

# Keeping Middle Grades Students On Track to Graduation

## Initial Analysis and Implications

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# Research Question

How early in the middle grades (g. 6-8) can we identify students at high risk for falling off the graduation track?

# Important Prior Findings

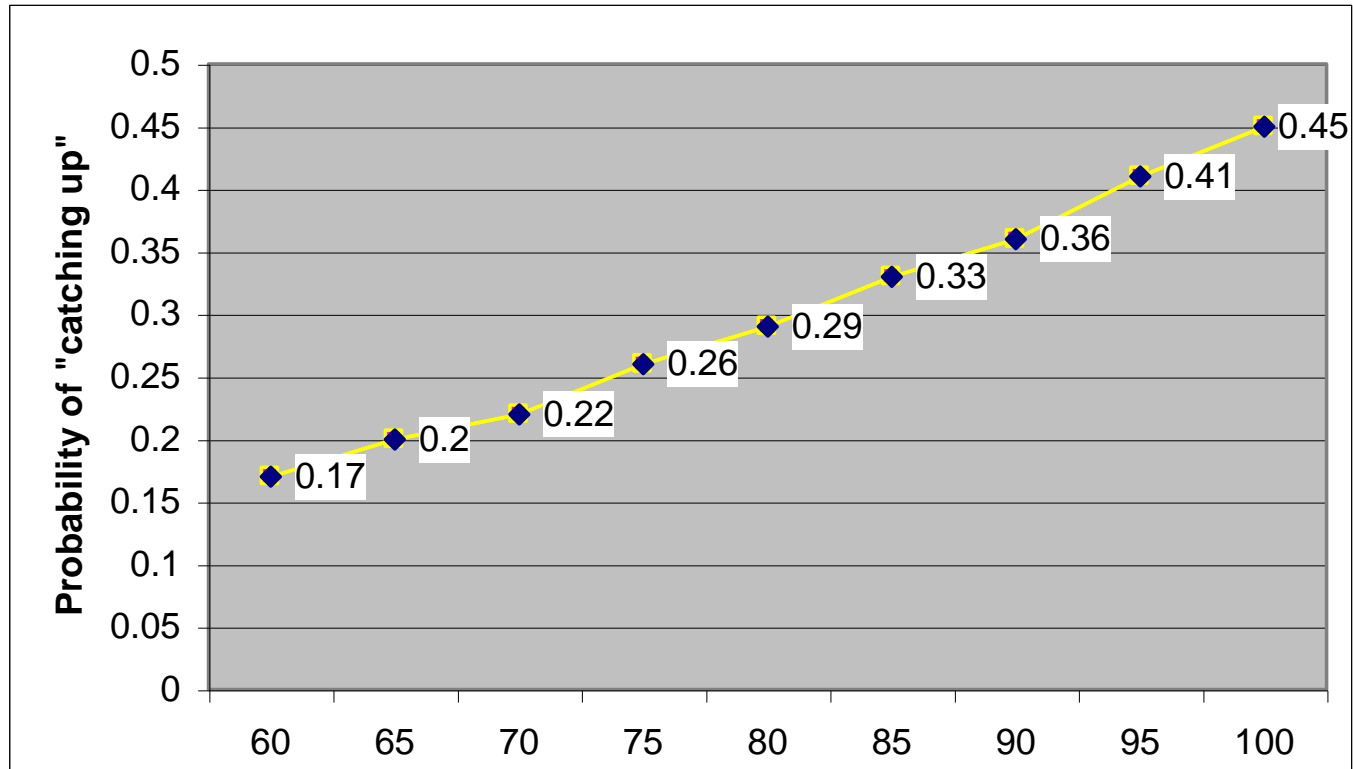
- Students who enter high school *two or more years behind grade level* in math and literacy have only a 50/50 chance of on-time promotion to the 10<sup>th</sup> g.
- Ninth grade retention is a major risk factor for dropping out of high school

# Cont.-Prior Findings

- Student **attendance, behavior, and effort** all influence the likelihood that students will significantly improve their achievement levels during grades 6-8
- In a representative sample of high poverty middle schools in Phila., 77% of the students who had 95%+ attendance, got excellent behavior marks, had above average effort levels in 6<sup>th</sup>—8<sup>th</sup> g., *made large achievement gains in math*

