The intent of Pathways to Adult Success (PAS) is to improve the future for America's youth through education and contribute to a stronger foundation for America's economy and community life.

The PAS initiative is rooted in the long-standing research and community-building mission of the Center for Social Organization of Schools (CSOS), a unit within the Johns Hopkins University (JHU) School of Education, and previously a unit within JHU's Krieger School of Arts and Sciences.

CSOS was born in the aftermath of the 1954 Supreme Court decision Brown v. Board of Education, under the leadership of JHU sociology professor James Coleman. With his team of graduate students (including future CSOS director Jim McPartland), Coleman laid the groundwork for JHU's ground-breaking work illuminating the relationship of race, poverty, and educational attainment, as well as pragmatic spin-offs into direct services to boost students' progress in schools and future outcomes.

Pathways to Adult Success (PAS) is the latest of CSOS's research and outreach endeavors. With PAS we seek to refine a set of indicators — and the thinking — that help educators identify the students most likely to need help to continue on a path to success, and the help most suited to support them.

Through PAS, we intend, with your partnership, to identify, refine, and communicate descriptors and processes for indicator and response systems that enable caring adults to intervene at crucial points in students' lives, and to guide and keep them on track towards a bright future as adults.

We invite you to join our work.

FROM THE BILL & MELINDA GATES FOUNDATION

Over the past decade, we've seen schools and systems make tremendous progress using indicators, such as Freshman On-Track and the ABCs (attendance, behavior and course-passing/credit accrual), to foster continuous improvement and increase the number of students earning a high school diploma.

The Bill & Melinda Gates Foundation is delighted to support this informal network of practitioners and researchers in taking the next steps in building effective indicator and response systems.

In particular, we're excited about the potential to accelerate the development of new approaches and implementation practices through work together across a new and more formalized national network. We also hope that this work will enable the field to more quickly learn and develop consensus, leading to increases in students' postsecondary access, preparation, and success in the coming decade, and thus more equitable opportunities and outcomes.

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PATHWAYS to ADULT SUCCESS

EWS 2.0
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PATHWAYS TO ADULT SUCCESS AT A GLANCE

THE KEY ELEMENTS OF PATHWAYS TO ADULT SUCCESS (PAS)

PAS is a system to help schools and communities provide the support middle and high school students need to graduate and then succeed in postsecondary learning of some type toward a bachelor’s or associate degree, industry certification, or other meaningful career training. Early Warning Systems 2.0 (EWS 2.0) is the heart of the PAS system, allowing schools to monitor students’ paths using specific indicators of progress, to gather and analyze data, and to make decisions to provide more support for students. Important solutions must be pursued through partnerships that reach outward from the school — into the community, postsecondary institutions, businesses and nonprofit organizations, all working with local students and their families. PAS also offers an online library of How-To’s, providing educators and stakeholders access to a variety of practical resources to help them develop systems to improve students’ postsecondary preparation.
Pathways to Adult Success (PAS) is an effort by volunteer representatives from a diverse set of school districts, state departments of education, nonprofit organizations, higher education institutions, businesses, and community organizations. Its aim is to collectively determine how to support, enable, and accelerate the required changes in beliefs, practices, and structures to enable all students to graduate from high school with a clear, strong, and supported pathway to postsecondary success.

**The Essential Question for our work:**

What do today’s youth need from their schools and communities to support them toward becoming productive adults in a fast-moving society and constantly-evolving local and global environment — in which some things have remained constant over time and other circumstances have changed dramatically?

**The reason for this cross-sector work to improve students’ Pathways to Adult Success (PAS):**

The journey from adolescence to adult success has changed considerably over the past quarter century and continues to evolve. Once, a high school diploma signified that a young adult had acquired the formal education necessary to succeed in the workplace and society. Now the successful completion of postsecondary education or career training beyond a high school diploma is required for students to have similar odds of adult success.

