Clinical Child BMI Data Work Group Project

Ellen Amore, KIDSNET, Center for Health Data & Analysis, RIDOH
Jim Beasley, formerly of Rhode Island KIDS COUNT
Carolyn Belisle, Blue Cross & Blue Shield of Rhode Island
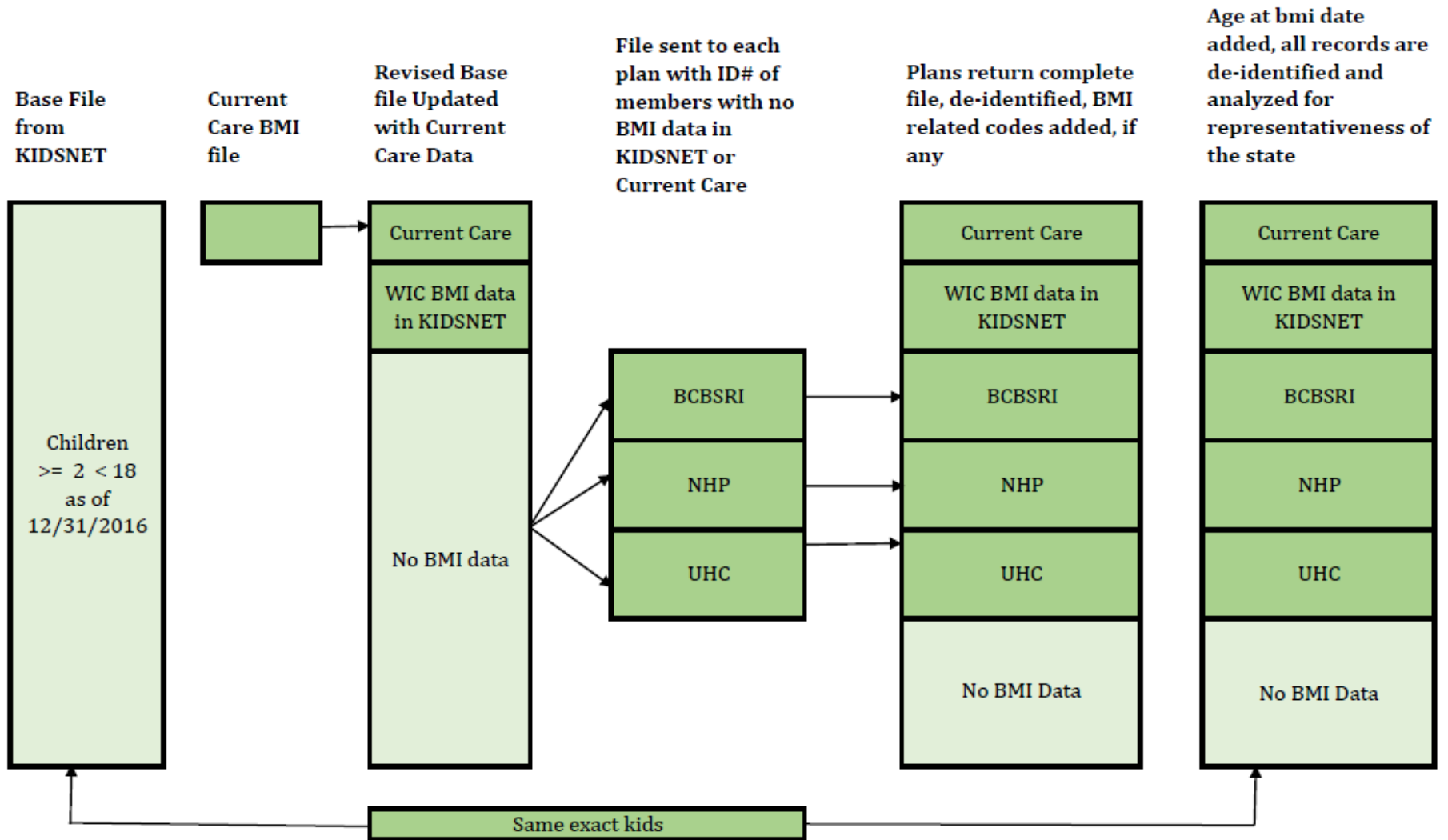Libby Bunzli, Office of the Health Insurance Commissioner
Melissa Lauer, Executive Office of Health & Human Services
Devan Quinn, Rhode Island KIDS COUNT
Michelle Rogers, