



**Kentucky Department of**

***Our  
Children,***

***Our  
Commonwealth***

**Education**

# Kentucky Department of Education 2016-17 KSIS Beginning-of-Year Training

**State Board Room (125), 500 Mero Street, Frankfort and KDE  
Media Portal**

**April 20 and 21, 2016**

**9:30 a.m. (ET) / 8:30 a.m. (CT)**





# Early Warning System

Office of Continuous Improvement and Support

(502) 564-4772

# Early Warning

“The ideal early warning system would identify all future dropouts and would raise no false alarms – every student identified as ‘at risk’ would fail to complete high school without intervention. The system would do so whether or not the population it was predicting was composed of 5% or 50% future dropouts.”

Jared E. Knowles, PhD  
Research Analyst  
Wisconsin Department of Public Instruction



# Introduction

- ▶ New data mining tool named Early Warning created using statistical modeling, measuring a student's dropout risk
- ▶ Multiple years of data from IC used to make determination
- ▶ First iteration will be grades 09-12; lower grades incorporated in a later release
- ▶ Currently in Closed Beta in Jefferson County Public Schools, Paducah Independent and Warren County Staging sites only
- ▶ Available to all Kentucky districts in Campus.1629 scheduled to install on August 3



# Early Warning New Direction

- ▶ Changes occurred after Beginning of Year Training but before deployment to production
- ▶ Changes based on district feedback during the Persistence to Graduation Summit
- ▶ Initial focus was Identification
- ▶ New focus is Monitoring
- ▶ See Campus' [Early Warning documentation](#) for details