# Impact of Attendance

**Figure 3** (*Impact of Attendance*)

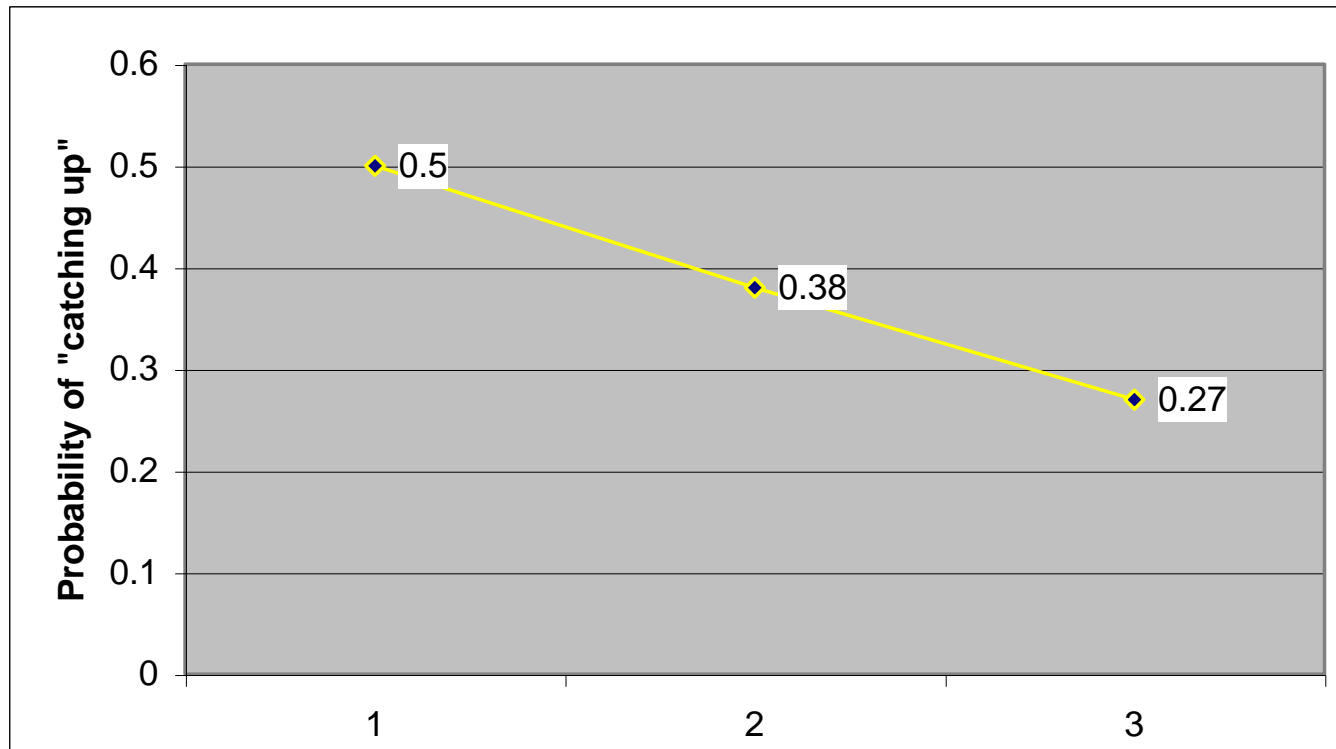


*Percentage of total school days attended*

*(CEMS student; Non-Asian Student; from Cohort 1; with effort of 6; behavior of 2; percentage of effective math teachers of 50)*

