Student Mobility in the Kansas City Area

Results of Research Presented by
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Kansas City GradNation Summit:
*Building a Citywide plan to improve school
attendance for students from highly mobile families*
September 1, 2015

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Outline of Today

- **Definition of Mobility**

- **Data Sources**

- **Analyses**
  - School Level Measures of Student Mobility
  - Geographic and Temporal Mobility Patterns
  - Individual Student Measures of Mobility
  - Mobility and Student Demographics
  - Relationship of Mobility to Attendance and Achievement

Where are we today?

- Research & Findings = Preliminary

- Data
  - Missouri Department of Elementary & Secondary Education (DESE)
  - Partnering Local School Districts

Student Mobility is a complex issue –

Baseline to Benchmark

Definition of Mobility

- Mobility: non-routine movements of students between schools, either intra- or inter-district, that are not due to grade promotion or changed school boundaries.

  – "Transfers In" or "Transfers Out" in MO DESE Core Data
  – Others, such as suspensions and drop outs, not included

Data Sources

- **Missouri DESE**
  - Summary Transfer Data for Public Schools in Jackson County
  - De-identified Enrollment & Attendance Records
    - All public school students, which includes charter students
    - 3 counties: Clay, Jackson, and Platte
    - Includes Exit Codes, which help determine reason for/type of transfer

    The DESE data do not contain demographic or achievement information.

- **Local districts**
  - De-identified student level enrollment, attendance, and performance, including some demographic
 - Sample size was more than 161,000 students

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How does one use the data?

ZIP code

$24,250 ⬇ =

2015 Neighborhood Poverty

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What do the DESE aggregate data tell us about school-level mobility?

- Definition of School-Level Mobility:
  - (TRANSFERS IN + TRANSFERS OUT)

    (SEPT. Enrollment)

- Also called "churn rate."

- Most common mobility measure found in the literature.

Data Source: MO Department of Elementary & Secondary Education
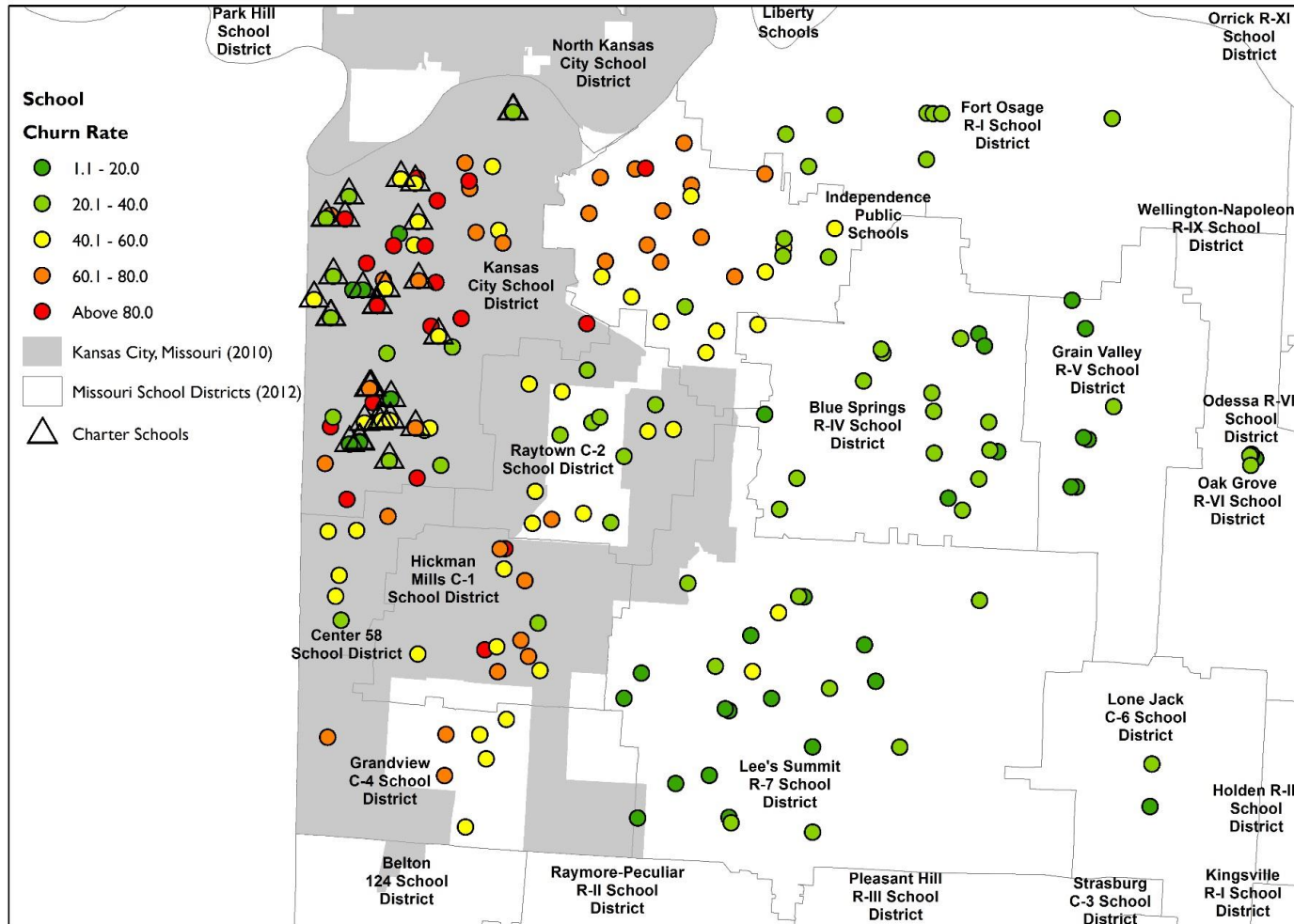
Source: Institute for Policy & Social Research, The University of Kansas; data from Kansas City Area Education Research Consortium (KC-AERC), boundary and location data from Missouri Spatial Data Information Service (MSDIS).