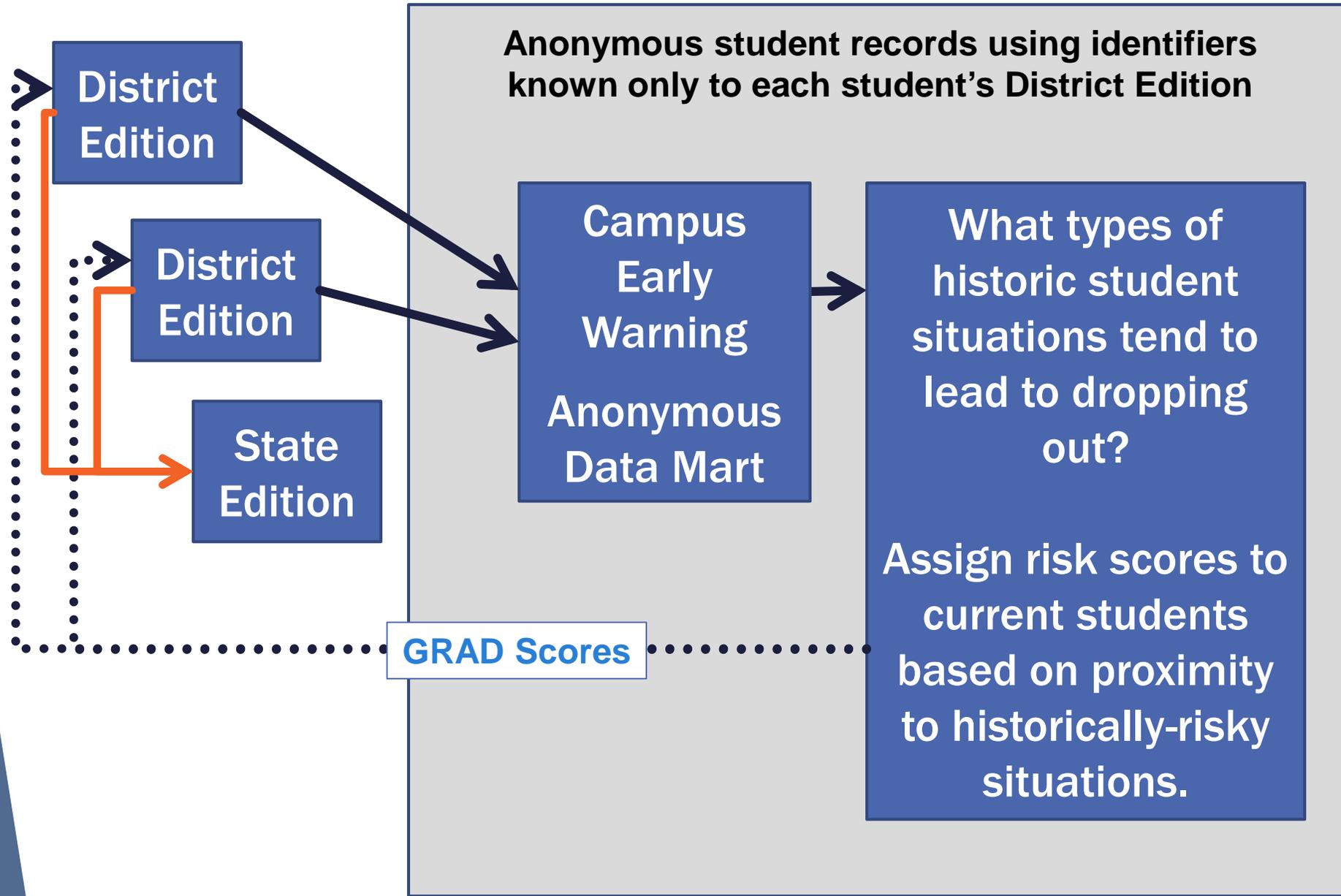


# Early Warning Tool

- ▶ Only includes currently enrolled students
- ▶ Graduates are not shown
- ▶ Reasons that GRAD Scores may be Not Available
  - Student may not have a 9<sup>th</sup> grade enrollment
  - Student could be new to the school
  - Student may not have enough information available in the system to make a determination



# Campus Early Warning



# Planned for Future Release

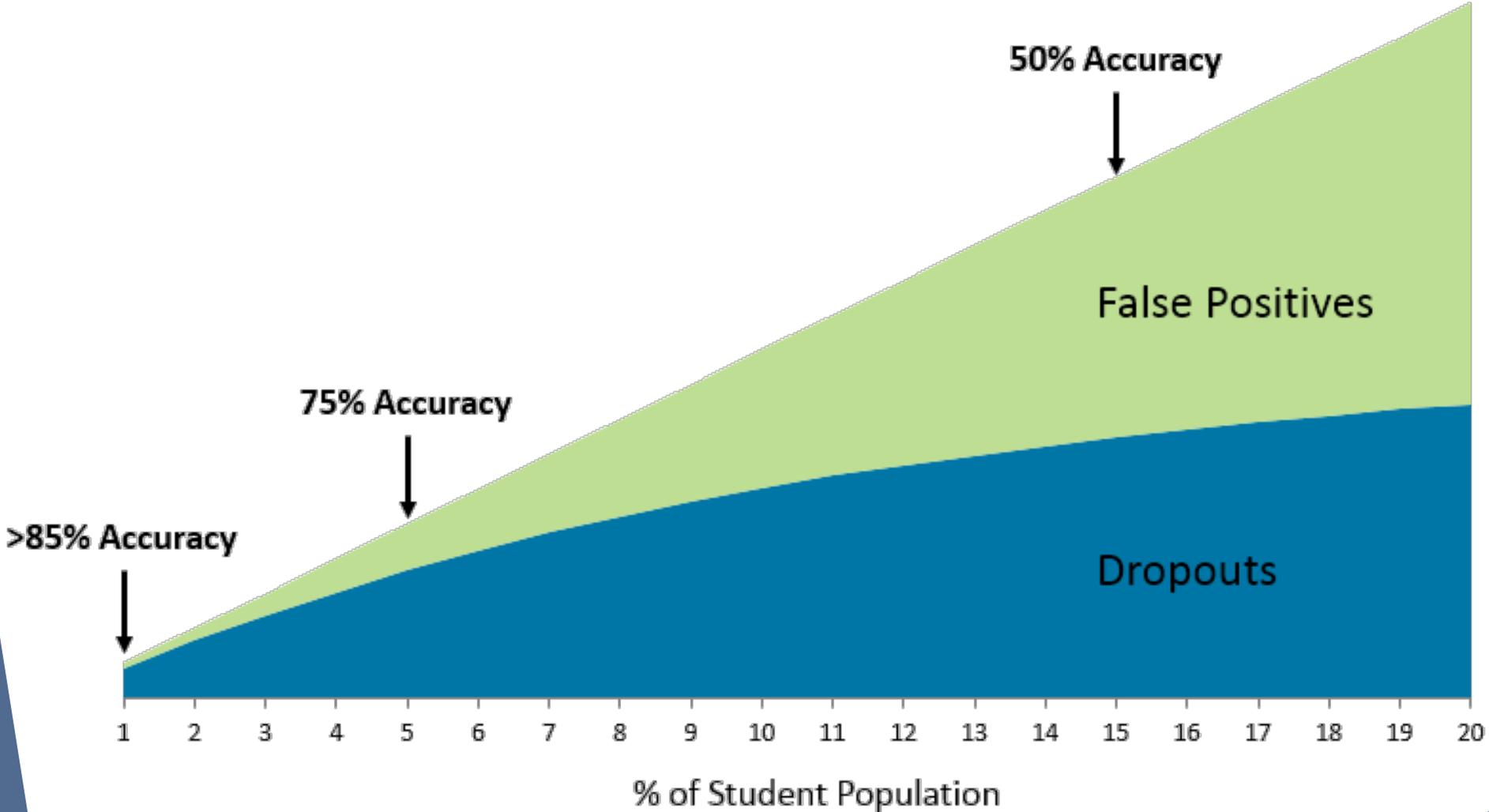
- ▶ GRAD Score to be added to ad-hoc filter
- ▶ New widgets for dashboard