# Impact of Behavior

**Figure 5** (*Impact of Behavior*)

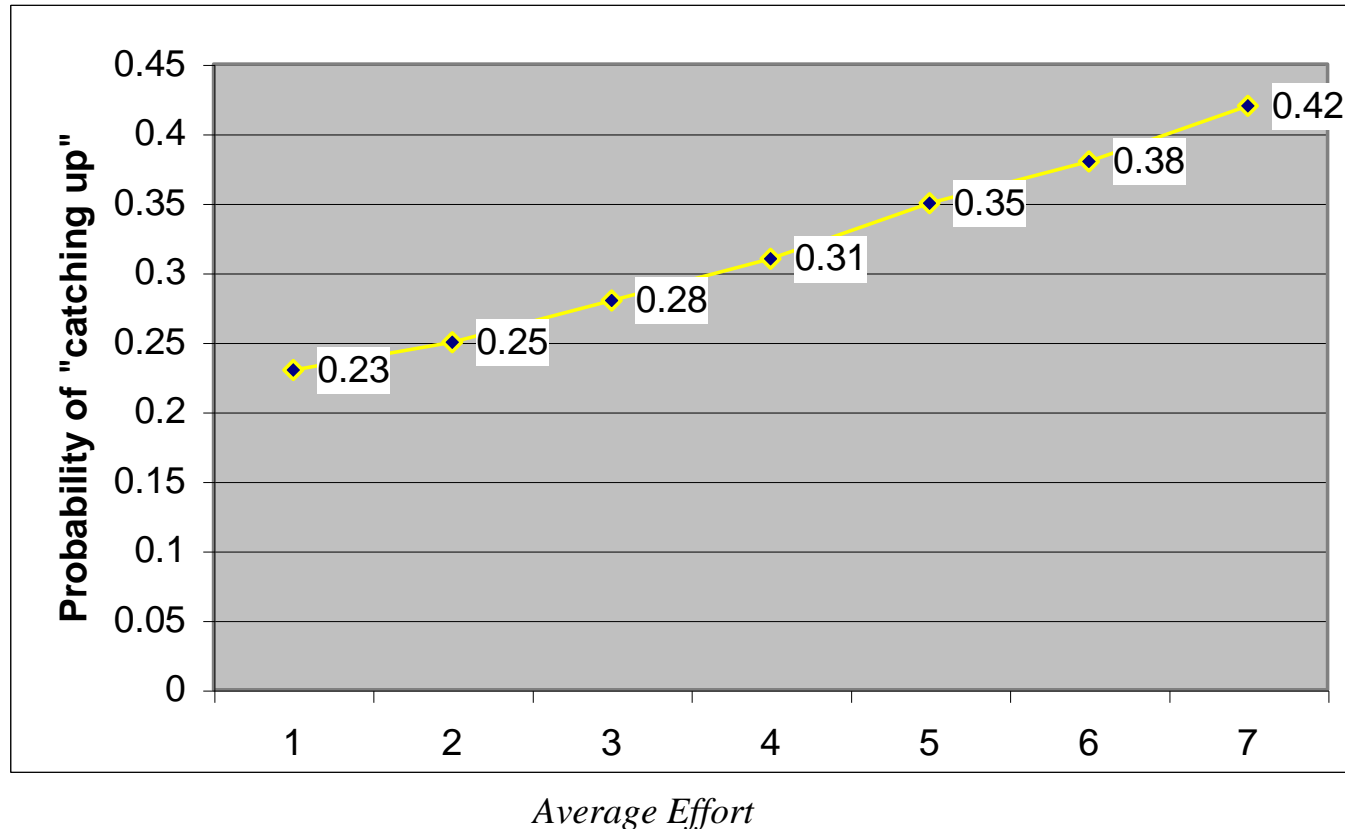


*Average Behavior Marks (1 = Excellent, 2 = Satisfactory, 3 = Unsatisfactory)  
(CEMS student; Non-Asian Student; from Cohort 1; with attendance rate of 92%; effort of 6; % of effective math teachers of 50)*



# Impact of Effort

**Figure 4** (*Impact of Effort*)



(CEMS student; Non-Asian Student; from Cohort 1; with attendance rate of 92%; behavior of 2, percentage of effective math teachers of 50)

# Why Focus On Middle Grades?

- **Adolescence** and living in neighborhoods with concentrated **poverty** have been shown to negatively impact student attendance, behavior, and effort



# Impact of Adolescence and Poverty on Attendance in Baltimore

High Poverty Neighborhood	% of Students who miss 20+ days (grades 1-5)	% of Students who miss 20+ days (grades 6-8)	# Middle Grade Students (Baltimore)
Clifton-Berea	15%	46%	513
Greenmount	15%	50%	499
Madison	21%	<b>65%</b>	552
Midway	6%	55%	553
Park Heights	17%	57%	627



# Middle Grades Dropout Prevention Study—Data and Methods

- We followed all students enrolled in the 6<sup>th</sup> grade in 1996-1997 through 2003-2004 (*one year beyond standard time to graduate*)
- We also looked at more recent cohorts of 6th graders (*1998-99, 2000-01, 2003-04*) to verify our findings
- We did a preliminary screen of about 20 variables (*i.e., test scores, overage, course failures, attendance, behavior marks*) to see which, if any, could identify as early as 6<sup>th</sup> grade students at high risk for falling off the graduation track