This fact profoundly changes public PreK – 12 schools’ role in preparing all students for their future. In short, the mission of high schools must transform from being the end of formal public education for many, to become the launching pad for further and more tailored schooling and training for all. This change in mission requires substantial and widespread shifts in practices and structures at many levels and in many different ways. These changes need to occur:

- across the PreK – 12 public education system
- in how higher education institutions and employers work with the PreK – 12 school system, and how these partners change to help strengthen the pathways from PreK – 12 schooling to adult success
- in the role community institutions and the broader community around schools play in supporting youth success
EWS 2.0: BUILDING PATHWAYS TO ADULT SUCCESS

Early Warning System (EWS) using predictive indicators of student success were developed in the first decade of the century and focused on dropout prevention and raising high school graduation rates. The core idea of EWS is as follows: First, monitor all students’ progress using predictive indicators of key outcomes (high school graduation, post secondary success etc.). Teams of adults then combine this data with their knowledge of students to devise effective actions for the greatest impact by identifying the most strategic point of action, whether at the individual, class, grade, or school level. Finally, the selected actions’ outcome is monitored, and the action adjusted as needed, until students are back on track or kept on track to the desired outcome.

Over the course of a year, through multiple face-to-face and virtual meetings, the PAS team drew on the wisdom of three expert workgroups on DATA, INDICATORS, and ACTIONS, composed of individuals with EWS experience, to create a shared understanding of the evidence base, so that field experience of EWS could be extended and adapted to support student progress not only to high school graduation, but also to postsecondary success. This process resulted in EWS 2.0.

On the following pages, we provide details for each step in the EWS 2.0 system: using the best indicators for student success, engaging in in-depth analysis of the data and results, and then strategically selecting, applying, and monitoring effective strategic actions to support student progress through secondary and postsecondary schooling. We also detail how data systems can best be organized to enable schools and communities to build their own locally appropriate forms of EWS 2.0. Finally, we share the wisdom of PAS collaborators on ways teams of adults working together to advance student success can make EWS 2.0 useful and effective.
In this section, we present

- workgroup guidance on standards for predictive indicators
- the emerging understanding of how the ABC (attendance, behavior, and course performance) EWS indicators used for high school graduation can be extended to enable progress monitoring toward college readiness and persistence
- workgroup guidance for EWS 2.0 College Readiness and Persistence Indicators.

We conclude the indicator section by discussing emerging learnings around social-emotional behaviors and beliefs and student success.

Students typically send strong signals to educators about whether they are on track to graduate high school ready to continue their education. Valid indicators help us identify the most important signals. PAS workgroups established the following standards to provide guidance on identifying the most useful predictive indicators to promote student and adult success.

- Indicators are quantifiable measures of behaviors, skills, and characteristics that are highly predictive of students’ being on track for high school graduation, postsecondary readiness, and adult success.
- Indicators are most useful when they directly measure behaviors or outcomes that are important to students’ well-being and progress in school and training. This makes them actionable.
- Indicator data can be obtained easily and regularly.
  ~ Collecting, recording, and reporting the indicators does not require substantially more effort from school-level personnel than is already required by federal and state laws and regulations, and district policies.
- Indicators are timely.
  ~ Patterns and trends can be quickly observed and acted on; outcomes of actions can be promptly monitored, enabling rapid revision.
- Indicators are reliable.
  ~ It has been demonstrated that they send dependable signals, over time and through repeated statistical analysis of large-scale, longitudinal databases in different settings.
- Indicators point to underlying conditions that are “malleable” or modifiable.
- In general, a few good indicators are more actionable than many.
- Indicators can serve both a formative function (leading to immediate actions) and a summative function (leading to monthly, quarterly, mid-year, or end-of-year redesign of action systems). Essentially, however, indicators lead to actions.
  ~ Thresholds that indicate the type of action needed — indicating whether to take action now, not yet, or not at all — may vary by context, but will fall within a numerical range established by evidence.
• New indicators, beyond those already in use and meeting the above criteria, must also:
  ~ Identify and prioritize substantially more youth in need of support than are identified by the existing indicators, and/or
  ~ Identify behaviors, skills, and characteristics that support adult success and are not captured by existing indicators; and
  ~ Lead to new solutions.
The ABCs — Attendance, Behavior, and Course Performance — have proven to be the most valid and reliable indicators that show when students are on track toward high school graduation. Multiple research studies in different locations have shown that specific indicator levels (highlighted in the High School Graduation row in the table below) are consistently predictive of students’ likelihood of high school graduation. However, these general guides are refined based on a school’s and district’s own analysis.

Emerging research also suggests ways the ABCs can be extended to provide valid and reliable signals as to whether students are on track to succeed in four-year colleges. Our current knowledge of important thresholds for students’ college readiness and persistence ABC indicators are shown on the bottom row of the table. Current knowledge is not sufficient to provide detailed guidance on indicators of success in community college, or workforce readiness or readiness for industry-linked certification programs.

