within the early warning data tool, if the tool you are using has this functionality). The team should reflect on the following questions:

- Which elements of fidelity are currently missing?
- Why are these elements currently missing? Is there a pattern where these elements are consistently absent?
- What supports are needed to help implement the intervention with fidelity? (For example, is more time needed? Is more training or coaching needed to support the interventionist in improving implementation?)

If the intervention is implemented with fidelity, the team can reflect on other questions to address implementation before making changes to the intervention plan. These questions include the following:

- Has the intervention been implemented for sufficient time to see the intended impact? It is possible that not enough time has elapsed for a student to show progress within the intervention?
- Do some elements of the intervention need to be intensified for the student? For example, does the student need more time within the intervention or more opportunities for practice and to receive feedback?
- Return to the [root-cause analysis completed in Step 4](#). Does the assigned intervention address the root cause of the student's struggles? Could there be a different root cause that should be considered?
- Is the intervention the right match to address the student's needs? If the EWIMS team is considering a different root cause, the intervention may require change.

Based on the answers to these questions, the EWIMS team may decide to give the student more time within the intervention, work with the interventionist to make changes to implementation, or change the intervention that the student is receiving. Both the student and the student's family should be involved in planning for any changes, which can provide them with an opportunity to better understand and invest in the intervention process. Regardless of the decision made, the team will need to communicate these changes to the interventionist and other stakeholders, as appropriate. The team also will need to continue monitoring the student's progress to determine if the changes are having the desired impact. If the student begins to make progress, continue implementing these changes. If the student is not making progress, return to the decision-making tree (Figure 4) and go through the process again. Sometimes you must go through the process multiple times to find the right solution.

Communicate Intervention Status

As part of the monitoring process, the EWIMS team, or assigned members of the team, regularly check in with intervention providers. These conversations help the EWIMS team determine the level of fidelity and intervention progress. Although some elements of fidelity are more easily documented (e.g., duration), other elements (e.g., student engagement) are important to consider and can be addressed through conversations with the intervention provider and student, observations of the intervention, or self-reflection by the interventionist. See the [Student Intervention Implementation Log \(Appendix C\)](#) for a quick self-reflection log that the interventionist can complete on a weekly basis to gather information about these elements of fidelity.

In addition, the EWIMS team or a designated individual must communicate with the parents or guardians about the student's progress in the intervention. This communication is particularly important if the intervention does not seem to be having the desired impact or if changes to the intervention are made.

Determine Overall Intervention Effectiveness and Adjust

Across time, the EWIMS team will examine the effectiveness of the available interventions at the school for meeting student needs. All interventions should be based on research, but there may be several reasons why your data indicate that an intervention is not effective for your students. For example, the intervention may have been studied using a different student population than the population of your school.² By examining the effectiveness of each intervention more broadly, the EWIMS team will improve its understanding of which

² For help with determining the evidence base on specific interventions, see the National Center on Intensive Intervention's Academics and Behavioral Interventions Tools Chart at <https://intensiveintervention.org/about-charts-resources> or the WWC at <https://ies.ed.gov/ncee/wwc/>.

interventions address specific student needs. The team can then use this information to improve the process of matching students to interventions.

The team also may consider whether changes need to be made to the school's available interventions ([Step 7](#)). For example, are existing student needs not addressed by the interventions currently available? If so, what is the area of need? Is it academic, behavioral, social-emotional/whole child, or attendance related? Then, the team should conduct a search and develop a list of potential interventions and strategies that may address the need, pairing the list with information on the population of students originally studied and the associated costs (e.g., resources, funding, staff time) of implementing the intervention or strategy. For resources on research-based interventions, see [Tool 3: Identifying New Interventions \(Appendix B\)](#). After the team shares the need and potential solutions with leadership and staff, appropriate intervention(s) can be purchased and implemented. New interventions should be added to [Tool 2: Student Support and Intervention Mapping \(Appendix B\)](#) so that the team can more readily assign students to new interventions.