# Data and Methods (cont.)

- We looked for variables with a high yield (75%+ students with this characteristic do not make it to the 12<sup>th</sup> grade on time)
- Once we identified these variables, we looked at their impact on graduation status (on-time and within one extra year)

# Data and Methods (cont.)

## Examples of Variables Screened

- Student status: Special ed, ESL
- Standardized test scores: PSSA by scoring level and TerraNova by decile
- Course Failure: core courses
- 5<sup>th</sup> grade (Big Four)
- Overage: 1-2 years, 2 years+
- 9<sup>th</sup> g. repeaters
- # Suspensions
- Race and Gender
- SES

# Findings-- 4 Powerful 6<sup>th</sup> Grade Predictors of 'Falling Off Track'

- Attending school 80% or less of the time
- Receiving a poor final behavior mark
- Failing Math
- Failing English

# Significant Numbers of 6<sup>th</sup> Graders Have These Risk Factors

- In a given year, between 1,000-2,000 6<sup>th</sup> graders in Philadelphia have each of these risk factors
- Students typically have one or two risk factors
- Only a few have three, virtually none have all four
- Altogether, about 3500 6<sup>th</sup> graders in 1996/97 had *one or more* of these risk factors

# These 6<sup>th</sup> Graders Account for 40% of SDP Students Who Do Not Graduate

- 6<sup>th</sup> graders who **do not attend** regularly, receive **poor behavior** marks, *or* **fail math or English** have no more than
  - a 10% chance of graduating on time
  - a 20% chance of graduating one year late

# They Also:

- Score poorly on the PSSA
- Become overage in the middle grades
- Become 9<sup>th</sup> grade repeaters (often for several years)



# Attendance

Low attending sixth graders (students missing betw. 36 and 54 school days) have a 1 in 5 chance of making it to 12<sup>th</sup> grade on time

- Only 14% graduate on time or within one extra year

**1996-97 6th g. students attending 70-80% of the time (n=1087)**

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
6th	100%	9%	0	0	0	0	0	0
7th	0	78%	13%	0	0	0	0	0
8th	0	5%	69%	13%	1%	0	0	0
9th	0	0	0	73%	55%	41%	16%	6%
10th	0	0	0	2%	29%	27%	15%	7%
11th	0	0	0	0	1%	18%	8%	4%
12th	0	0	0	0	0	1%	20%	11%
On-Time Grad	NA	NA	NA	NA	NA	NA	10%	NA
Grad +1 Yr	NA	NA	NA	NA	NA	NA	NA	4%
Left SDP	0	8%	17%	12%	14%	13%	40%	NA

"Left SDP" includes all 'leavers': student transferred, moved, withdrew or otherwise left the District and is no longer in SDP data file

 on-track to graduation  
 4-year grad

# Behavior

Sixth graders with poor behavior (earning an unsatisfactory final behavior mark) have a 1 in 4 chance of making it to the 12<sup>th</sup> g. on time

- Only 17% graduate on time or within one extra year

**1996-97 6th g. students earning unsatisfactory behavior marks (n=1660)**

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
6th	100%	11%	0	0	0	0	0	0
7th	0	79%	15%	0	0	0	0	0
8th	0	5%	73%	14%	0%	0	0	0
9th	0	0	0	73%	51%	36%	13%	6%
10th	0	0	0	2%	34%	28%	17%	7%
11th	0	0	0	0	2%	22%	11%	5%
12th	0	0	0	0	0	1%	25%	4%
On-Time Grad	NA	NA	NA	NA	NA	NA	7%	NA
Grad +1 Yr	NA	NA	NA	NA	NA	NA	NA	10%
Left SDP	0	5%	13%	11%	14%	12%	34%	NA

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	on-track to graduation
	4-year grad



# Failed Math

Sixth graders who fail math have less than a 1 in 5 chance of making it to the 12<sup>th</sup> grade on time

- Only 21% graduate either on time or with one extra year

**1996-97 6th g. students who failed math (n=1424)**

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
6th	100%	22%	0	0	0	0	0	0
7th	0	67%	24%	0	0	0	0	0
8th	0	6%	62%	21%	0%	0	0	0
9th	0	0	0	64%	59%	44%	16%	7%
10th	0	0	0	2%	24%	27%	18%	7%
11th	0	0	0	0	1%	14%	11%	4%
12th	0	0	0	0	0	0%	17%	14%
On-Time Grad	NA	NA	NA	NA	NA	NA	10%	NA
Grad +1 Yr	NA	NA	NA	NA	NA	NA	NA	11%
Left SDP	0	5%	14%	13%	15%	13%	39%	NA