<table>
<thead>
<tr>
<th>ABC ON-TRACK INDICATORS</th>
<th>ATTENDANCE</th>
<th>BEHAVIOR IN SCHOOL</th>
<th>COURSE PERFORMANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH SCHOOL GRADUATION</td>
<td>Above 90%</td>
<td>No consistent indicators of major or minor behavior incidents</td>
<td>Pass core courses</td>
</tr>
<tr>
<td>COLLEGE READINESS &amp; PERSISTENCE</td>
<td>Mid-90s or higher</td>
<td>Agency/effort</td>
<td>GPA for core courses 2.7 - 3.2 (depending on local context)</td>
</tr>
</tbody>
</table>
How the ABCs can indicate whether students are on track for college readiness and persistence:

**ATTENDANCE**
Current research shows that students who attend high school nearly every day have the strongest track record of college persistence. Students who attend high school 97 percent of the time or more have the highest odds of college degree attainment, particularly for four-year degrees.

There is also evidence that students who attend less than 95 percent of the time and miss 10 or more days of school begin to see diminishing odds of college degree attainment. Some schools and districts may initially want to see attendance between 95 and 97 percent as an “alert zone” in which students are more closely monitored and other indicators examined, but not as a signal for the school to take immediate action to improve college readiness.

**BEHAVIOR**
We continue to deepen our understanding of social-emotional learning measures and students’ likelihood of college success. The behavior category in the ABC indicators is where states, districts, and schools can employ social-emotional indicators as they become sufficiently reliable and valid.

In the meantime, all available evidence suggests that for students to succeed in college or career training, they need to develop the ability to self-manage their learning in such settings.

Thus, in the absence of established indicators, observation and assessment of students’ success in self-managing their learning could prove an effective means to monitor and support the development of behaviors important for their eventual college and career success.

**COURSE PERFORMANCE**
While this EWS indicator for high school graduation is whether students are passing core academic courses (English and mathematics in middle school, and required credit bearing classes in high school), GPA or grade-point average is the most predictive indicator of college readiness and persistence.

Research suggests that a B or higher average or 3.0 GPA for core academic courses is a dependable threshold indicating how likely students are to succeed in college studies. Studies at the local and state levels, however, have identified GPA thresholds ranging from 2.7 to 3.2 as being the most predictive of college success. This shows that districts and states should conduct their own analysis and set levels appropriate for their students. Such analysis, however, is not always possible, so PAS recommends using a GPA of 3.0 or a B average as the starting point.

Just as with attendance, districts and schools may want to first more closely monitor students near the cut point — i.e., those with 2.7 GPAs — and consider how they fare on other ABC indicators before devoting resources to improve their odds of college success.
1. Continue to use a limited number of valid, powerful indicators. Resist the temptation to add indicators simply because the outcome seems of some value to postsecondary success. Doing so is likely to add complexity without improving indicators’ usefulness.

2. Extend the most proven EWS for high school graduation indicators (the ABCs of Attendance, Behavior, and Course Performance) to predict students’ on-track status for college readiness and persistence (see guidance on pages 8-9).

3. Add two additional types of indicators to effectively monitor whether youth are on track for college success.
   • First, a checklist of students’ key postsecondary preparation milestones. These are the navigation steps students need to take in secondary school to keep all their postsecondary options open. They include
     ~ visits to postsecondary institutions
     ~ meeting with a college advisor or counselor
     ~ test-taking as required (SAT and/or ACT)
     ~ applying to appropriate postsecondary institutions
     ~ completing financial aid forms
     ~ accepting an offer to a postsecondary institution

     Many students also need additional support once admitted to college to help them register for classes and campus housing, and navigate other challenges in the postsecondary transition.

     • Second, a composite measure — or checklist — that shows the postsecondary preparation “intensity” of a student’s high school experience. This may include
       ~ taking required courses for admission into the state university system
       ~ participation in Advanced Placement (AP), International Baccalaureate (IB), dual-enrollment college courses, and/or three or more linked career electives
       ~ performance on state achievement assessments
       ~ developing stronger writing skills

     A separate checklist may be kept for middle grades students, with an emphasis on the rigor of courses taken, since course selection, sequence, and performance in grades 6 – 8 can be critical in determining high school and postsecondary paths.
MEASURING STUDENTS’ SOCIAL-EMOTIONAL LEARNING ON THE PATHWAY TO ADULT SUCCESS

The many educators, researchers, and other advisors involved in PAS broadly agree that students’ integrated social-emotional-academic development is important for postsecondary and adult success. They also recognize that social-emotional learning in education is a relatively young but rapidly advancing area of research.