GUIDING QUESTIONS FOR STEP 6

1. How will you determine if the intervention was delivered as intended?
2. Are there problems with how the intervention is being implemented?
3. How will you determine if students are making sufficient progress?
 - a. What goals have been set to show student progress? How are students involved in setting goals?
 - b. What is the plan for monitoring student progress in the intervention?
 - c. What data will you collect? Who will collect the data?
4. Are students who are participating in interventions showing improvement? Are there patterns among the students who are showing improvement versus students who are not improving?
5. Are students who are participating in interventions continuing to display indicators of risk? If the students are indicating risk, then consider the following:
 - a. Are additional data needed to identify a better fit between the intervention and student needs? As interventions are implemented, do new student needs arise?
 - b. Are resources sufficient to implement supports and interventions? If not, how might you identify additional resources for the short term?
 - c. Are there interventions that need to be modified or replaced?



STEP 7: Evaluate and Refine the EWIMS Process

During Step 7, the EWIMS team reflects on the EWIMS implementation process during the school year. The team discusses what worked well, what needs to be modified, and what needs to be replaced or eliminated. Each decision is supported by data and evidence and documented to improve implementation moving forward. At the end of the school year, the current EWIMS team, in collaboration with school and district leadership, should identify needed adjustments to team membership. Identifying new team members early will allow for them to receive training on using the early warning data tool and the implementation process during the summer.

The key activities for Step 7 are as follows:

- Review implementation of the EWIMS process holistically.
- Establish recommendations for improving the EWIMS process moving forward.
- Establish the EWIMS team for next year, including roles, responsibilities, and integration with other teams.

Anticipated Outputs for Step 7

1. A shared understanding of the EWIMS process implementation strengths and challenges
2. Clear recommendations for improving the EWIMS process
3. An established EWIMS team for the following school year, consisting of diverse team members with a clear understanding of the process and their roles

At a minimum, you should complete Step 7 annually, but it can be revisited throughout the school year to inform a cycle of continuous improvement.

Key Activities

Review EWIMS Process Implementation

At least annually, the EWIMS team meets to discuss implementation of the EWIMS process. During this time, discuss each step of the EWIMS implementation. For each step, the conversation includes five questions:

- What went well?
- What areas need to be improved or modified?
- What should be replaced or eliminated?

- What have we learned about implementing EWIMS or where have we implemented the EWIMS process well? What are areas for continued growth or learning?
- How well have we reflected the core principles of student success systems in the work of the team?

For example, in reviewing Step 1, the team reviews the composition of the team and discusses if any changes should be made for next year (e.g., were important voices or perspectives missing from the EWIMS team this year?). The team also might discuss how communication between the EWIMS team and other members of the school community went this year, including systems and structures that worked well and how to further strengthen communication moving forward. To inform this conversation, the EWIMS team may want to gather input from teachers, parents/guardians, interventionists, and involved community organizations about their perspectives on the EWIMS process. For example, the team may want to administer a survey to the entire staff, the students, and the parents/guardians of students who were involved in the EWIMS process to understand how EWIMS supported student progress and engaged the school community.

An additional, optional resource for EWIMS teams to use to deepen reflection during this step is the [GRAD Partnership Student Success Systems Team Reflection Tool](#).

Establish Recommendations for Moving Forward

Once the team has discussed what went well and areas for improvement, the team should come to a consensus on recommendations for moving forward. It is important that this conversation is well documented. Once everyone returns to school in the fall, the team should revisit the recommendations agreed on during the summer to ensure that they remain appropriate. Team decisions will vary by implementation step and depend on school needs but may include modifying the team meeting process for greater efficiency, changing the composition of the team to ensure that different roles and cultural and linguistic backgrounds are represented, expanding the availability of effective interventions by training more staff, adding an intervention to address student needs, eliminating an ineffective intervention, and many more.

Plan the EWIMS Team for Next Year

Where possible, it is best for EWIMS team members to continue in their role from year to year. However, during the review process, the team may discuss some necessary changes to the team's composition. This discussion will be especially relevant if there is turnover or changes in roles for members of the team. When reviewing team composition, make sure that the team for next year will consist of members who have (a) the authority to make decisions, (b)

expertise in analyzing student data, (c) knowledge of diverse students plus available interventions and resources at the school, and (d) student-centered mindsets.

If new staff join the EWIMS team, make sure that they receive training during the summer on the team's purpose, equitable practices, and navigating and using the early warning data tool and the EWIMS implementation process. This will ensure that all team members will be ready to review incoming student data when the team first convenes in the fall.

GUIDING QUESTIONS FOR STEP 7

The guiding questions for Step 7 encourage EWIMS teams to reflect on the six previous steps.

Overall

1. What were the biggest challenges the team faced? How were you able to address and learn from these challenges?
2. What were the biggest successes? How can you leverage those going forward?
3. How did you incorporate supportive community relationships; holistic real-time actionable data; an adaptive analysis, response, and improvement system; and a shared set of student-centered mindsets into the EWIMS work? Which component do you think is strongest? Where can you focus on improvement next year?
4. What advice do you have for future EWIMS teams when considering the successes and challenges that EWIMS team members experienced and addressed?
5. What made the team's job easier (and what made it harder than necessary)? What changes could make the team's job even easier?

STEP 1—Establish Roles and Responsibilities

1. Who will continue to be on the EWIMS team? (Note: Some individuals should overlap from year to year to ensure continuity across time.) Who will leave? Provide the rationale for your responses.
2. Are there groups or individuals who need to be on the EWIMS team? Provide the rationale for your response.
3. How did the team meeting schedule, norms, and operating procedures support team success? Are there practices that should be revisited or adjusted for greater success going forward?

STEP 2—Use an Early Warning Data Tool

1. How did the tool support team activities?
2. How would you change or improve use of the tool?

STEP 3—Review Early Warning Data

1. What went well in reviewing early warning data reports and data displays?
2. How would you improve the tool's reports and their use?

STEP 4—Interpret Early Warning Data

1. What additional data were important for identifying underlying causes for students displaying symptoms of risk?
2. How were human insights used to inform data analysis? Are there groups or individuals who should be represented in the process moving forward?
3. What advice would you give to someone who is new to analyzing the data?
4. Were there any unintended (negative or positive) consequences for students or staff because of the type of information that was used (or not used) during data analysis? Note the consequences and provide the contextual backdrop for them.
5. Did you learn any new strategies that supported the interpretation of the early warning data?

STEP 5—Assign and Provide Interventions

1. What existing strategies ensured that students got back on track or were headed in that direction?
2. Did your analysis of the early warning data and your interpretation techniques allow you to match students to appropriate interventions? Why?

STEP 6—Monitor Students and Interventions

1. How did existing supports and interventions for students who were displaying symptoms of risk help students get back on track or get headed in that direction? Were any strategies better suited for groups of students (based on their needs)?
2. Which strategies are still needed to support students as they get back on track for graduation?



References

- Allensworth, E. M., & Easton, J. Q. (2005). *The on-track indicator as a predictor of high school graduation*. University of Chicago, Consortium on Chicago School Research.
<https://consortium.uchicago.edu/sites/default/files/2018-10/p78.pdf>
- Allensworth, E. M., & Easton, J. Q. (2007). *What matters for staying on-track and graduating in Chicago public high schools: A close look at course grades, failures, and attendance in the freshman year*. University of Chicago, Consortium on Chicago School Research.
<https://consortium.uchicago.edu/publications/what-matters-staying-track-and-graduating-chicago-public-schools>
- Allensworth, E., Gwynne, J. A., de la Torre, M., & Moore, P. T. (2014). *Looking forward to high school and college: Middle grade indicators of readiness in Chicago Public Schools*. University of Chicago, Consortium on Chicago School Research.
<https://consortium.uchicago.edu/publications/looking-forward-high-school-and-college-middle-grade-indicators-readiness-chicago>
- Balfanz, R. (2009). *Putting middle grades students on the graduation path: A policy and practice brief*. Johns Hopkins University, Everyone Graduates Center.
https://www.amle.org/portals/0/pdf/articles/policy_brief_balfanz.pdf
- Balfanz, R., & Byrnes, V. (2019). Early warning indicators and intervention systems: State of the field. In J. A. Fredricks, A. L. Reschly, & S. L. Christenson (Eds.), *Handbook of student engagement interventions* (pp. 45–55). Academic Press.
- Bernhardt, V. L. (2004). *Data analysis for continuous school improvement* (2nd ed.). Eye on Education.
- Chamberlain, R., Scales, P. C., & Sethi, J. (2020). Competing discourses of power in teachers' stories of challenging relationships with students. *Power and Education*, 12(2), 139–156.
<https://doi.org/10.1177/1757743820931118>
- Dane, A. V., & Schneider, B. H. (1998). Program integrity in primary and early secondary prevention: Are implementation effects out of control? *Clinical Psychology Review*, 18(1), 23–45.