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	on-track to graduation
	4-year grad



# Failed English

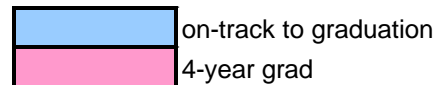
Sixth graders who fail English have a 1 in 8 chance of making it to the 12<sup>th</sup> grade on time

- Only 16% graduate on time or with one extra year

**1996-97 6th g. students who failed English (n=905)**

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
6th	100%	28%	0	0	0	0	0	0
7th	0	59%	28%	0	0	0	0	0
8th	0	7%	55%	25%	0	0	0	0
9th	0	0	0	59%	61%	47%	16%	6%
10th	0	0	0	3%	21%	27%	20%	10%
11th	0	0	0	0	2%	12%	10%	5%
12th	0	0	0	0	0	1%	13%	13%
On-Time Grad	NA	NA	NA	NA	NA	NA	9%	NA
Grad +1 Yr	NA	NA	NA	NA	NA	NA	NA	7%
Left SDP	0	7%	16%	13%	16%	13%	41%	NA

"Left SDP" includes all 'leavers': student transferred, moved, withdrew or otherwise left the District and is no longer in SDP data file



# Comparison Group

Sixth graders with 90%+ att., excellent behavior, passed math and English, and scored at or above basic on the 5<sup>th</sup> grade PSSA have more than a 3 in 4 chance of making it to the 12<sup>th</sup> grade on time

- 69% graduate on time or with one extra year

**1996-97 6th g. comparison group (n=1225)**

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
6th	100%	0%	0%	0	0	0	0	0
7th	0	92%	1%	0	0	0	0	0
8th	0	1%	92%	1%	0%	0%	0	0
9th	0	0	0	87%	8%	5%	1%	1%
10th	0	0	0	0	76%	7%	2%	2%
11th	0	0	0	0	1%	74%	4%	3%
12th	0	0	0	0	0	1%	76%	14%
On-Time Grad	NA	NA	NA	NA	NA	NA	61%	NA
Grad +1 Yr	NA	NA	NA	NA	NA	NA	NA	8%
Left SDP	0	6%	7%	12%	14%	13%	16%	80%

"Left SDP" includes all 'leavers': student transferred, moved, withdrew or otherwise left the District and is no longer in SDP data file

	on-track to graduation
	4-year grad

\*right-hand columns may >100%, as 12th graders and grads overlap (grad status being 1 of 6 status codes that students carry)



# Who Made It?

As hypothesized, sixth grade students with at least one risk factor graduated 1:4, while those students who did not exhibit any risk factors in the 6<sup>th</sup> grade graduated 4:3.

	<b>Graduated</b>	<b>Did not Graduate</b>
<b>Had Risk Factor</b>	<b>1658</b>	<b>4114</b>
<b>Did Not Have Risk Factor</b>	<b>3500</b>	<b>2765</b>

# How Many Students With These Risk Factors Are Found in Our Middle Schools?

*Middle Schools with Sixth Graders with **One or More** Risk Factors, by Poverty Level and School Size, 1996-97*

	% Low-Income	6th Grade Enrollment	<80% Att	Att + Beh	Att + Math	Att + Engl	Bad Behavior	Beh + Math	Beh +Engl	Fail English	Fail Math	Fail Math/Engl	All Four
<b>School 1</b>	46	391	51	5	9	7	35	1	1	24	41	2	1
<b>School 2</b>	60	83	5	0	1	1	1	0	0	6	6	0	0
<b>School 3</b>	86.3	377	121	26	56	45	46	2	3	68	82	6	0
<b>School 4</b>	86.1	123	25	7	16	2	23	5	1	9	37	2	1
<b>School 5</b>	90.3	268	91	22	23	11	35	3	1	14	30	1	1
<b>School 6</b>	90	171	50	16	28	20	26	1	3	28	49	1	0