Therefore, PAS does not currently recommend that specific social-emotional skill levels should be used as indicators in EWS 2.0. When a state or district decides that research has determined how to measure social-emotional skills with sufficient reliability and validity, such measures could be included in the “Behavior” category in an ABC indicator system — as the behavior category includes not only measures of involvement with school disciplinary systems, but also beliefs and actions associated with school success.

PAS further believes that student surveys and data from teachers’ observations of students’ social-emotional behaviors and beliefs can be helpful in the analysis phase of EWS 2.0, when teams of educators work to understand why students may be off track for postsecondary success and decide on the action(s) to take to provide additional support.

PAS participants recommend that schools regularly administer student and teacher school climate surveys and include key outcomes in the data reviewed by EWS 2.0 teams. This will help identify situations where actions at the class, grade, school, or district level may help multiple students with indicators, and show where preventative and generative actions can and must occur at the systems level.
When a valid indicator shows that a student needs additional support, further analysis will help determine the best course of action. This section details our EWS 2.0 workgroup recommendations for conducting a root cause analysis of student needs and determining the most effective strategies for supporting students toward high school graduation and postsecondary learning.

**Identify the Reason(s) for an Indicator: Root Cause Analysis**

EWS 2.0 asks adults in the school, district, or community to consider why students or groups of students show a need for additional or different types of support. This is called root cause analysis.

**Two Levels of Root Cause Analysis**

- For the individual student and groups of students with common indicators
  - A team of school or grade-level adults familiar with the student(s) should investigate reasons for the indicators and how best to provide support. This is the most common type of analysis in an EWS 2.0 system.
  - An adult with a positive relationship with the student should have a conversation with the student about the reason(s) underlying the indicator(s).

- For an entire grade, school, or group of schools
  - A similar investigative process can help identify school, district, and community practices and/or policies that result in large numbers of students having indicators.
  - A root cause analysis expanded to grades or schools can be considered a systems analysis and a means to identify the best preventative strategies.

**What Should Root Cause Analysis Include?**

- Consider all easily accessible, appropriate student and school data relevant to the indicator(s) and student(s). This may include any of the following, among others:
  - Academic outcomes
  - Demographic factors
  - Social-emotional observations
  - Daily interactions
  - Out-of-school challenges
  - School policies and practices

- When expanded to system-level analysis also consider
  - Whether students are provided universal access to conditions for success in such areas as quality
instruction, course selection, counseling, college process navigation, extra academic help, school climate, extracurricular activities, health care, etc.

Whether students or groups of students confront constraints in or out of school that undermine the pathway to adult success. These can be explicit or implicit, intended or unintended, including social and cultural norms, racial/gender/ethnic bias, direct/indirect effects of poverty, etc. While school- or district-based actions may not resolve the external constraints that adversely affect students, they may be able to mitigate or moderate their impacts on school success.

**Determine the Most Strategic Response Given the Identified Cause of the Indicator(s)**

- What patterns and trends are there among students with the same indicator(s)?
- Will the student(s) require direct support(s) at either the small-group or case-managed level? Can students’ needs best be addressed at classroom, grade, school, district, community, or state levels? Can partnerships with postsecondary institutions and employers help?
- Which action(s) will have the greatest effect for the time and energy invested?
- Would one of the most effective actions be to rethink or change institutional practices or policies at school, district, community, state, or federal levels?

**Select the Best Action (Short- and Long-term)**

- Consider and build on student strengths.
- Start with actions that can be carried out with resources on hand, while developing new capacity or finding additional resources if current ones are not sufficient.
- If the root cause is a systems issue, a two-stage response may be needed:
  - What short-term steps can enable the student(s) to overcome system challenges?
  - What can be done in the mid- to long-term to change the system?
- What can be enacted promptly? What will take a few months to implement? What might be done in the next year or two?