- Dynarski, M., Clarke, L., Cobb, B., Finn, J., Rumberger, R., & Smink, J. (2008). *Dropout prevention: A practice guide* (NCEE 2008-4025). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/dp_pg_090308.pdf
- Faria, A.-M., Sorensen, N., Heppen, J., Bowdon, J., Taylor, S., Eisner, R., & Foster, S. (2017). *Getting students on track for graduation: Impacts of the Early Warning Intervention and Monitoring System after one year* (REL 2017–272). DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest. https://ies.ed.gov/ncee/edlabs/regions/midwest/pdf/REL_2017272.pdf
- GRAD Partnership. (n.d.). *Student success systems: Advancing student success*. <https://www.gradpartnership.org/student-success-systems/>
- Grayson, J. L., & Alvarez, H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *Teaching and Teacher Education*, 24(5), 1349–1363. <https://doi.org/10.1016/j.tate.2007.06.005>
- Gresham, F. M., Gansle, K. A., Noell, G. H., Cohen, S., & Rosenblum, S. (1993). Treatment integrity of school-based behavioral intervention studies: 1980–1990. *School Psychology Review*, 22(2), 245–272.
- Heppen, J. B., & Therriault, S. B. (2008). *Developing early warning systems to identify potential high school dropouts* (Issue Brief). American Institutes for Research, National High School Center. <https://files.eric.ed.gov/fulltext/ED521558.pdf>
- Immordino-Yang, M. H., Darling-Hammond, L., & Krone, C. R. (2019). Nurturing nature: How brain development is inherently social and emotional, and what this means for education. *Educational Psychologist*, 54(3), 185–204. <https://doi.org/10.1080/00461520.2019.1633924>
- Jerald, C. D. (2006). *Identifying potential dropouts: Key lessons for building an early warning data system*. Achieve & Jobs for the Future. <https://www.achieve.org/files/Identifying-Potential-Dropouts.pdf>
- Johns Hopkins University. (2012). *Using data to keep all students on track to graduation: Team playbook*. Johns Hopkins University, School of Education, and Center for Social Organization of Schools. http://new.every1graduates.org/wp-content/uploads/2012/11/Team_Playbook.pdf

- Kennelly, L., & Monrad, M. (2007). *Approaches to dropout prevention: Heeding early warning signs with appropriate interventions*. American Institutes for Research, National High School Center. <http://files.eric.ed.gov/fulltext/ED499009.pdf>
- Li, Y., Scala, J., Gerdeman, D., & Blumenthal, D. (2016). *District guide for creating indicators for early warning systems*. Regional Educational Laboratory West at WestEd. <https://www.air.org/sites/default/files/downloads/report/District-Guide-for-Creating-Indicators-for-Early-Warning-Systems-2016.pdf>
- Love, N. (2000). *Using data, getting results: Collaborative inquiry for school-based mathematics and science reform*. Regional Alliance for Mathematics and Science Reform at TERC.
- Mac Iver, M. A., & Balfanz, R. (2022). *Continuous improvement in high schools: Helping more students succeed*. Harvard Education Press.
- Mac Iver, M. A., Stein, M. L., Davis, M. H., Balfanz, R. W., & Fox, J. H. (2019). An efficacy study of a ninth-grade early warning indicator intervention. *Journal of Research on Educational Effectiveness*, 12(3), 363–390. <https://doi.org/10.1080/19345747.2019.1615156>
- Metz, A., & Louison, L. (2019). *The hexagon tool: Exploring content*. University of North Carolina at Chapel Hill, National Implementation Research Network, Frank Porter Graham Childhood Development Institute.
- National Center on Intensive Intervention. (2019). *Considerations for effective implementation: 5 elements of fidelity*. <https://intensiveintervention.org/resource/five-elements-fidelity>
- Neild, R. C., Balfanz, R., & Herzog, L. (2007). An early warning system. *Educational Leadership*, 65(2), 28–33.
- O’Donnell, C. L. (2008). Defining, conceptualizing, and measuring fidelity of implementation and its relationship to outcomes in K–12 curriculum intervention research. *Review of Educational Research*, 78(1), 33–84.
- Porter, S. C., Jackson, C. K., Kiguel, S., & Easton, J. Q. (2023). *Investing in adolescents: High school climate and organizational context shape student development and educational attainment*. University of Chicago Consortium on School Research. <https://consortium.uchicago.edu/sites/default/files/2023-04/Investing%20in%20Adolescents-Apr%202023-Consortium.pdf>

