

Early Warning and Intervention Systems: Promise and Challenges for Policy and Practice

Robert Balfanz
Johns Hopkins Univ

Three Key Topics Informed by Our Research and Experience

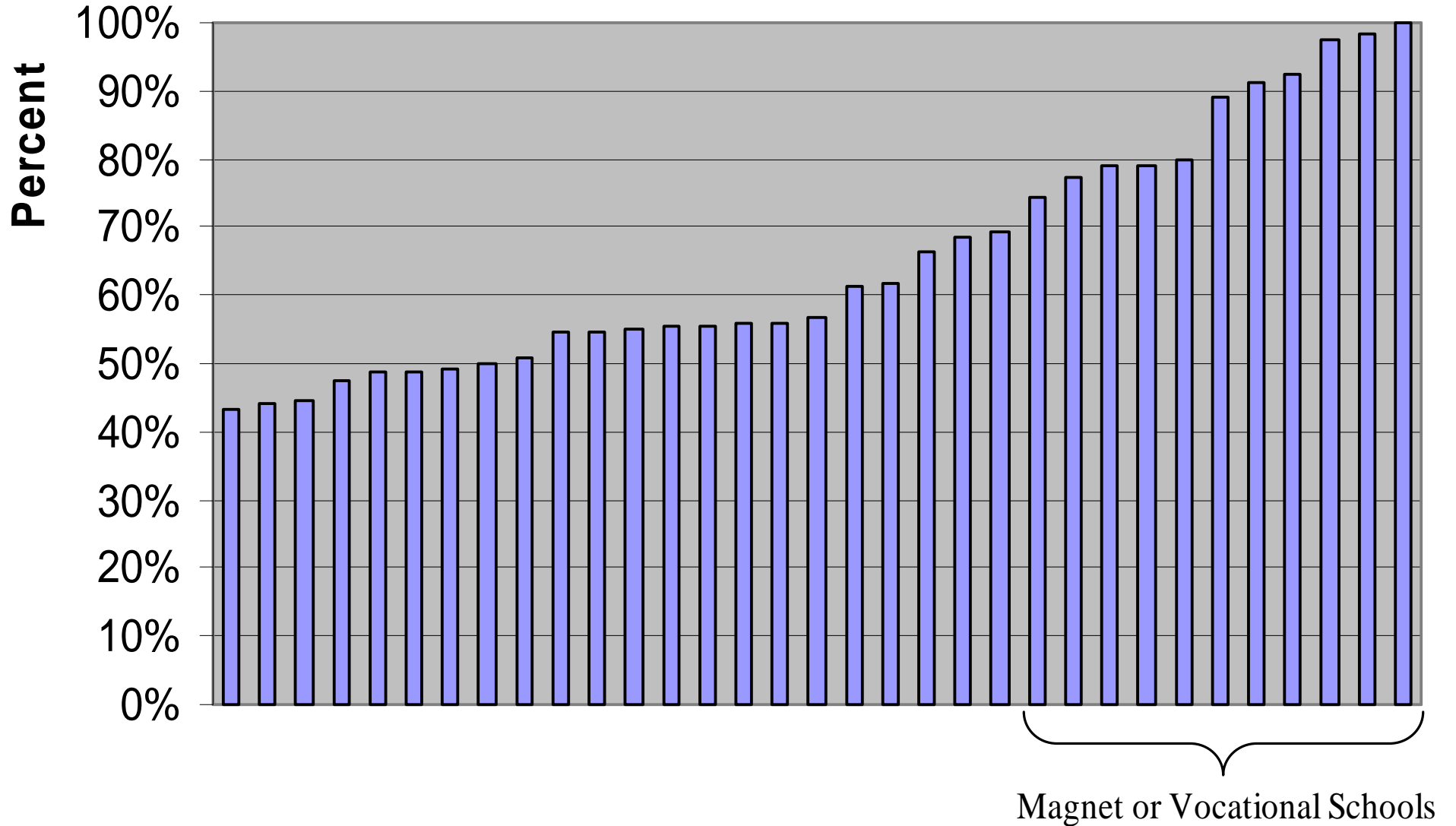
- Using Off-track to High School Graduation Indicators to Build Early Warning Systems
- Using Early Warning Systems to Enable More Effective Interventions
- Using On and Off-track Indicators to Target School Support, Resources, and Accountability Systems