# Successive Cohorts

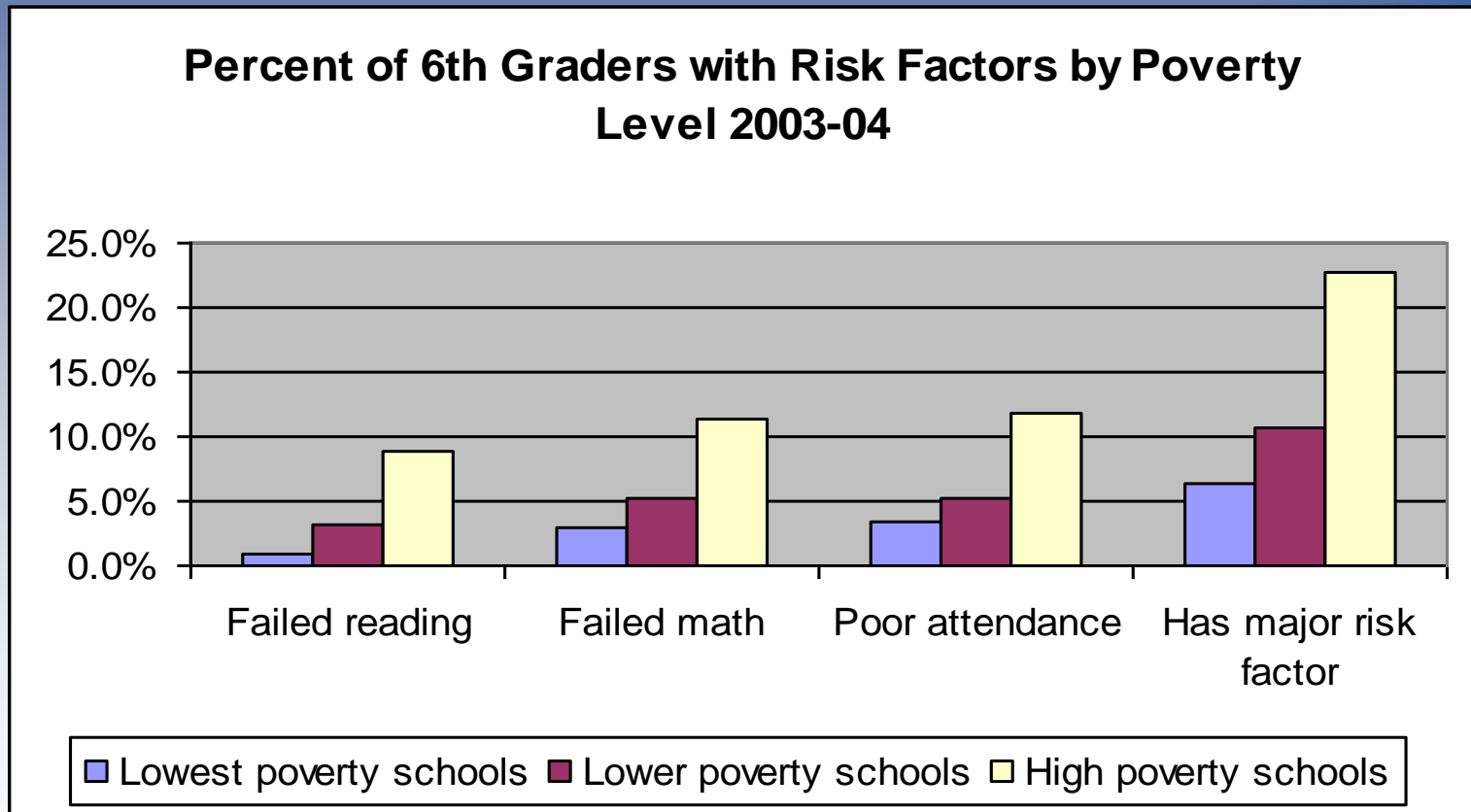
- Numbers of 6<sup>th</sup> g. students in SDP in need of interventions remains high

<b>6th Grade Predictor</b>	<b>1996-97 n=10,864*</b>	<b>1998-99 n=12,295</b>	<b>2000-01 n=11,252</b>	<b>2003-04 n=13,835</b>
<b>70-80% Attendance</b>	1087	1024	1093	884
<b>Poor Behavior</b>	1400	1650	1680	<i>Forthcoming</i>
<b>Fail Math</b>	1424	1247	1076	1302
<b>Fail English</b>	905	953	943	965

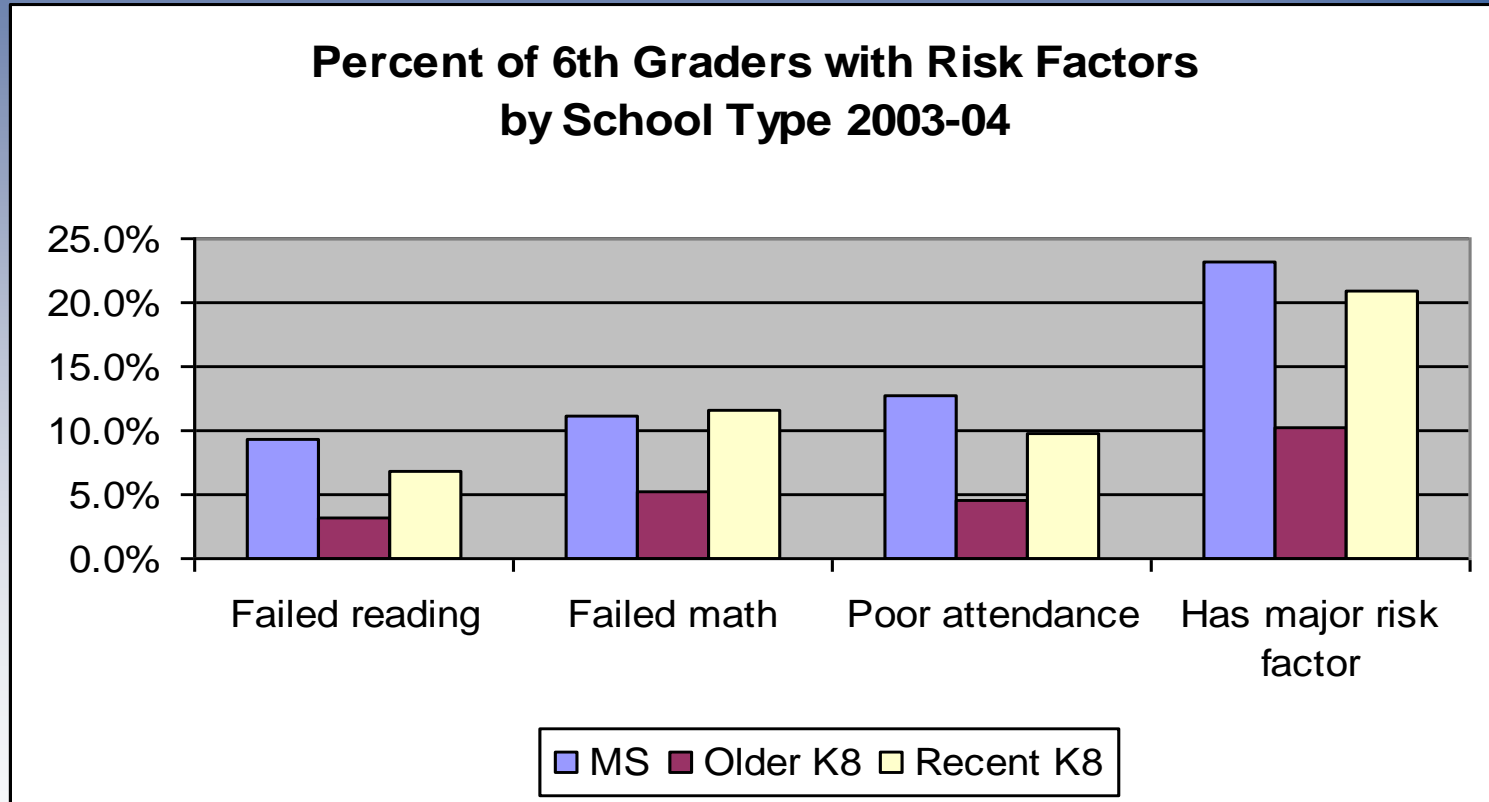
*\*all n's include students with administrative, attendance and marks data*



# Impact of Poverty on 6<sup>th</sup> Grade Risk Factors, SDP



# Impact of K-8s on 6<sup>th</sup> Grade Risk Factors, SDP



# Implications

- As early as the sixth grade, we can identify a significant percentage of students who will ultimately leave the District without graduating
- Before they drop out, these students will have multiple years of low test scores, poor behavior, and weak attendance
- This will impact not only the students themselves but the schools they attend

# Implications (cont.)

- Intervening early and getting students “back on track” will not only decrease the dropout rate but will have positive impacts on middle grade and high school test scores, attendance, and overall school climate

# Implications (cont.)

- Different groups of students will need different interventions
- As a result, the number of 6<sup>th</sup> graders needing additional supports can easily reach 50 to 100 students per school

# How Can Middle Grades Be Re-designed and Re-envisioned...

- So that students make significant achievement gains?
- So that students stay on track to graduation?

# Middle Grade Schools Need to...

- Acknowledge the impact of adolescence
- Acknowledge the impact of poverty
- Develop preventative and proactive strategies to mitigate their effects
- Have strong school-wide instructional programs, quality teachers, and strong professional development/teacher support

# Combining Academic and Social Supports is Key

- **The Good News:** Research-based programs and approaches exist for both academic and social supports, for four levels of intervention
- **The Real Deal:** Will take reorganization of human effort, resources, and outlook to implement academic and social supports well and widely



# Four Levels of Interventions Needed

- School-wide
- Targeted
- Intensive

# Interventions Needed- Attendance

	Key Components	Programs in Place
<b>Schoolwide</b>	<p><b>Close Tracking of absences</b> (daily/weekly)</p> <p><b>Meaningful Incentives</b></p> <p><b>Safety: in- and out-of-school</b></p> <p><b>Proactive Response</b> to 1st unexcused absence</p> <p><b>Survey Reasons</b> for non-attend</p>	<p>Check and Connect (Univ. of Minn.)</p> <p>British Stoplight Program</p> <p>School Attendance Initiative (SAI)</p>
<b>Targeted</b>	<p><b>Teacher Teams</b></p> <p><b>Problem Identification and solving</b></p> <p><b>Involve Families in Program Planning and Implementation</b></p>	<p>Check and Connect</p> <p>British Stoplight Program</p> <p>Proyecto Adelante (Oregon Council for Hispanic Achievement)</p>
<b>Intensive</b>	<p><b>Social Service Supports</b></p> <p><b>Effective coordination</b> with-- and referral to-- social service agencies</p>	

# Interventions Needed-- Behavior

	Key Components	Programs in Place
Schoolwide	<p><b>Teaching</b> good behavior  <b>Modelling</b> good behavior  <b>Recognition</b> for good behavior  <b>Data Tracking</b>  <b>Incentives</b></p>	<p><b>PBS (Positive Behavior Support)</b>            Univ. of Oregon</p>
Targeted	<p><b>Alternatives to Suspension-</b>            Constructive Reflection  <b>Grief Counseling</b>  <b>Anger Management</b></p>	<p><b>PBS (Positive Behavior Support)</b>            Univ. of Oregon  <b>Time Out/Accommodation Rooms</b>  <b>Second Step</b>  <b>CADE</b></p>
Intensive	<p><b>Social Service Supports-</b> effective coordination with and referral to social services</p>	<p><b>CSAP</b></p>

# Interventions Needed— Course Failure

	Key Components	Programs in Place
<b>Schoolwide</b>	<b>Strong Instructional Programs</b> with balanced procedural and conceptual components	<b>Core Curriculum</b>
<b>Targeted</b>	<b>"The Right Extra Help"</b> (e.g., decoding v. comprehension) <b>Coordination with classroom instruction</b>	<b>Elective Replacement (TDMS)</b> <b>Extra Help Labs</b> <b>Reduced Class Size (MGAP)</b> <b>Effective After-School Programs</b> (Read 180, Understanding Math)
<b>Intensive</b>	<b>Linked to classroom instruction</b> <b>Effective diagnosis</b> (what % of socio-emotional skill gap)	<b>Tutoring</b> <b>Very Small group instruction (&lt;10 students)</b>

# Conclusion

- Middle grades reform in urban, high-poverty districts needs to be based on a proactive, preventative vision
- Transition to adolescence in neighborhoods of concentrated poverty can be a perilous time
  - A near majority of Philadelphia students are falling off the grad track at this point

# Conclusion (cont.)

- Middle Grades schools need to assume that significant numbers of 6th graders will have attendance or behavior issues and/or need extra support in math and reading
- Without intervention, we can be fairly certain that these students will fall off track to graduation
- Middle grade schools need to be organized and resourced to meet the needs of these young people

# Next Steps– Need Integrated Supports

- Putting all of these interventions in place in a *coordinated, integrated, and comprehensive* fashion in schools serving middle grades students; and
- Establishing *effective partnerships* between schools and social service providers

# Contact Information

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