- Rumberger, R., Addis, H., Allensworth, E., Balfanz, R., Bruch, J., Dillon, E., Duardo, D., Dynarski, M., Furgeson, J., Jayanthi, M., Newman-Gonchar, R., Place, K., & Tuttle, C. (2017). *Preventing dropout in secondary schools* (NCEE 2017-4028). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/wwc_dropout_092617.pdf
- Scales, R. (2013). Examining the sustainability of pre-service teachers' visions of literacy instruction in their practice. *Professional Educator*, 37(2).
<https://eric.ed.gov/?id=EJ1025685>
- Scales, P. C., Roehlkepartain, E. C., & Houlberg, B. J. (2022). *The elements of Developmental Relationships: A review of selected research underlying the framework*. Search Institute.
<https://www.search-institute.org/wp-content/uploads/2022/09/ElementsofDevelopmentalRelationships-FINAL.pdf>
- Schaffer, G. E., & Bender, S. L. (2022). *Implementing universal social-emotional programs: A step-by-step guide for schools*. Taylor & Francis.
- Search Institute. (2023). *The developmental relationships survey* [Website].
<https://www.search-institute.org/developmental-relationships-survey/>
- Seeskin, A., Massion, T., and Usher, A. (2022). *Elementary on-track: Elementary school students' grades, attendance, and future outcomes*. University of Chicago Consortium on School Research. <https://consortium.uchicago.edu/sites/default/files/2023-04/Elementary%20On-Track-Oct2022-ConsortiumAndTT.pdf>
- Seeskin, A., Nagaoka, J., & Mahaffie, S. (2018). *Hidden risk: Changes in GPA across the transition to high school*. University of Chicago Consortium on School Research.
<https://consortium.uchicago.edu/sites/default/files/2019-01/Hidden%20Risk%20Changes%20in-Oct2018-Consortium.pdf>
- Stuit, D., O'Cummings, M., Norbury, H., Heppen, J., Dhillion, S., Lindsay, J., & Zhu, B. (2016). *Identifying early warning indicators in three Ohio school districts* (REL 2016–118). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest.
https://ies.ed.gov/ncee/edlabs/regions/midwest/pdf/REL_2016118.pdf

- Syvertsen, A. K., Scales, P. C., Chavez, C., Roehlkepartain, E. C., & Roskopf, J. (2023). *Developmental relationships: A validity argument for research and practice* [Manuscript submitted for publication].
- Therriault, S. B., O’Cummings, M., Heppen, J., Yerhot, L., & Scala, J. (2013). *High school early warning intervention monitoring system implementation guide: For use with the National High School Center’s early warning system high school tool*. American Institutes for Research, National High School Center. <https://www.air.org/sites/default/files/High-School-Early-Warning-Intervention-Implementation-Guide-March-2013.pdf>

Appendices

Appendix A. EWIMS Glossary

Appendix B. Supporting Documents

- Tool 1: EWIMS Action Planning Tool
- Tool 2: Student Support and Intervention Mapping
- Tool 3: Identifying New Interventions

