Impact of Waivers in 1240 Schools

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and the House Committee on Education
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Presentation Overview

- Review of analysis plan
- Changes in demographics, performance and expenditures in Act 1240 Schools between 2015-16 and 2018-19
  - Schools with and without waivers
- Impact of waivers based upon regression analysis
  - Impact of Instructional waivers
  - Resource Use waivers
  - Individual waivers (with over 10% of schools)

APA's Approach

- To build upon BLR's work and not duplicate it, APA:
  - Focused on impact of waivers on Act 1240 schools
    - Excluding Conversion Charters and Open-Enrollment Charters
  - Examined the areas that schools receive waivers in, not individual waivers
    - Examined waiver areas aggregated into instructional and resource use categories, then individually for the waivers with held by more than 10% of schools to have sufficient sample size
    - Excluded waivers for schedule changes
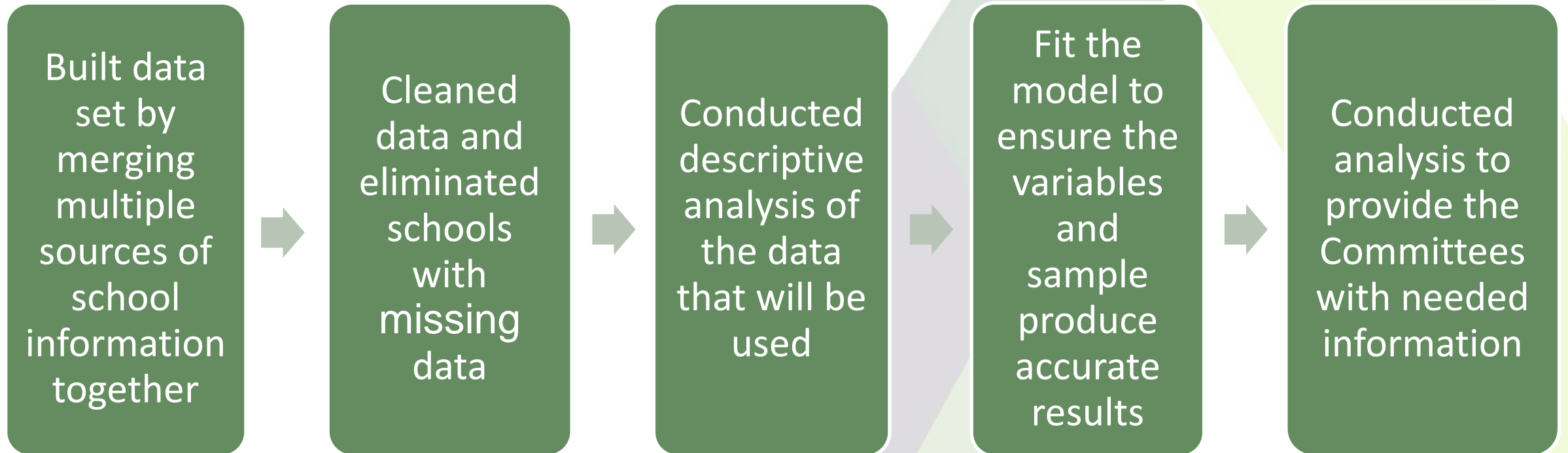 - Analyzed impact of waivers over time

Why Focusing on Act 1240 Schools?