**Summary**

Bring together all elements of the analysis — root cause and systems analysis, determination of the most strategic action level(s), and consideration of existing capacities and resources — to identify appropriate immediate and long-term action(s).
In the Actions section of EWS 2.0, we present

- workgroup guidance on standards for action
- some possible strategies for beginning to take action in EWS 2.0 systems

How can a school that uses EWS 2.0 ensure that actions to help both individual students and larger groups of students will be effective? These guidelines developed by the EWS 2.0 workgroups can help.

For the purposes of PAS, “actions” comprise both interventions and responses.

- Each action is spurred by analysis of indicators.
- Actions may be immediate or long-term.
- Actions may take place at the individual, school, community, district, or state level. They may focus on entire populations at the school or institutional level, at regular intervals in a preventative manner; be tailored to groups of students with common characteristics and/or identified needs; or be case-managed for individual students.
- Take an expansive view of what action can be. Create a resource map/list identifying student supports currently available, and those that can be developed or expanded, within the school and community. Also consider policy changes.
- Implementation of the actions and supports can be made visible and measurable.
- The outcomes of the targeted actions can be systematically monitored and measured against progress benchmarks.
- Ongoing evaluation leads to continuous improvement. Actions can be changed if they are not working as intended, or when intended actions produce unintended consequences.
Under EWS 2.0, raising expectations for all students’ postsecondary preparation can lead to the identification of more students who need support than educators may perceive existing resources will accommodate. Rather than allowing such a situation to overwhelm a school and hinder all progress toward providing students with greater support, schools can take a number of steps as they begin.

- **Be proactive.**
  Look for ways that a school’s actions can help prevent large numbers of students from falling off track. Examine policies and practices carefully to identify which ones may be counter-productive.

- **Be strategic.**
  Concentrate actions at high-leverage locations and times. Look for the classrooms or grade levels or times during the school day or academic year when an action will impact multiple off-track students.

- **Focus on building supportive relationships.**
  Supportive, developmentally-appropriate relationships between adults in the school and students are one of the most powerful and affordable actions schools can take to support and guide students better. Research shows that effective adult-student relationships need to provide support without pity and help develop practical solutions for students.

- **Mitigate what you can’t yet solve.**
  Ideally, EWS 2.0 indicators combined with a school’s root cause analysis can lead to lasting solutions. But this is not always possible in the short term. Instead, schools can help to mitigate the impact when indicators show students are not on track. Attendance is a good example: while a school works on a long-term improvement strategy, educators and the community can help students learn material they missed and complete their assignments.

- **Adopt a continuous improvement approach.**
  Small improvements accomplished continually over time can have a major impact. If your school’s situation or a specific challenge seems overwhelming, start with an attainable, short-term goal. Try something. If it doesn’t work, learn from it and try another approach.
A PAS workgroup of leading education data, research, and technology experts from school districts, state departments of education, technology companies, and nonprofit organizations developed the following guidance for EWS 2.0 data systems, and the considerations for districts, states, and other entities as they develop and improve their data systems.

Key Characteristics of Effective EWS 2.0 Data Systems:

- Any early warning data system should provide educators with easily accessible data on validated indicators that are predictive of their students’ high school graduation and postsecondary success.

- The indicators provided should give educators timely, actionable insight into the students who may need additional support — and in which ways — toward high school graduation and postsecondary success. Ideally, EWS data systems should identify individuals and groups of students who need particular support, and help provide information for broader school and district policy decisions that will result in greater support overall.

- Early warning data systems should enable educators to record, track, and analyze the impact of the actions — also called interventions and responses — they take in response to information from the indicators.

- EWS 2.0 data provided should be able to be aggregated at the individual, classroom, grade, school, and district level (and state level for statewide systems), and disaggregated by different student sub-groups, including customized sub-groups created by schools and districts.

To achieve these characteristics, PAS makes the following recommendations:

RECOMMENDATION 1:
Validate indicators and thresholds for accuracy and usefulness in supporting students’ success in middle and high schools and students’ readiness for postsecondary success.

- EWS 2.0 data should be based on validated indicators that are strongly predictive of high school graduation and postsecondary success. For these indicators, data systems should provide thresholds for action that show users whether a student is on track, falling off track, or entirely off track.