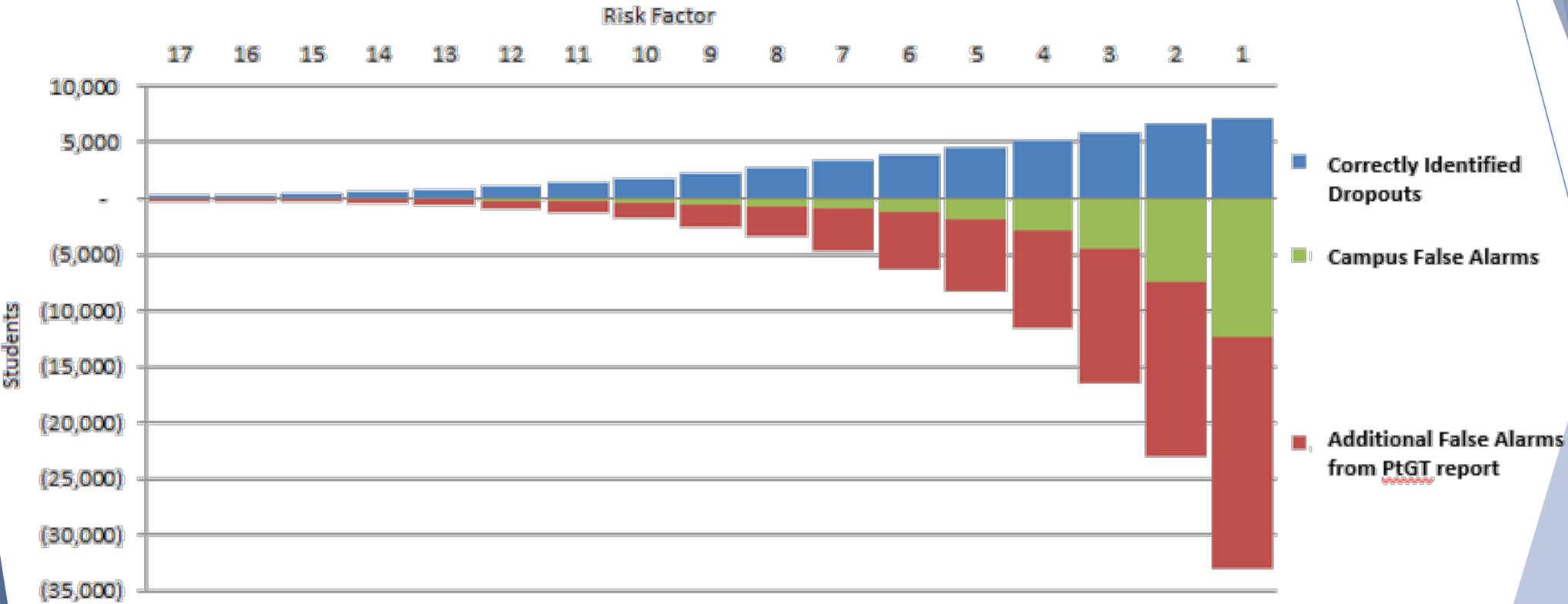
Student Performance	
FACTOR	QUINTILE (POSITIVE TO NEGATIVE)
Grades	
Attendance	



# Early Warning Predictive Performance



# Comparing predictive performance



# Persistence to Graduation Report

The previously used PtGT Report is still available under KY State Reporting. Districts are free to still utilize this reporting to identify students at risk. Please be aware the risk values on this report and the percentiles in the new tool are calculated differently. Many of the same students may appear on both reports but the risk value and the percentiles will not be comparable. The next few slides will provide a brief overview of the PtGT Report.