- Included majority of schools
  - In 2019-20, 94 percent of all schools in the state had a waiver through Act 1240
- Since waivers have only been granted since 2015 in Act 1240 schools, it allowed the study team can evaluate the impact of waivers over time
  - Had available waiver, performance and expenditure data for this period
  - Allowed for comparison between "treatment" and control group (with waivers vs. without waivers in specific areas and aggregated categories)
  - Conversion Charters and Open-Enrollment Charters have been allowed waivers since 1995, no ability to examine impact (before and after) based upon available data so excluded

Analysis Plan

- To determine the impact of waivers in Act 1240 schools, APA:
  - Analyzed available waiver, demographic performance, and expenditure from 2015-2019 using a linear regression model
  - Compared the changes in performance outcomes and expenditure levels before (2015-16) and after (2018-19) the implementation of the waiver between schools that have a waiver and those that do not (by individual area or aggregated category)
  - Controlled for available school characteristics such as:
    - Student need (percentage of students eligible for free and reduced lunch, in special education or are English Learners)
    - School size
    - Grade-level
    - Performance or expenditure level prior to receiving the waiver

Analysis Process

| Built data set by merging multiple sources of school information together | → | Cleaned data and eliminated schools with missing data | → | Conducted descriptive analysis of the data that will be used | → | Fit the model to ensure the variables and sample produce accurate results | → | Conducted analysis to provide the Committees with needed information |

Data for Analysis

- To produce sample of of 929 schools:
  - Combined three data sources
    - Waiver data provided by the BLR
    - Expenditure data from the Arkansas Statistical Report
    - School performance and characteristics from ADE My School Info
  - Excluded open enrollment and conversion charter schools
  - Excluded schools with missing data
- Disaggregated sample schools out by school type and waiver (instructional, resource use, individual waiver area)

Aggregated Waiver Variable: Waivers with Potential Impact on Instruction/Student Outcomes

- Teacher Licensure
- Attendance
- Library Media
- Credit Hours
- Class Size and Teaching Load
- Salaries/Compensation/Personnel Polices
- Principal
- Alternative Learning Environment
- Planning Periods

- Guidance and Counseling
- Curriculum
- Duty-Free Lunch
- Superintendent
- Achievement Gap Task Force
- Student Services
- Advanced Placement

Aggregated Waiver Variable: Waivers with Potential Impact on Resource Use/Expenditures

- Teacher Licensure
- Attendance
- Library Media
- Credit Hours
- Class Size and Teaching Load
- Salaries/Compensation/Personnel Polices
- Facilities
- Principal

- Alternative Learning Environment
- Planning Periods
- Guidance and Counseling
- Duty-Free Lunch
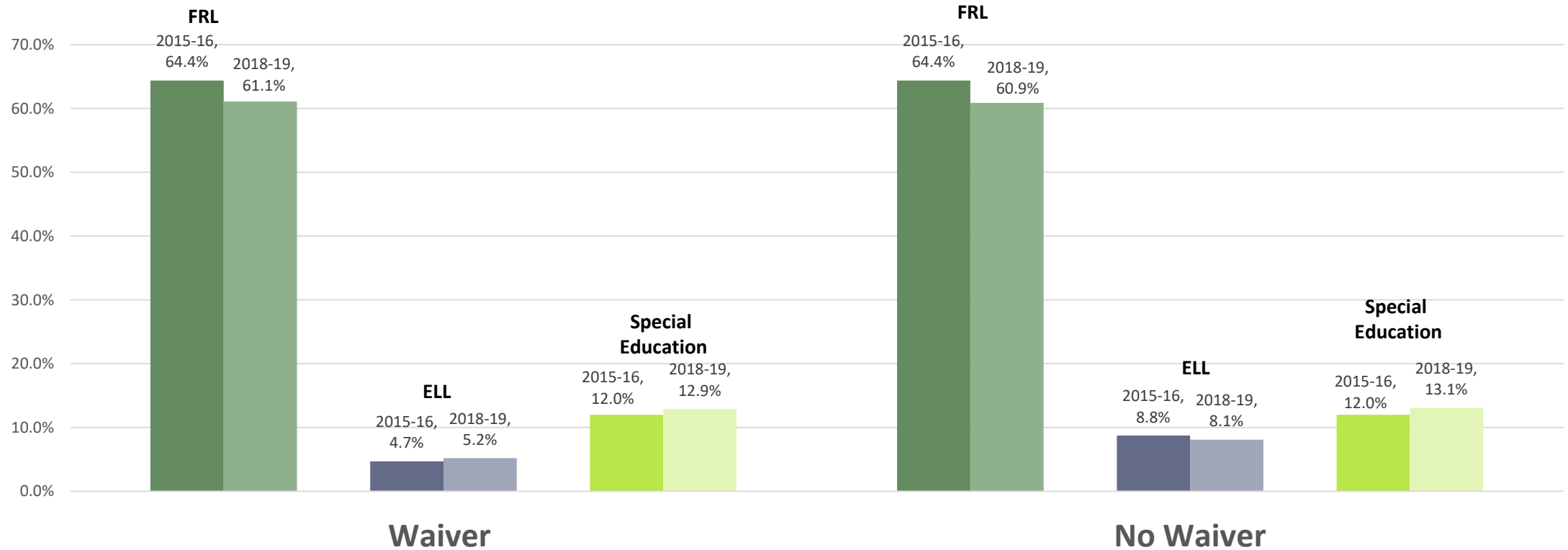- Superintendent
- Student Services