- While there are national recommendations around specific thresholds for attendance, behavior, and course performance that suggest when students are off track for high school graduation and postsecondary preparation, our research and experience also suggests that the predictive power of the ABCs can vary by district. Given this, we recommend that districts locally validate their indicators wherever feasible. Alternatively, states can validate a set of EWS 2.0 indicators based on statewide data while giving districts the flexibility to adjust thresholds based on local circumstances. In states, districts, and schools where neither option is viable, start with the nationally recommended thresholds and adjust them as needed, based on local experience over time.
Additional considerations:

- Indicators, or thresholds for action, should be based on accurate data sets. Data collected by schools and districts can be messy, with many different definitions, standards, collection methods, entry and processing procedures, time stamps, and more. Thus, district or state data analysts will need time to organize and clean up data before schools and districts conduct analysis. School staff involved with data reporting and entry also may need training in the use of common data definitions and accurate data entry.

- District and state capacity and state roles in serving districts vary based on size of district and the nature of each state: U.S. school districts range in size from about 100 students to 1.1 million. Thirteen states each have fewer students than the country’s four largest school districts. Local and state decisions must be made about the location and design of EWS 2.0 data systems and training for their use. States with large numbers of small or rural districts may need to take responsibility for validating data and action points, technical details of setting up systems, and helping schools use the systems. States with large variation in size and nature of school districts will need to determine their areas of greatest need and how to deploy technical and human capacities and resources.

- States should explore whether to develop a cloud-based, self-service model that will allow districts to upload their data for analysis. The program could then validate the indicators, set action points, and provide real-time reports back to the school or district. This type of solution may be critical for small and rural districts. It would also allow districts to experiment with different variables that may influence graduation or postsecondary readiness rates and provide better information on student success. Since cloud-based technology requires sending data back and forth, these channels should be rigorously verified for security. We also strongly recommend that such data be used for student-support purposes only — not for states’ school accountability systems.

- Some researchers have found different thresholds for different groups of students, such as English-language learners. Ensuring indicators and thresholds work well for all student populations will help users target interventions more carefully and efficiently.

**RECOMMENDATION 2:**

**Develop both individual and composite indicators.**

As technology and digital storage capacity continue to evolve, so do possible strategies for gathering and monitoring EWS data. Initial EWS were based on data in teachers’ gradebooks, attendance rolls, and disciplinary referrals. Later, Excel enabled digital sorting and analysis. Such approaches were based on only a single or few easily collected and validated indicators (like those that formed our ABC system). Later, more advanced programs allowed schools and districts to consider many different indicators of students’ needs, as well as composite indicators that rate or issue scores on students’ status toward graduation.

- Ideally, EWS 2.0 data systems should contain both valid individual indicators to help schools identify effective actions to keep students on track to postsecondary success, and composite measures that provide guidance for prioritizing student-support strategies.

- Whether schools or districts have a composite indicator or not, EWS 2.0 data systems should provide easily accessible data on individual indicators that show directly whether students are on track to high school graduation and postsecondary success.
These guidelines can help districts, states, and those who will build or adjust data systems determine how to organize their EWS 2.0 indicators:

**Strengths and Challenges of Individual and Composite On-Track Indicators**

<table>
<thead>
<tr>
<th>INDIVIDUAL INDICATORS</th>
<th>COMPOSITE INDICATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strength:</strong> Based on limited set of easily collected, understandable and validated data.</td>
<td><strong>Strength:</strong> Based on a wider range of data, which can improve the strength of the prediction. Automated data collection and use of algorithms simplify the work and messiness of data collection and analysis to provide one overall strong indicator.</td>
</tr>
<tr>
<td><strong>Strength:</strong> Student performance on separate indicators directly linked to high school and postsecondary outcomes (the ABCs) is readily actionable. Eases users’ ability to examine root causes, design interventions.</td>
<td><strong>Strength:</strong> Can help teams focus on broader continuum of students, prioritize students’ needs. Helps to decide which students may need different levels of focus.</td>
</tr>
<tr>
<td><strong>Challenge:</strong> Determining which students and indicators to prioritize is based on adults’ individual and collective knowledge of/relationships with students.</td>
<td><strong>Challenge:</strong> To take action, educators still need to unpack the factors causing a student to show up in the composite indicator. Thus, two steps are required before action is taken. Also, individual indicators are still needed.</td>
</tr>
<tr>
<td><strong>Challenge:</strong> If resources are limited, a school or district may stress one indicator over another, in ways that are less strategic and not data-based.</td>
<td><strong>Challenge:</strong> The system assigns “weights” to different data elements that form the composite. The composite may be less accurate if the student population differs from those upon whom the composite indicator was validated.</td>
</tr>
<tr>
<td><strong>Challenge:</strong> If more individual indicators are added for accuracy and context, too many indicators may be overwhelming and discourage schools’ use of the systems.</td>
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</table>

**RECOMMENDATION 3:**

**Track interventions for students**

- EWS 2.0 data systems must enable monitoring of interventions.
- EWS 2.0 data systems should help users clearly see which students need additional support, which interventions or supports they have received, and whether student outcomes improve as a result.
- EWS 2.0 data systems should also include the type of intervention, how often a student participates, and the indicator the intervention will address, so that results can be aggregated and analyzed to determine which interventions help students the most.
- In addition to common types of interventions, systems should also allow school or district teams of educators to add customized interventions.
RECOMMENDATION 4:
Data displays and reports.

• Data displays should be developed for different user groups, since school-based teams that will determine support for individual or groups of students may need different reports from those needed by principals or district/state officials for entire schools or districts.

• Additional reports for students and families could help communicate students’ areas of need and strength, provide students more agency in their own improvement, and help them monitor their own progress.

• For each report, the team should only provide the needed data for each group, ensuring the reports are useful and compliant with student privacy laws.

Additional consideration:

• Align EWS 2.0 with other district priorities so that reports can serve a variety of purposes.

RECOMMENDATION 5:
Disseminate reports and meaningful uses for the data.

• EWS data system developers should consider how they will disseminate reports and encourage meaningful use of the displays. A collaborative approach should include an iterative process of asking educators for their needs in student support monitoring, leading to mutual ownership of the system design.

• Careful consideration should be given to how data are disaggregated. Professional development should be provided for school/district teams with respect to the discussion of diverse groups of students.

Additional considerations:

• Build champions in the district who can advocate for EWS 2.0 systems as an essential resource. Design systems to be sustainable through staff turnover or technology changes.

• Ground the data in individual stories to make the work compelling. EWS 2.0 also may motivate students to take actions or seek help if they can see the indicators for themselves. They should be partners in identifying solutions and their own education goals.
RECOMMENDATION 6:  
Assemble an effective state-/district-level EWS 2.0 data system development and support team

- District/state-level EWS 2.0 data system teams should consist of technology experts who will build the system and can make changes based on the team’s feedback; administrators who can support the initiative and align the work with other school/district initiatives; and an EWS 2.0 manager or coach(es) who will train schools on the system and EWS 2.0 more broadly.

- In large school districts and at the state level, the divide between leaders of information technology and research/assessment is a common challenge. Build relationships across departments and have a district/state leader prioritize the work and help build collaboration.

Additional considerations:

- Build constituency and usability. Provide presentations across the state/district to get feedback and build educator support and interest.

- Help districts tie EWS 2.0 into existing priorities and develop metrics so that teams can identify when reports need to be updated and data improved. Align technology with student support needs rather than allowing technology to shape the work.

- Many times, only a few professionals in a district/state can provide programming for the EWS 2.0, and these experts often must address other urgent issues. Developing high-level champions for the project and a direct line of communication with the superintendent or another leader will help make EWS 2.0 sustainable. Provide clear links between EWS 2.0 and all other data initiatives such as RTI, PBIS, and MTSS; do not make EWS 2.0 a standalone project.
THE ROLES OF SCHOOL/DISTRICT LEADERS AND TEAMS IN EWS 2.0

One of the strongest recommendations from PAS members who have substantial experience working with EWS at the school, district, and state levels is that to be effective, EWS needs both strong and supportive leadership from principals and districts to organize the adults in schools into effective EWS teams. Thus, one of the key differences between EWS and other student support strategies is the essential role played by teams of adults working together to use predictive indicators, and then taking strategic actions to keep all students on track to high school graduation and postsecondary success. This section provides guidance on organizing effective EWS teams, based on the insights of PAS workgroup members.

In schools, having standing team(s) of adults who meet regularly and frequently to review student data and indicators is a central part of EWS 2.0. The team(s) should analyze the indicator data, determine which students to focus on and how, and then take action to set more youth on the path to postsecondary persistence. Team(s) should also evaluate their actions over time so they can improve school practices and policies. Each team should bring together knowledge and experience from multiple sources to forge a collective response for individual students, groups of students, or the entire school. Decisions should not depend on a single adult in a classroom or counseling suite. Instead, adults should collaborate to support each other as they address issues facing students.