What can we learn from individual level data?

- Pattern of mobility FROM schools and TO schools
  - Including exit codes for reason for/type of transfer
- Distinguish WHEN transfers occur
  - during the school year (by month)
  - over the summer
- Calculate how many students have 0, 1, 2, 3+ transfers during a year
- Identify the districts (and schools) where highly mobile students are enrolled

In theory, we could examine the effect of mobility over several years, although not done for this project.

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Kansas City Area Student Mobility

Summer Transfers 2015

FROM:	TO:				
	Charter	Another Metro District	Same Metro District	Other	Total
Charter	507	537	0	118	1,162
Metro District	881	4,373	2,484	4,924	12,662
Other	343	5,525	0	N/A	5,868
Total # transfers	1,731	10,435	2,484	5,042	19,692

During School Year Transfers 2015

FROM:	TO:				
	Charter	Another Metro District	Same Metro District	Other	Total
Charter	77	440	0	471	988
Metro District	252	4516	3343	6734	14,845
Other	490	8274	0	N/A	8,764
Total # transfers	819	13,230	3,343	7,205	24,597

Data Source: MO Department of Elementary and Secondary Education

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1.25 to 1

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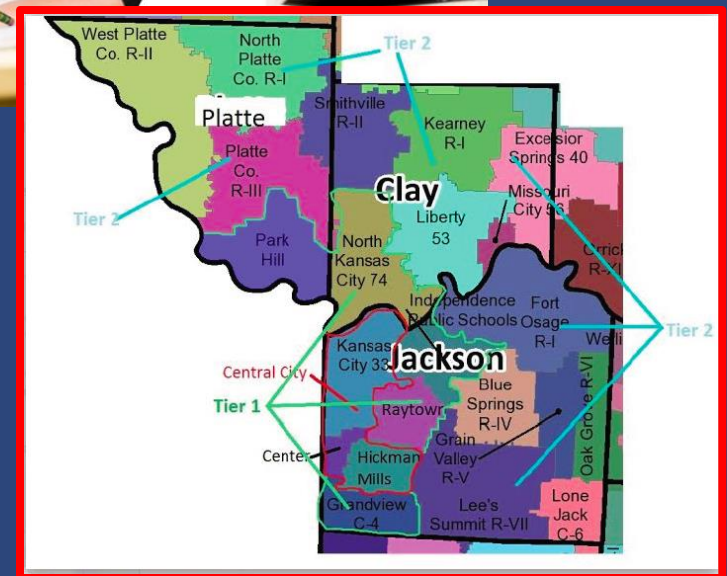Data Source: MO Department of Elementary and Secondary Education