Sample Data Compared to the State
(Excluding Open Enrollment and Conversion Charters)

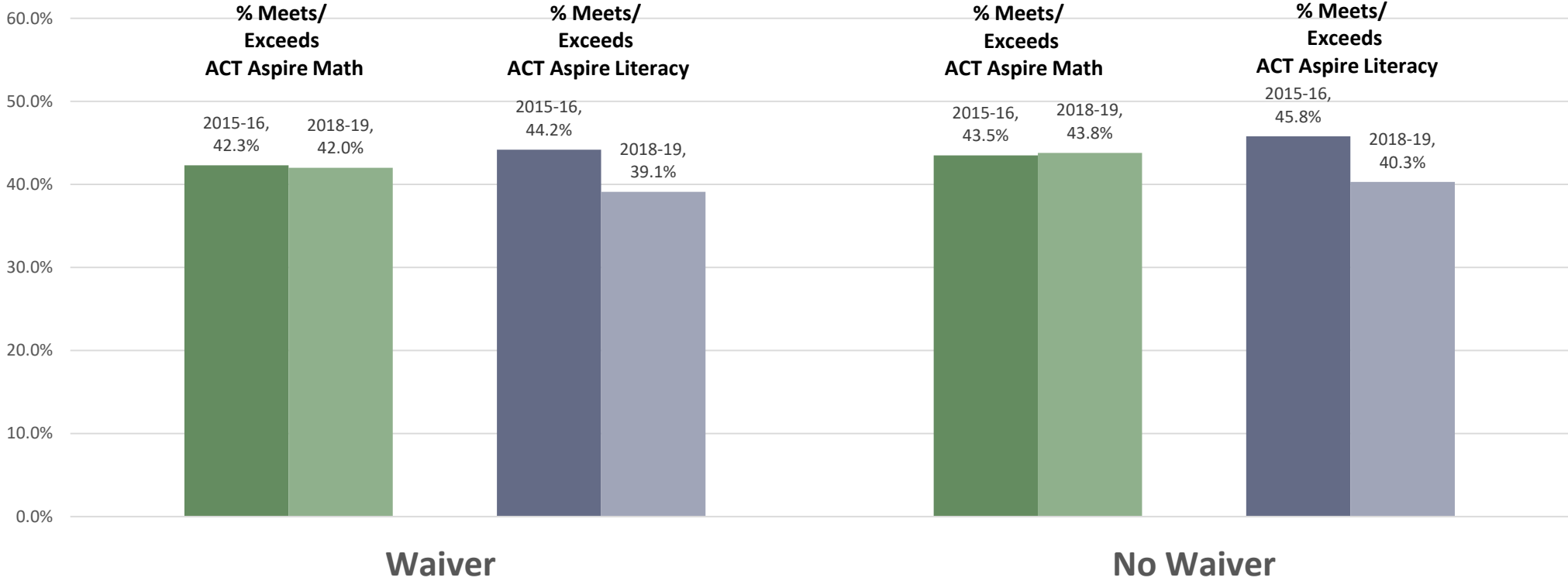|	State	Sample
Average Enrollment	464	466
Percent Free-reduced Price Students	64.0%	61.7%
Percent Special Education	13.9%	13.0%
Percent English Language Learners	7.0%	6.7%
Percentage Meets/Exceeds Aspire Math	46.6%	43.3%
Percentage Meets/Exceeds Aspire Literacy	39.8%	39.9%
Total Expenditures Per Pupil	$8,387	$8,331
Total Instructional Expenditures Per Pupil	$5,760	$5,664
Total Support Services Expenditures Per Pupil	$1,493	$1,472