Establishing Early Indicators: Foundational Studies and Developing Our Approach

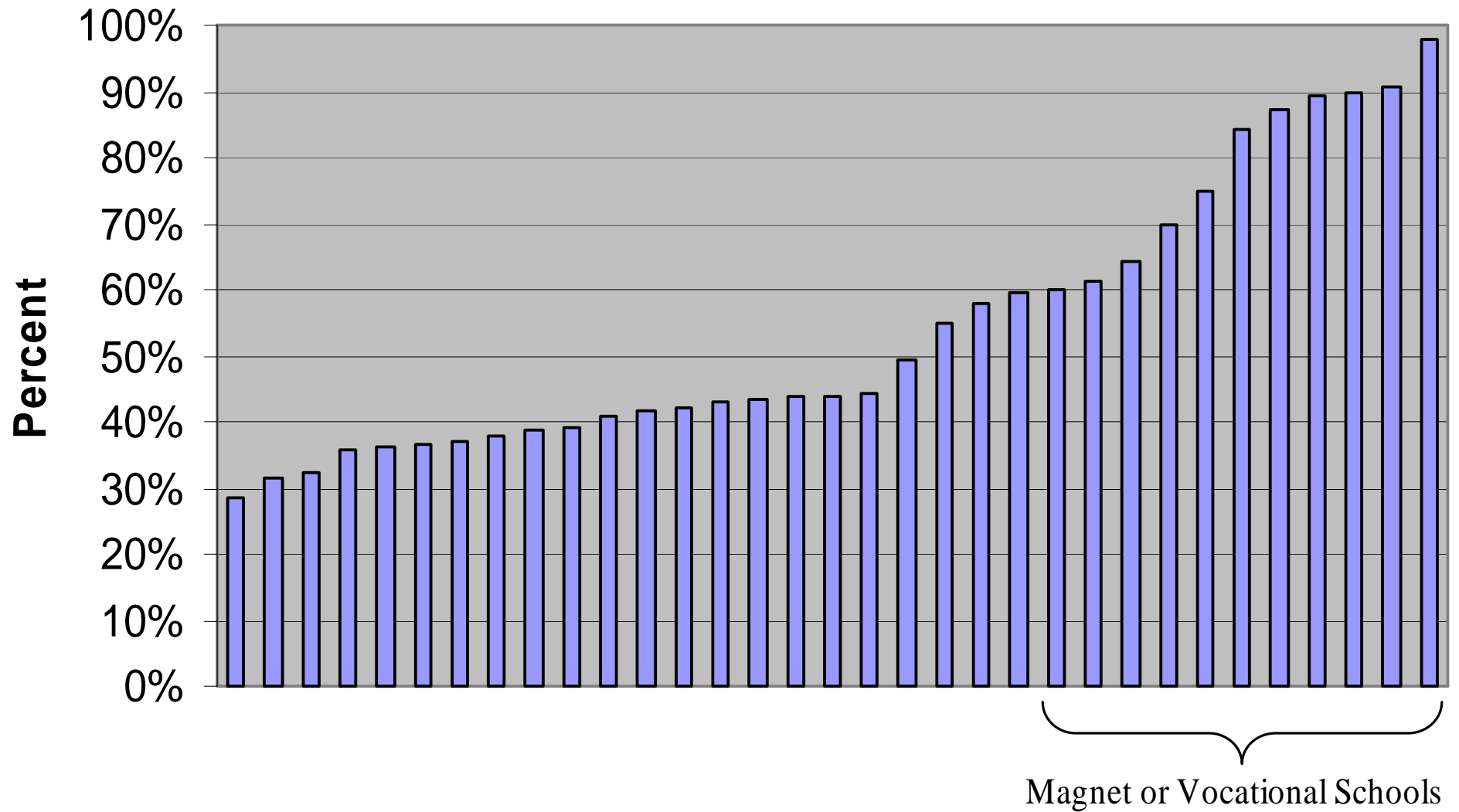
Study 1: Can we Identify How the Educational Challenge of the Ninth Grade Varies Across High Schools

- Compared the non-selective, neighborhood high schools of Philadelphia to the school districts magnet and selective high schools
- Looked at who was in the ninth grade in each high school