Appendix C. Student Intervention Implementation Log

Appendix D. Long-Term Guiding Questions

Appendix A. EWIMS Glossary

Term	Definition
Early warning indicator	Early warning indicators predict educational attainment (e.g., high school graduation) well in advance of the outcome. They identify students in need of intervention, systematically guide school improvement, and hold schools accountable for students' outcomes. early warning data tools may vary in the exact indicators used but generally include, at a minimum, chronic absence, course performance, grade point average, behavioral problems, and off-track indicators.
Early Warning Intervention and Monitoring System (EWIMS)	EWIMS is an AIR-created systematic approach that uses data to (a) identify students who are in danger of not graduating on time, (b) assign students who are showing symptoms of risk to interventions, and (c) monitor students' response to the intervention(s). It is a seven-step process supported by an early warning data tool.
Early Warning Data Tool	A platform that uses local, historical student data and research-based predictive analytics to accurately predict which students are in danger of missing key educational milestones, including graduating from high school, so that educators can intervene early and get students back on track.
Evidence based	Practices, policies, or recommendations that are supported by studies that meet What Works Clearinghouse (WWC) design standards with or without reservations.
Intervention	A strategy that targets specific skill or content gaps of students who are struggling. Interventions can target academics, behavior, social-emotional skills, or attendance. Formal interventions could be programs; many schools use strategies as interventions. Knowing the evidence base of the strategy or more formal interventions (and if the research was conducted with a similar student population to yours) can be important in terms of the results achieved.
Interventionist	An individual within a school who provides supplemental (Tier 2) or intensive (Tier 3) intervention supports to students who are struggling in either a small-group or one-on-one setting. An intervention may be academic, behavioral, or social-emotional, depending on each student's specific needs.
Locally validated indicators	Early warning indicators can vary in their predictive power across different grade levels and districts. Your early warning tool should include indicators that most accurately predict the risk of not graduating from high school using your own data. If you are interested in learning more about validating your own indicators, see https://www.air.org/resource/district-guide-creating-indicators-early-warning-systems .
Multi-tiered system of supports	A multi-tiered system of supports (MTSS) provides a framework that integrates data and instruction within a multi-level prevention system to maximize student achievement and support students' social needs, emotional needs, and positive behavior.

Term	Definition
Predictive analytics	Early warning tools may employ high-impact algorithms to create a predictive model based on your district’s historical data and research-based indicators to accurately identify students who are in danger of not graduating on time.
Progress monitoring	A component of a Multi-Tiered System of Supports (MTSS) to assess responsiveness to the intervention. This process includes developing a progress monitoring plan that outlines a progress monitoring tool, a student goal, and the frequency of data collection and review. During delivery of the intervention, educators should collect and graph progress monitoring data and evaluate these data against the student’s goal to determine if the student is making sufficient progress. For more information, see https://intensiveintervention.org/intensive-intervention/progress-monitor .
Student success system	Student success systems are a way of organizing a school community to better support the academic progress, career and college transitions, and well-being of all students. Student success systems help educators and communities build a sense of belonging and school connection among students, address schoolwide achievement patterns, and meet individual student needs by focusing on relationships, actionable data, and evidence-based practices. See the GRAD Partnership for more information on student success systems.
Threshold	Each early warning indicator has a threshold that must be exceeded for a student to be considered in danger of not graduating from high school on time. These indicators and thresholds have been validated through research.

Appendix B. Supporting Documents

- [Tool 1: EWIMS Action Planning Tool \(Used in Steps 1 and 7\)](#)
- [Tool 2: Student Support and Intervention Mapping \(Used in Steps 1, 5, and 6\)](#)
- [Tool 3: Identifying New Interventions \(Used in Steps 5 and 7\)](#)

Tool 1: EWIMS Action Planning Tool (Used in Steps 1 and 7)

Directions: The school or district EWIMS team can use this tool to begin planning and implementing an EWS to identify students who may be in danger of dropping out of high school.

SCHOOL/DISTRICT: _____

DATE: _____

Step	What do you have in place?	What do you need?	What are your next steps? (Assign individuals to be responsible for these actions.)
1. Establish roles and responsibilities			
2. Use an early warning data tool			
3. Review early warning data			
4. Interpret early warning data			
5. Assign and provide interventions			
6. Monitor students and interventions			
7. Evaluate and refine the EWIMS process			

Tool 2: Student Support and Intervention Mapping (Used in Steps 1, 5, and 6)

Directions: Complete the following matrices to catalog interventions and supports. Include the availability (e.g., the number of students who can be served at one time, resource limits) and details (e.g., the focus of the intervention, the evidence base).