Change in Act 1240 Schools Demographics

Change in Demographics, Comparing 2015-16 to 2018-19

Waiver:
- FRL: 2015-16, 64.4% / 2018-19, 61.1%
- ELL: 2015-16, 4.7% / 2018-19, 5.2%
- Special Education: 2015-16, 12.0% / 2018-19, 12.9%

No Waiver:
- FRL: 2015-16, 64.4% / 2018-19, 60.9%
- ELL: 2015-16, 8.8% / 2018-19, 8.1%
- Special Education: 2015-16, 12.0% / 2018-19, 13.1%

Change in Act 1240 Schools Performance

Change in ACT Aspire Achievement, All Grades, Comparing 2015-16 to 2018-19

% Meets/ Exceeds ACT Aspire Math — 2015-16, 42.3%; 2018-19, 42.0%

% Meets/ Exceeds ACT Aspire Literacy — 2015-16, 44.2%; 2018-19, 39.1%

% Meets/ Exceeds ACT Aspire Math — 2015-16, 43.5%; 2018-19, 43.8%

% Meets/ Exceeds ACT Aspire Literacy — 2015-16, 45.8%; 2018-19, 40.3%

Waiver

No Waiver

Change in Act 1240 Schools Expenditures

Change in Expenditures, Comparing 2015-16 to 2018-19
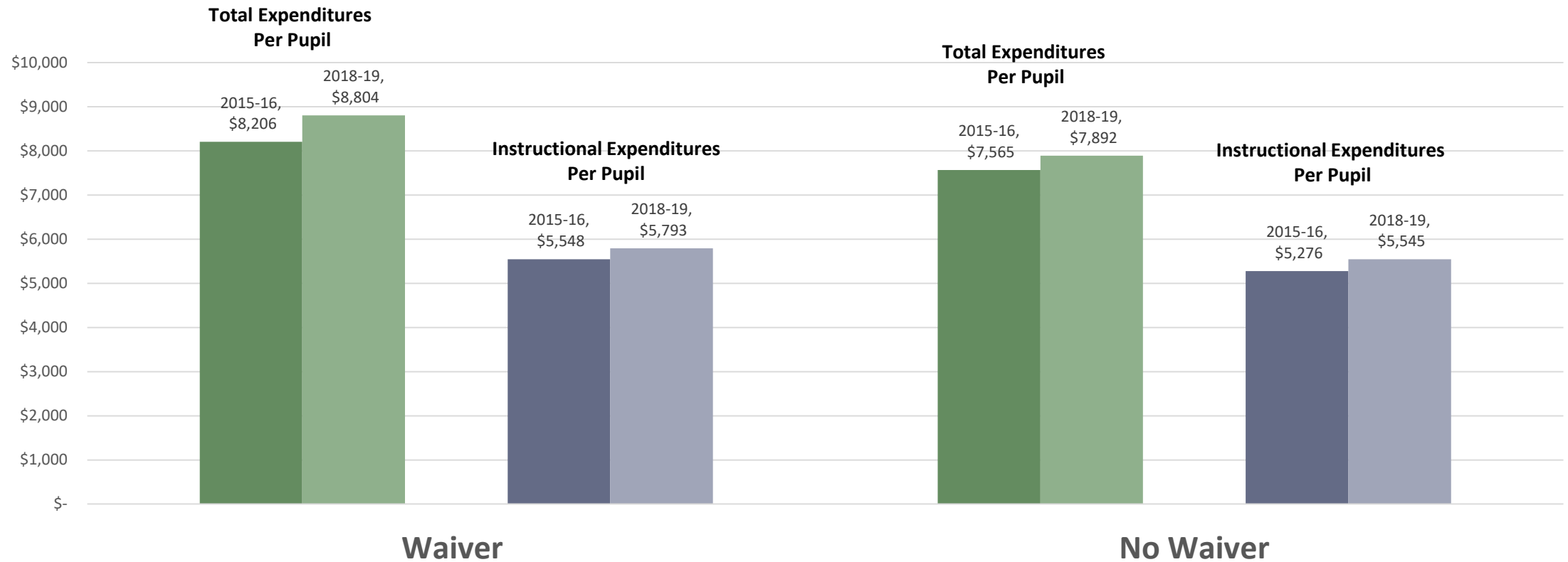
Regression Analysis