An EWS 2.0 team can be an expansion or retooling of existing team(s) or entirely new, depending on the school and district. An EWS 2.0 team should focus on the needs and possibilities for supporting students to graduate from high school and to persist and succeed in the first two years of postsecondary education (including college or career/technical training). The team(s) should help the school review and streamline existing practices. The team(s) should be able to pursue solutions for students who are struggling, who need to elevate aspirations and effort, and/or who are high-achieving but could aim higher. Teams should include at least one key decision-maker who can help put decisions into practice.

An EWS 2.0 team(s) should build on strengths and capacities in the school. A team may already exist that can take on EWS 2.0 — perhaps a new version of the current EWS team. A school may already have one or more teams in place, such as:

- School leadership team
- Existing EWS, dropout prevention, or graduation enhancement team
- Response to Intervention (RTI) team, focused primarily on students with disabilities
- Positive Behavior Intervention System (PBIS) team
- Multi-Tiered Student Support team (MTSS)
- Advanced Placement (AP) access team

Far fewer schools, however, have teams focusing on topics that impact students’ success after high school, such as college and career readiness, academic intensity, civic engagement, or health and well-being.
In designing and implementing EWS 2.0 student support team(s), a school should determine

- Who should serve on the team?
  Classic EWS teams focused primarily on ninth graders often include an administrator, a counselor, teachers of core subjects, and others who interact frequently with students. However, data may show that 10th and 11th graders are floundering, that the entire school has a challenge with mathematics, or that college and career readiness is an issue. The team should be composed of the adults with the most relevant knowledge to address the challenges, and may include non-educators, including social workers, coaches, support staff, school resource officers or others. Involving district-level representatives may also help to inform policy or large-scale decisions.

- How large should teams be?
  We suggest a team size of six to 10 members.

- How many students can a team support, and as a result, how many teams are needed?
  In a large school, multiple teams and/or additional educators or other professionals may be needed to help address the large number or diversity of students in need of supports.

- How will the EWS 2.0 team(s) be integrated into the fabric of the school, and what training and preparation might the team need to handle this responsibility?

- If there are multiple teams in a school serving different but related functions (e.g., EWS 2.0, school leadership teams, instructional teams, RTI or MTSS teams, and/or multiple EWS teams), how can they be integrated, with clearly defined information flow, decision-making, monitoring, and impact on students?

- How will a schedule and/or sub-teams be created to perform the key functions of EWS 2.0 teams?
  a) Continual monitoring of all students on the EWS 2.0 predictive indicators and responding with individual or group-level actions as necessary
  b) Looking for systems-level solutions for the classroom, grade, school, district, community, etc.
  c) Using EWS 2.0, together with other data, to monitor how well the school/district/community is providing key supports to keep all students on the path to adult success
  d) Focusing particularly on critical areas as identified by the data (e.g., academic intensity, mathematics, ELL, etc.)
SAMPLE TEAM SCENARIOS

Building on the traditional EWS-team model already in use by many schools, EWS 2.0 teams may need a broader focus. In addition to school administrators, counselors, teachers of core subjects, and others who interact frequently with students, EWS 2.0 teams may also include social workers, coaches, support staff, school resource officers, and community representatives, depending on schools’ needs. Involving district-level representatives may also help to inform policy or large-scale decisions.
• How will the team make decisions? What criteria will be used?

• How will teams ensure they apply the EWS 2.0 guidelines for Data, Indicators, Analysis, and Action?

When engaging in system-level analysis, teams should keep in mind that some solutions or improvements, in areas such as academic intensity or those involving schedule changes, must be done at the right time to mesh with the planning, budget, and hiring cycles of the school.

Implementing a functional EWS 2.0 team and a student support/progress-monitoring process can be a challenge for some schools. One common stumbling blocks is that data is not collected, organized and presented in a timely way.

One solution is for the principal to designate one or more adults with responsibilities to gather, record, and organize data at specific intervals of time. The principal or another leader may also need to establish protocols for data collection and organization for the team’s use. Options include:

• Responsibilities may be divided among adults.

• A school or district “data coach,” “promotion coach,” or other professional can review the indicator data and make “student watch-list” recommendations for team meetings.