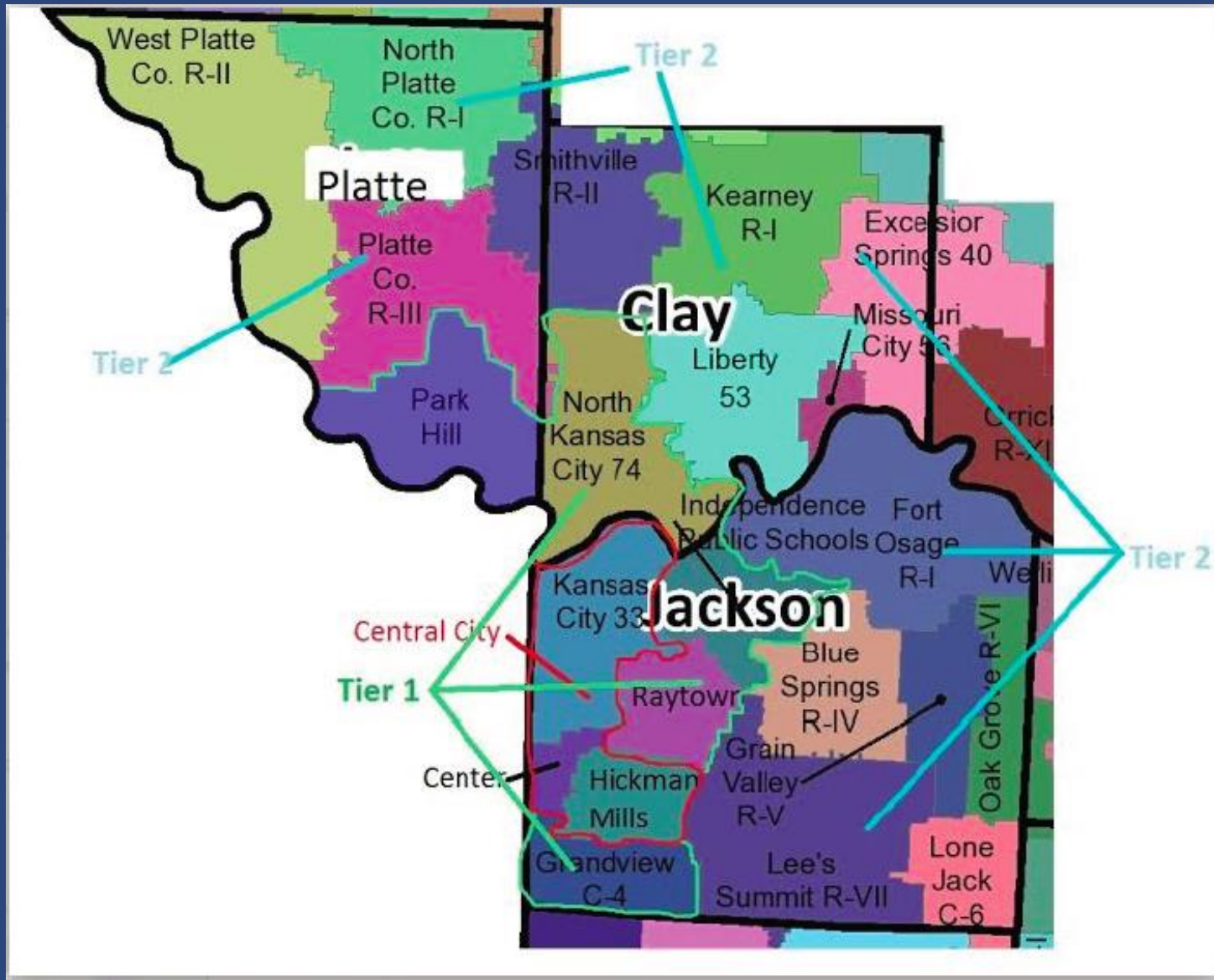
Individual Student Mobility
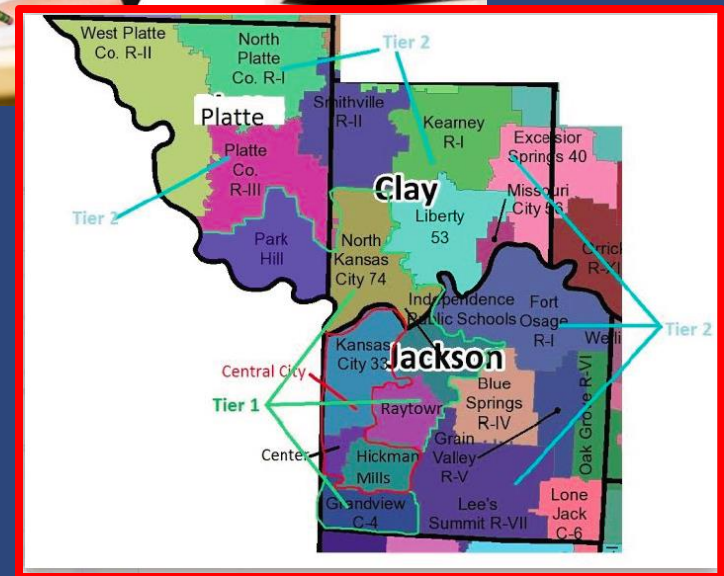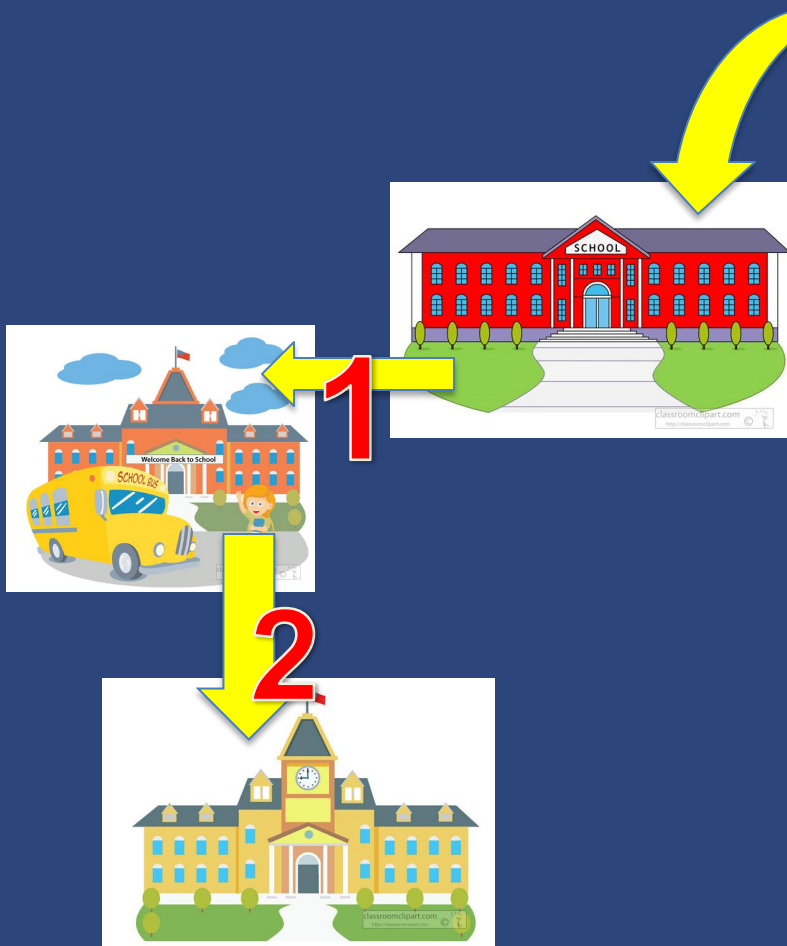
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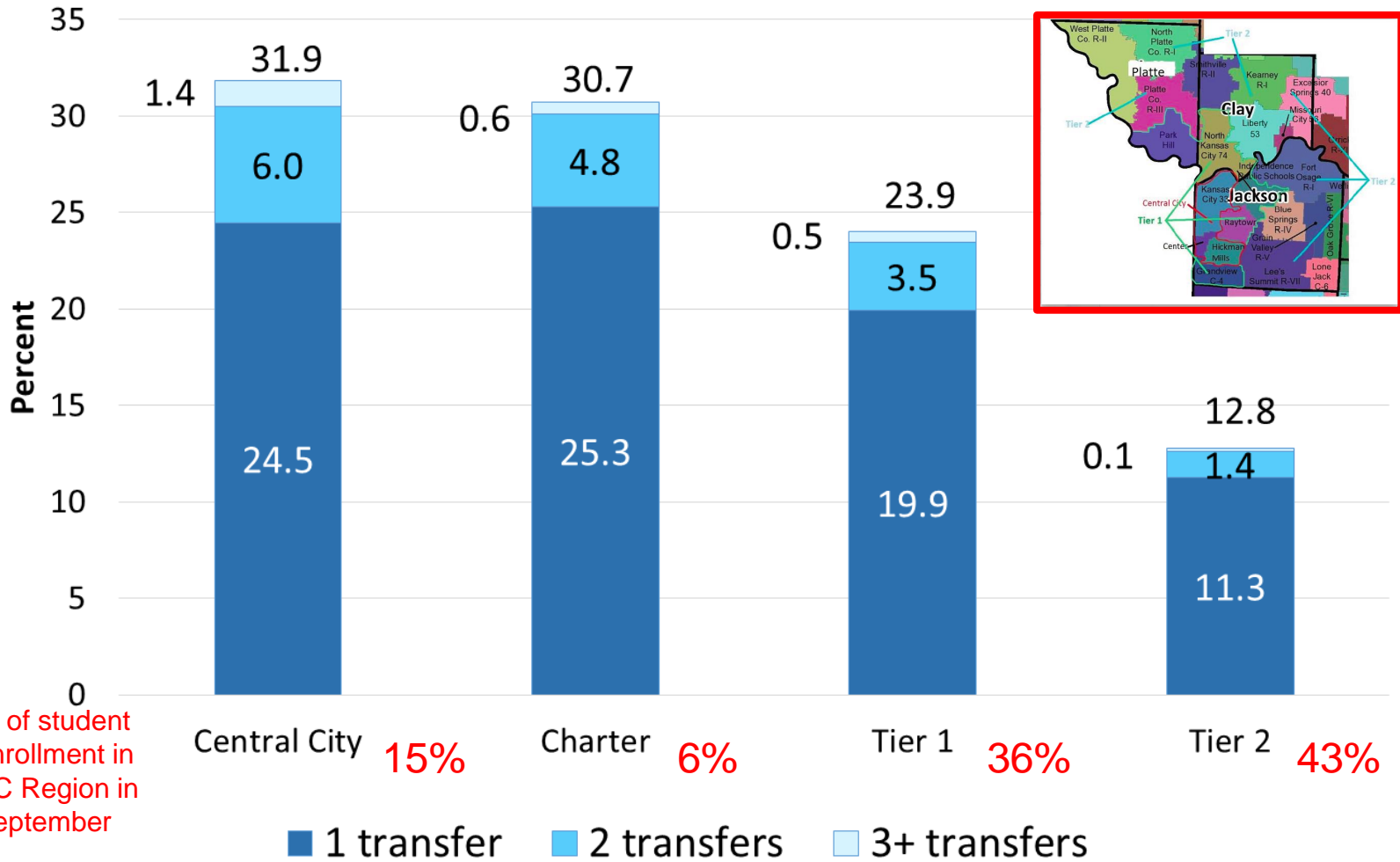
- More than 1 in 5 students (22.7%)
  - 36,799 students in 2015
- More than 6,350 students changed schools 2 or more times
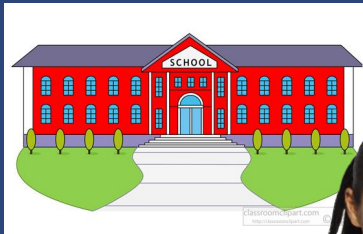

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Individual Mobility by Area

KC Area	0	1	2	3+	# students "served" in districts	Sep 2015 enroll (for reference)
Number and % of Students with 0, 1, 2, 3+ Transfers 2015						
Central City	19,300	6,932	1,698	389	28,319	24,089
Charter	7,599	2,772	530	69	10,970	10,118
Tier 1	48,075	12,600	2,241	342	63,258	57,940
Tier 2	63,071	8,136	988	102	72,297	69,463
Total	138,045	30,440	5,457	902	174,844	161,610
Students in area as % of all students in category						
Central City	14.0%	22.8%	31.1%	43.1%		14.9%
Charter	5.5%	9.1%	9.7%	7.6%		6.3%
Tier 1	34.8%	41.4%	41.1%	37.9%		35.9%
Tier 2	45.7%	26.7%	18.1%	11.3%		43.0%
Total	100.0%	100.0%	100.0%	100.0%		100.0%

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Data Source: MO DESE

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Students with 1, 2, and 3+ Transfers in Year
As % of Students with Last Enrollment in District

% of student enrollment in KC Region in September

Central City 15% Charter 6% Tier 1 36% Tier 2 43%

■ 1 transfer ■ 2 transfers □ 3+ transfers

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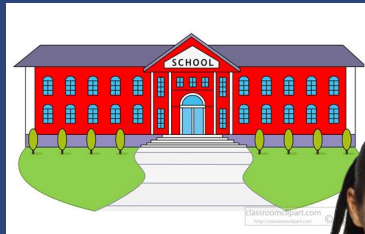
Mobility and Attendance
Data Source: Local KC School Districts During School Year 2014

Transfer Student

- 4.5% lower attendance rate

- Instructional Days Missed between schools
  - Average = 4 days
  - 1 of 2 students miss 0, 1 or 2 days
  - 25% miss 6 or more days with 10% missing 12 or more days and 5 % missing 16 or more

Mobility and Attendance
Data Source: MO DESE

Transfer Student

Changed schools in 2013 = 3 times more likely to have changed schools in 2015

What are the cumulative effects of such mobility for individual students?

What is the impact of mobility across grade levels?

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Mobility and Achievement
Data Source: Local KC School Districts

Controlling for ethnicity, homelessness, neighborhood poverty and English Language Learner status …

A student who has a transfer (1 or more) is **only 60% as likely to be proficient in Communication Arts** as a student who does not have a transfer.

Missouri Standardized Assessments
Grades 3-8 in 2015

A student who has a transfer (1 or more) is **only 62% as likely to be proficient in Math** as a student who does not have a transfer.

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Demographics and Mobility: Ethnicity
Data Source: Local KC School Districts

Demographics and Mobility for 8 Selected Districts			
2014			
	Base # of Students	# Mobil Students (School Year)	% Mobile
Total	91,352	13,884	15.2
Ethnicity			
Asian	2,195	262	11.9
Black/African American	30,026	5,595	18.6
Hispanic	13,350	2,014	15.1
American Indian/Native American	415	77	18.6
Multi-racial	3,684	733	19.9
Pacific islander/Native Hawaiian	423	79	18.7
White	41,259	5,124	12.4