# Overview of Persistence to Graduation report (PtGT)

Path: KY State Reporting | KDE Reports | Persistence to Graduation

- ▶ PtGT assigns every student a risk value score based on selected research-based indicators
- ▶ Two output options: PDF and CSV
  - PDF version only uses current year data
  - CSV version uses current and prior year data
    - ✓ Only run outside of school hours to avoid system performance issues





<b>Indicators Used to Calculate Risk Value Scores</b>	<b>Risk Point Value</b>	<b>Current Year</b>	<b>Prior Year</b>
<b>Demographics</b>			
LEP	1	✓	
2 years older than expected for grade level	1	✓	
<b>Attendance</b>			
5-10% C/R time missed	1	✓	✓
>10% C/R time missed	2	✓	✓
<b>Behavior</b>			
1-4 INSR events (In-school Removal)	1	✓	✓
5+ INSR events (In-school Removal)	2	✓	✓
1-4 SSP3 events (Suspensions)	1	✓	
5+ SSP3 events (Suspensions)	2	✓	
<b>Performance</b>			
>10-15% Failing Term Grades	1	✓	✓
>15-25% Failing Term Grades	2	✓	✓
>25-35% Failing Term Grades	3	✓	✓
>35-45% Failing Term Grades	4	✓	✓
>45-55% Failing Term Grades	5	✓	✓
>55% Failing Term Grades	6	✓	✓

# Persistence to Graduation PDF report



- ▶ Risk Value from year to date data only
  - Behavior, Attendance, Performance and Total
- ▶ Generate throughout the year

Kentucky Persistence to Graduation Report

School No	School Name	StateID	First Name	Last Name	Grade	Risk Value All Behavior YTD (Suspensions + INSR)	Risk Value Attendance YTD (Current Year)	Risk Value Performance YTD (Current Year Grades)	Total Risk Value (Include all indicators for prior/current years)
█	█	█	█	█	9th Grade	0			8
█	█	█	█	█	9th Grade	0			8

# Persistence to Graduation CSV report

- ▶ Recommended for beginning and end of school year
- ▶ 9 columns align with research-based indicators to calculate the Risk Value Score
- ▶ 13 additional data columns assist in data/root cause analysis



# Persistence to Graduation CSV report



	A	B	C	D	E	F	G	H
1	Title	School_No	School_Name	StateID	First_Name	Last_Name	Gender	Enrolled_Grade
2	PtGT	School_No	School_Name	StateID	First_Name	Last_Name	M	9th Grade
3	PtGT	School_No	School_Name	StateID	First_Name	Last_Name	M	9th Grade
4	PtGT							
5	PtGT							
6	PtGT	Risk_Value	Current_Year_Absent_Days_Percentage	Prior_Year_Absent_Days_Percentage	Age_Equivalent	Age	Homeless	LEP
7	PtGT	2	10		12.38 Y		15 N	N
8	PtGT	3	9		6.26 Y		14 N	N
9	PtGT	4	9					
10	PtGT	5	7					

	P	O	R	S
1	Current_Year_Suspension_Count	Current_Year_INSR_Count	Prior_Year_INSR_Total	IEP
2	0	0		8 N
3	0	0		8 Y

	T	U	V
1	Prior_Years_Failing_Grades_Count	Prior_Years_Passing_Grades_Count	Prior_Years_Failing_Percentage
2		3	1 / 75
3		3	1 / 75

	W	X	Y
1	Current_Year_Failing_Count	Current_Year_Passing_Count	Current_Year_Failing_Percentage
2			
3			
4			
5			
6			
7			
8			
9			

# Differences between Persistence to Graduation report and Early Warning

- ▶ The new system maximizes historic predictive accuracy
- ▶ The new system learns from much more data, to identify more risk factors
- ▶ The new system improves over time
- ▶ Risk profiles differ per district, school, grade level, and more



# Persistence to Graduation report (PtGT) and Early Warning can be used by:

- ▶ **Directors of Pupil Personnel (DPPs)**
- ▶ **District dropout prevention personnel**
- ▶ **Principals**
- ▶ **Counselors**
- ▶ **Special education administrators**
- ▶ **FRYSC**
- ▶ **Teachers**



# How can I use this information?

- ▶ For data analysis and root cause analysis
- ▶ To determine appropriate supports and interventions for students who may be off-track for graduation
- ▶ To provide targeted interventions for at-risk students
- ▶ To utilize available resources at community, district, state, and national levels



# Questions

- ▶ Refer to KDE's Persistence to Graduation website for questions and additional resources

<http://education.ky.gov/educational/int/Pages/EarlyWarningAndPersistenceToGraduation.aspx>