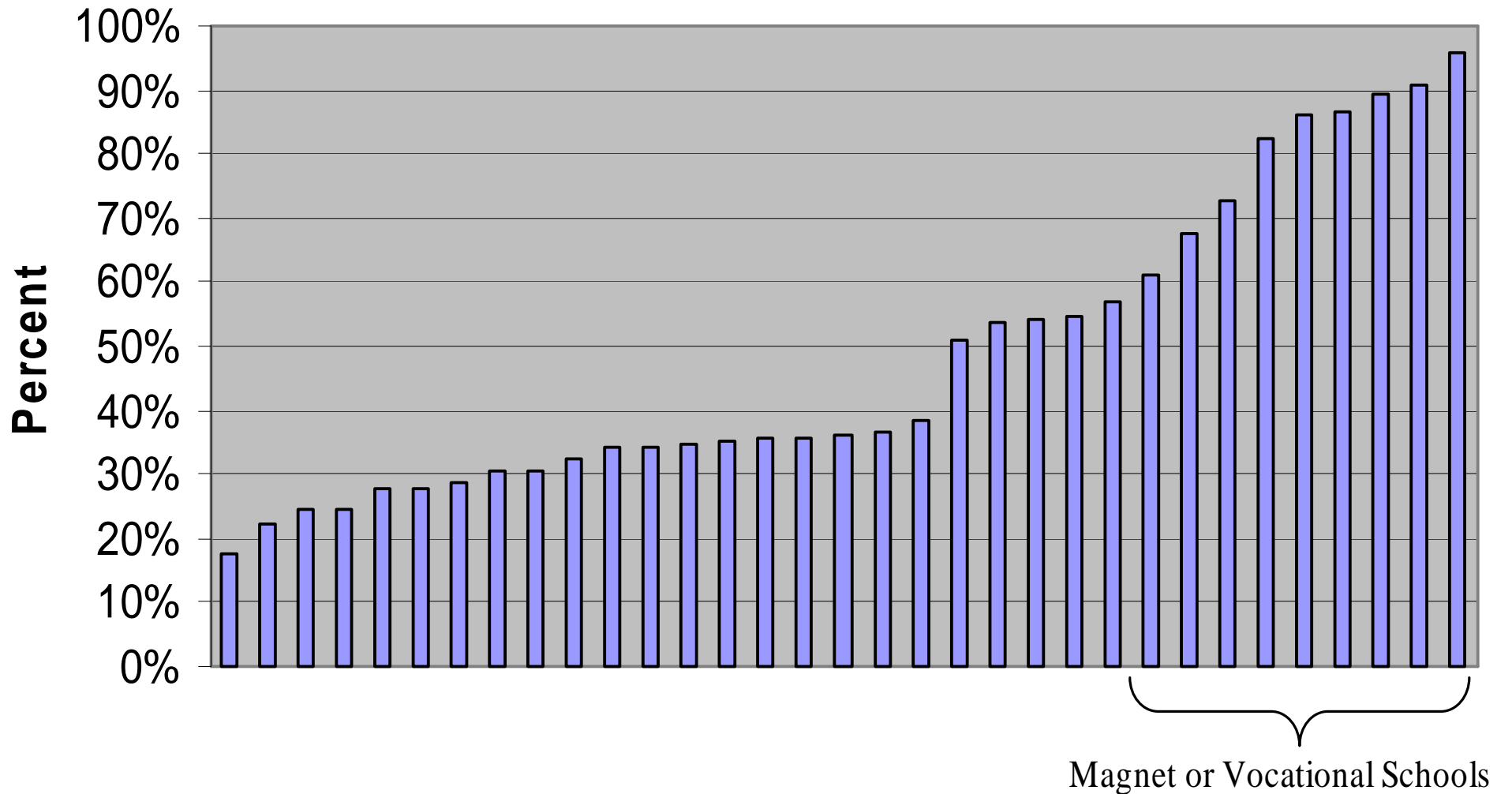
Percentages of 9th Graders who are First-Time Freshmen by High School