Demographics of All Students Compared with Mobile Students
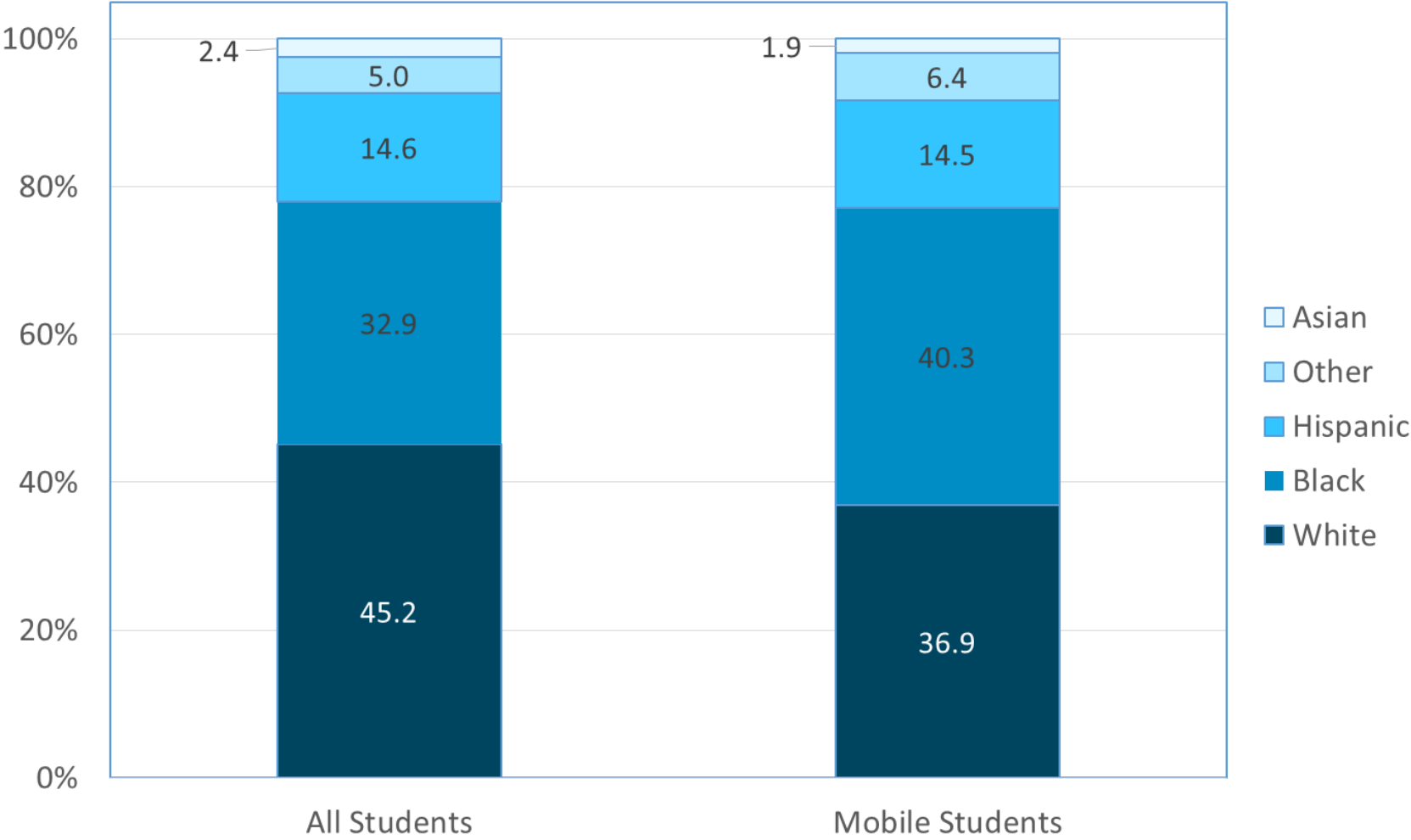
Demographics and Mobility: Other Factors
Data Source: Local KC School Districts

	Base # of Students	# Mobil Students (Schl Year)	% Mobile
Other Demographics			
Homeless	3,365	1,273	37.8
English Language Learner	8,840	1,482	16.8
Poverty			
Total students with poverty information	69,021	11,090	16.1
(based on zip code--not available for all students)			
Living in neighborhood with < 15% poverty	19,812	2,322	11.7
15.1% - 25% poverty	18,362	2,572	14.0
25.1% - 45% poverty	15,452	2,949	19.1
45.1% + poverty	15,395	3,247	21.1

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Combined Effects of Demographics on Transfers
Data Source: Local KC School Districts

What is the likelihood of a student having one or more transfers during academic year? (All demographic factors and poverty level considered simultaneously.)