	TIER 1	Availability	Details	TIER 2	Availability	Details	TIER 3	Availability	Details
Attendance	<i>ex. automatic calls</i>	<i>All students</i>	<i>Robocalls sent daily at 10 a.m. to all absent students and their families</i>	<i>Peer wake-up calls</i>	<i>100 students per 2 weeks</i>	<i>Student council members (10) can be assigned up to 10 students to text each morning for 2 weeks</i>	<i>Parent conference</i>	<i>As needed</i>	<i>Dean will set up parent attendance conference</i>
Behavior	<i>ex. schoolwide expectations from PBIS</i>	<i>All students</i>	<i>Students can earn PBIS points and qualify for weekly raffles and monthly assemblies</i>	<i>Lunch group</i>	<i>40 students per 6-week session</i>	<i>Each school social worker (2) runs 2 groups of 10 students for 6-week sessions</i>	<i>Referral to in-school or out of school counseling</i>	<i>In school: 20 Out of school: unlimited</i>	<i>See school counselor</i>
Course performance	<i>ex. study hall with math teacher</i>	<i>30 students</i>	<i>Available from 3:30 to 4:30 p.m. in Room 307</i>	<i>Tutoring</i>	<i>5 aides available</i>	<i>1:1 tutoring in math or ELA with aides</i>	<i>Individualized online math program</i>	<i>100 licenses</i>	<i>Math teachers can refer students to dean</i>

Tool 3: Identifying New Interventions (Used in Steps 5 and 7)

The following resources are free. They present information about academic, behavioral, social-emotional, and attendance intervention programs, including target student populations, evidence that supports the use of a specific intervention, and how to implement the interventions.

- [National Center on Intensive Intervention Academic Intervention Tools Chart](#). This tools chart reviews studies about academic intervention programs, rating the technical rigor of the study: study quality, study results, intensity, and additional research.
- [National Center on Intensive Intervention Behavioral Intervention Tools Chart](#). This tools chart reviews studies about behavioral intervention programs, rating the technical rigor of study quality, study results, intensity, and additional research.
- [WWC](#). The WWC has created intervention reports and practice guides that summarize the results of WWC reviews.
- [Evidence for the Every Student Succeeds Act \(ESSA\)](#). This website provides current and reliable information on intervention programs that meet ESSA evidence standards in reading, mathematics, social-emotional learning, attendance, science, and writing for K–12 programs.
- [Evidence Based Intervention \(EBI\) Network](#). The EBI Network provides guidance in the selection and implementation of EBI in classrooms.

Appendix C. Student Intervention Implementation Log

The intervention log is available here:

https://intensiveintervention.org/sites/default/files/DBI_Weekly_Log_508.pdf.

Appendix D. Long-Term Guiding Questions

Step 1

- What are the key goals of the EWIMS team? How are they measured?
- What are the most significant challenges facing the EWIMS team? How will the team address those challenges?
- What are the important lessons learned? How will these lessons inform future work?
- What, if any, additional resources are needed?
- What types of professional development for team members or broader school staff should be planned to continue to build the capacity of the EWIMS team and other key support staff?

Step 2

- Which types of reports from the early warning data tool are most useful for informing school and district policy decisions?
- If not already connected, how can you streamline the data entry and import process or connect it to existing data systems?
- If not already connected, how can the process of assigning interventions be connected to the existing early warning data tool?
- How can you use data from multiple years to validate local risk indicators, evaluate the impact of existing interventions, and identify persistent school- or district-level challenges?

Step 3

- Do students who were identified for displaying symptoms of risk in a previous school year continue to be identified in the current school year? If the answer is “yes,” are they identified for the same or different reasons?
- Do students who are identified for displaying symptoms of risk early in the school year continue to be identified later in the year? If so, are they identified for the same or different reasons?
- Do the number and percentage of students who are identified for any indicator and for each indicator change from year to year?

Step 4

- Are there any additional stakeholders (e.g., community members, wraparound service providers, law enforcement representatives, court representatives, human services representatives, business representatives, local policymakers, parents, teachers, students, guidance counselors, central office staff) who should be included in the long-term discussions about the way to systematically address the prevalence of risk factors displayed by students in the school? How will these stakeholders be engaged? How will buy-in be promoted? How will you ensure student confidentiality?
- What can the EWIMS team do to ensure that it can easily obtain additional data that are important for identifying underlying root causes? What further information is necessary to get a better picture? What types of information are difficult to obtain? How can you make that information more accessible?
- For students who do not graduate, what were the reasons or underlying root causes? What resources would the district need to locate and survey or interview some of these students?
- Reflecting on your data and EWIMS experiences. do any social justice inequities need to be addressed? If so, how will you address those?