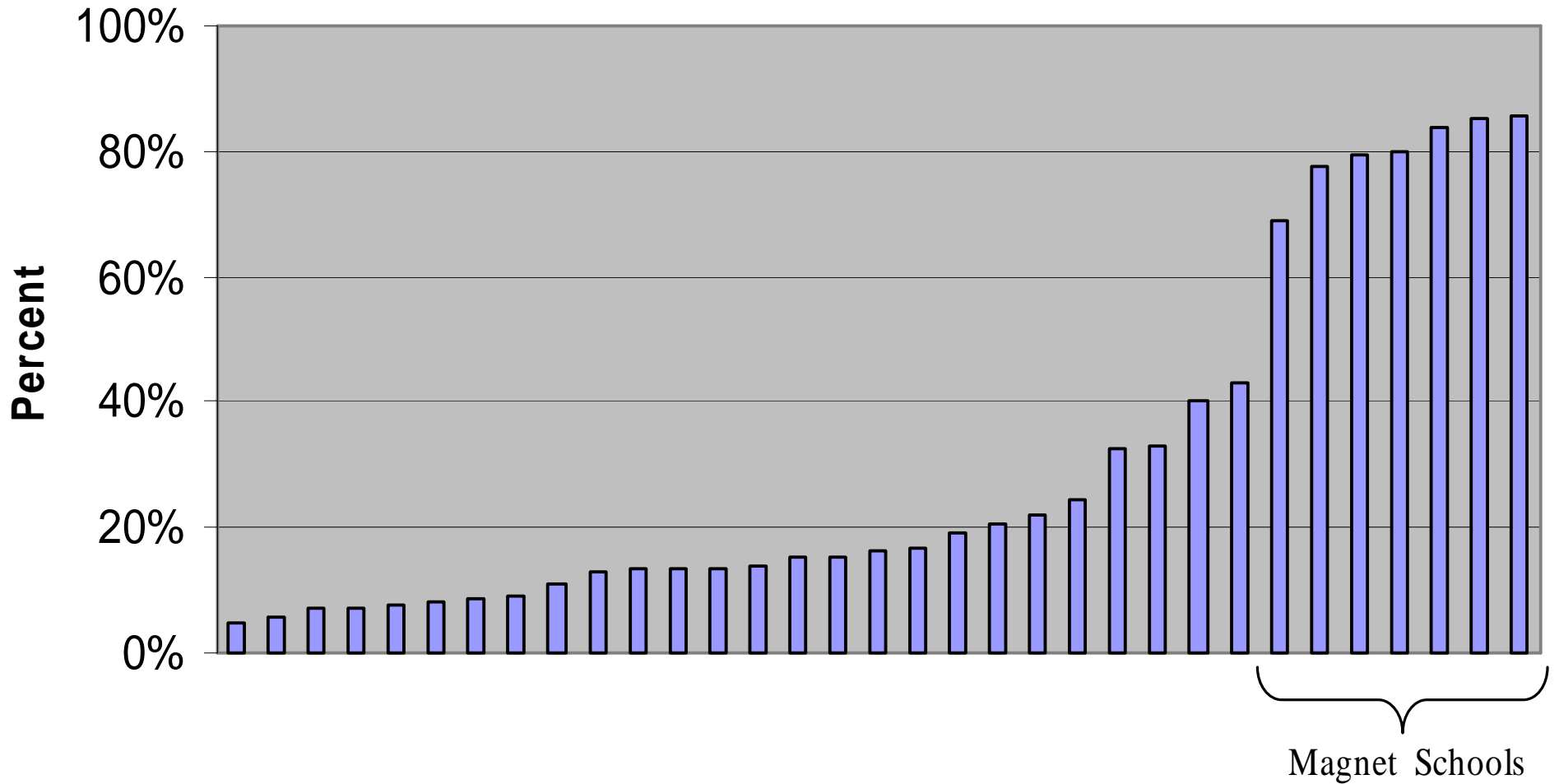
Percentage of 9th Graders who are On-Age, First-Time Freshmen by High School



Percentage of 9th Graders who are On-Age, First Time Freshmen with 80%+ Attendance in 8th Grade by High School



Percentage of 9th Graders who are On-Age, First Time Freshmen with 80%+ Attendance in 8th Grade and Math and Reading Skills at the 7th Grade Level or Higher by High School



Study 2: Schooling Trajectories of High School Students who become Incarcerated

- Found in Philadelphia that most are arrested in the 9th Grade
- The Majority of these Students had a common 8th grade experience they failed half their courses and attended school less than 2//3rds of the time

Study 2: Cont

- But there was a roughly equal number of students who had the same 8th grade outcomes but did not become incarcerated in high school
- However, both groups had the same graduation outcomes-less than 10% ultimately received a high school diploma
- Indicated that a student could become so off-track in the middle grades that becoming incarcerated in high school would not lower their odds of graduating-floor effects had been reached.