- Asian students 33% less likely to transfer than white students

- Black students 17% more likely to transfer than white students

- Hispanic students 11% less likely to transfer than white students

- Other students of color 40% more likely to transfer than white students

- Homeless students 200% more likely to transfer than non-homeless

- English language learners 5% more likely to transfer than non-ELL

- Students in a zip code with 10% higher poverty 14% more likely to transfer

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Transfers TO KCPS - During 2015 School Year by Month

FROM:	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Total
Central City (inc. KCPS)	197	234	189	136	86	208	132	124	76	25	1,407
Charters	6	20	33	40	22	35	20	23	17	3	219
Tier 1	5	47	48	35	24	62	45	32	23	5	326
Tier 2	0	5	16	8	4	21	15	5	8	2	84
Another Public in state	137	94	65	39	29	90	49	54	39	16	612
Home school	5	9	14	6	12	5	9	14	13	2	89
Private school in state	11	4	8	1	0	7	3	5	0	2	41
Out of state	166	115	92	106	44	137	69	106	72	9	916
Drop out	8	15	22	18	10	22	15	12	11	6	139
Another country	26	33	30	28	16	40	16	20	22	8	239
Total	561	576	517	417	247	627	373	395	281	78	4,072
% of transfers	13.8	14.8	12.7	10.2	6.1	15.4	9.2	9.7	6.9	1.9	100

Note: August after first 3 days of school. May before last two days of school.
Data Source: MO Department of Elementary and Secondary Education

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More Questions to Answer

- Are aggregate in-migration and aggregate out-migration similar in the schools in the different types of districts?

- How are percent of students transferring into a school related to aggregate performance on state assessments?

- How does omitting mobile students affect state accreditation measures?

- How are number of school changes related to performance at the individual student level?

- How are number of school changes related to student background characteristics?

KC Connections to Literature & National Context

- "Existing research suggests that student mobility, in general, leads to negative impacts on student test scores and dropout rates, with the most pronounced effects from frequent (3 or more) moves" (Rumberger)
  - All of this could be examined for the schools here in the metropolitan area given the cooperation for sharing of student-level data, local research expertise and funding.

  Let's LEARN from our LOCAL CONTEXT
  - Are there schools who are "out-performing" peer schools with students who are mobile? If so, who are they and what are the strategies they are using to do so? How can these be replicated and supported in other schools?

KC Mobility Summary

- **Patterns of Mobility by Area**
  - By Schools, rather than just as a district dynamic
  - Central City and Tier 1 Districts have proportionally higher numbers of mobile students
- **Patterns of Mobility Timing**
  - September, October and even November have high numbers of transfers (August & January)
  - 1.25 transfers during year to every 1 transfer in the summer

KC Mobility Summary

- Combined Effects of Demographics on Transfers
  - Asian students 33% less likely to transfer than white students
  - Black students **17% more likely** to transfer than white students
  - Hispanic students **11% less likely** to transfer than white students
  - Other students of color **40% more likely** to transfer than white students

KC Mobility Summary

- Homeless students 200% more likely to transfer than non-homeless

- English language learners 5% more likely to transfer than non-ELL

- Students in a zip code with 10% higher poverty 14% more likely to transfer

- Indications of Chronic Mobility
  - Changed schools in 2013 = 3 times more likely to have changed schools in 2015

KC Mobility Summary

- **Attendance**
  - 4.5% lower attendance rate
  - Average missing 4 days between each transfer with 10% missing 12 or more days each move
- **Achievement**
  - only 60% as likely to be proficient in Communication Arts
  - only 62% as likely to be proficient in Math

How many students are mobile in the metro?

- **More than 1 in 5 students (22.7%)**
  - 36,799 students in 2015
  - From Local Selected Districts in 2014, 1 in 7 students were mobile
- **More than 6,350 students changed schools 2 or more times in 2015**

What will we do as a community?