- Is the outcome different for schools with and without waiver(s) statistically significant after controlling for:
  - Starting point in 2015-16 (either expenditure or performance level)
  - Student characteristics including enrollment, demographics and grade level
- Significance determination:
  - Not significant (NS) means the difference is not statically different from 0
    - Identify whether the difference is probably higher than zero (+) or less than zero (-)
  - Statistically significant was p-value of .05 or less
  - When you do multiple statistical tests expect 1 out of 20 results to be a false positive
- Even with statistically significant difference, does not tell you whether the waiver caused changes in outcomes (correlation vs. causation)

Regression Analysis:
Aggregated and Individual Waiver Areas

- School considered to have a waiver if held for at least one year
- Waivers aggregated as Instructional or Resource
- Individual waivers also examined if more than 10% of schools had a waiver in that area
  - Teacher Licensure
  - Attendance
  - Library Media
- Examined multiple outcomes
  - Performance on ACT Aspire, Achievement and Growth for All Grades
    - Math and Literacy (ELA growth)
    - All Students and for FRL Students
  - Expenditures Per Pupil
    - Total and Instructional

Aggregated Waiver Achievement/Growth Regression Analysis

Is having waiver(s) associated with:	Instruction Waiver	Resource Waiver
All Students		
Change in Math Achievement	NS +	NS +
Change in Math Growth	NS +	NS +
Change in Literacy Achievement	NS +	NS +
Change in ELA Growth	NS -	NS +
FRL Students		
Change in Math Achievement	NS +	NS +
Change in Math Growth	NS +	NS +
Change in Literacy Achievement	NS +	S + (1.2 % pt. ↑)
Change in ELA Growth	NS +	NS +

No clear result: waivers might be associated with slightly better outcomes

Aggregated Waiver Expenditure Regression Analysis

Is having waiver(s) associated with:	Instruction	Resource
Change in Instructional Expenditures Per Pupil	NS -	NS +
Change in Total Expenditures Per Pupil	NS +	S + ($613 ↑)

Resource waivers are associated with an increase in total expenditure per pupil

Individual Waiver Area Achievement/Growth Regression Analysis

Is having a waiver associated with:	Attendance	Licensure	Library Media
Change in Math Achievement	S + (2.0 % pt. ↑)	S - (1.9 % pt. ↓)	NS -
Change in Math Growth	S + (.64 pt. ↑)	NS-	S - (.74 pt. ↓)
Change in Literacy Achievement	NS +	NS -	NS -
Change in ELA Growth	S + (.54 pt.↑)	NS -	NS -

Attendance waivers are associated with slightly better outcomes
Library and licensure waivers might be associated with lower achievement

Questions?