Step 5

- Which supports and interventions appear to be the most successful at helping students who are displaying symptoms of risk to get back on track? How do you know that those approaches are most successful?
- How will you identify promising supports and interventions to address unmet student needs (e.g., attend conferences, purchase interventions, ask or visit other schools and districts, form study teams, review literature, seek help from regional or state agencies)?
- Do trends in the data consistently identify the need for similar types of supports and interventions? How will school and district staff be included as part of the EWIMS efforts? How will you communicate this information to them? How will they be involved in decision making, implementation, and monitoring?
- What school and district policies need to be in place to improve the implementation of support and intervention strategies?
- What resources (e.g., time, materials, personnel, funding) are necessary to support interventions? What resources are available to support the identified students? If the available resources are not sufficient, how will you obtain additional resources (e.g., cost sharing across programs, grants, other funding sources)? How will you distribute the resources among groups and individual students based on their needs?

- What, if any, organizational or structural changes are needed in the school or district to support students?
- How will you communicate the results of this work to critical stakeholders (e.g., parents and students, teachers, administrators, communities, educators outside your district, the state department of education)?
- How will students and parents be included as part of the EWIMS efforts? How will you communicate this information to them?
- How will you celebrate the successes of the program and of individual students?
- Looking back at your data, should any Tier 1 supports (or universal supports) be implemented to help a broader group of students?
- Across several years, do trends in the data consistently identify the need for similar types of interventions? Do school or district policies and strategies exist that may address these needs?

Step 6

- What interventions seem to get students back on track consistently? Are those interventions available equitably across the district?
- Across several years, how effective are the existing interventions for improving outcomes for students who are assigned to them? Are some interventions better for addressing the needs of students with certain types of risk indicators or other underlying issues?
- Which interventions do not seem to work for students? How might these interventions be improved? Should these interventions be eliminated?
- How will you communicate the results of this work to critical stakeholders (e.g., parents, students, teachers, administrators, community members, educators outside your district, the state department of education)?
- What schoolwide policies need to be in place to improve the implementation of student support and intervention strategies?
- Are sufficient resources available to implement supports and interventions now that you have an efficient process for identifying needs? If not, how might you identify additional resources for the long term?
- Do you think the school or district needs any organizational or structural changes to support students? If so, what change(s) do you recommend?

Step 7

- What policies, organizational systems, or approaches at the school and district levels facilitate more effective supports and interventions?
- By looking at multiple years of data for the same class(es) or cohort(s) of students across time, how does the school or district validate the early warning indicators of risk?
- How many or what percentage of students who were not identified as showing signs of risk wound up not graduating with their cohort or dropping out?
- How many or what percentage of students who were identified as showing signs of risk graduated on time?
- Do the percentages show any trends within the district or in an individual school? If trends are apparent, do the trends continue across time?
- Do the early warning data and the EWIMS process reveal systemic problems in the district or school (e.g., risk factors that are prevalent from year to year, schools with persistent problems, groups of students who are consistently identified)?
- Are there any social justice implications from the EWIMS work?
- Are there lessons learned that the EWIMS team should communicate with broader audiences, including school staff, students and families, and community organizations?

About the American Institutes for Research®

Established in 1946, the American Institutes for Research® (AIR®) is a nonpartisan, not-for-profit organization that conducts behavioral and social science research and delivers technical assistance both domestically and internationally in the areas of education, health, and the workforce. AIR's work is driven by its mission to generate and use rigorous evidence that contributes to a better, more equitable world. With headquarters in Arlington, Virginia, AIR has offices across the U.S. and abroad. For more information, visit [AIR.ORG](https://www.air.org).



AIR® Headquarters

1400 Crystal Drive, 10th Floor
Arlington, VA 22202-3289
+1.202.403.5000 | [AIR.ORG](https://www.air.org)

Notice of Trademark: "American Institutes for Research" and "AIR" are registered trademarks. All other brand, product, or company names are trademarks or registered trademarks of their respective owners.

Copyright © 2023 American Institutes for Research®. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, website display, or other electronic or mechanical methods, without the prior written permission of the American Institutes for Research. For permission requests, please use the Contact Us form on [AIR.ORG](https://www.air.org).