Study 3: How Early in the Middle Grades Could we Identify Students who Absent Intervention Likely Would not Graduate

- Wanted reliable and valid indicators
- Collectively wanted the indicators to produce a high yield of future non-graduates
- Wanted them to be based on data readily accessible to schools

Study 3: cont

- Decision Rule 1-variable needed to identify students in the cohort examined who ultimately had a graduation rate from the school district of 25% or less (within 1 year of on-time graduation)
- Decision Rule 2-would only include variables that had independent and additive effects
- Conducted cohort analysis of entire 6th grade cohort of 1995/96 in Philadelphia, roughly 14,000 students
- Examined large number of potential indicators based on literature and our experience, included school performance/interaction and status variables

Study 3: Findings-Four Sixth Grade Indicators Emerged

- Attending less than 80% of the time
- Receiving a poor final behavior grade in a core course
- Failing Math
- Failing English
- Sixth graders with anyone of these indicators had 25% or lower graduation rates
- Collectively the four indicators identified 40% of the future non-graduates from the cohort

Extension and Replication Studies

- Have looked at additional cohorts in Philadelphia
- Analysis has been replicated in six additional school districts-five were high poverty urban school districts, one was a southern city-county district with urban, suburban and rural areas and varied incomes
- Basic Findings have held. Attendance, Behavior, and Course Performance variables reliably predicted significant numbers of future non-grads and dropouts, as early as the 6th grade

Attendance

- No common thresholds across the districts- Philadelphia needed to be below 80% attendance to get 75% yield, Boston needed to be below 90%
- Where you are in the attendance distribution may be a factor as well, as total days missed
- Indicators states and districts will need to do their own analysis to identify key attendance thresholds

Behavior

- Philadelphia data indicates that sustain mild miss-behavior is as problematic as behavior which generates suspensions
- Challenge- most districts do not systematically collect data on mild miss-behavior, only collect suspensions
- Suspensions were predictive though number and type varied by school district, but many more students in Philadelphia had poor behavior grades than were suspended. Thus suspensions as only behavior indicator may miss a significant number of off-track students

Course Performance

- Failing courses in the middle grades was consistently predictive across the districts of non-graduation and dropping out
- In most district sixth grades failed only 1 or 2 courses. Failing a single core course typically singled off-track status
- Only extremely low test scores-below the 15th percentile on nationally normed test had predictive power

Grade of On-Set of Off Track Indicators

- Could only examine across grades 6 to 10 in the three school districts
- In Philadelphia, Boston, and Mobile-the earlier a student exhibited an off-track indicator, the worse their odds of graduating.
- Students with no indicators in the middle grades, who developed them in the 9th grade did better than students with middle grade and 9th grade indicators. Even modest improvement in high school did not offset the impact of middle grade off-track indicators

Implications for State and District Data Systems

- Need systems which capture student grades, attendance, and behavioral indicators
- Many challenges-different districts record grades, behavior, and attendance in different ways
- May need to validate indicators for different sub-populations of students-urban, suburban, rural, higher and lower poverty school districts.

Using Early Warning Systems to Enable More Effective Interventions

- Potential of Early Warning Systems will only be realized if they are used to develop, provide, and target effective interventions at the school and student level.
- Piloting such Efforts in Philadelphia-combine Early Warning System with an extension of the Response to Intervention/Public Health multi-tiered prevention and intervention models
- Goal is to get the right intervention, to the right student, at the right time with the required intensity

Implications for Policy and Practice

- Ultimately need easily accessible classroom level early indicators data-see handout
- But significant utility to school based, early, early indicators taken from grade books, attendance sheets, and office referrals
- Potential usefulness of status variables to design interventions
- Need for extensive professional development and teacher support-culture change and developing technical skills

Using On and Off Track Indicators to Target School Support, Resources, and Accountability Systems

- Valid and reliable on and off-track indicators could enable the introduction of more accurate degree of educational difficulty measures into funding, staffing, and accountability actions
- Currently most allocation and accountability decision either do not take degree of difficulty into account or are based on status not school performance variables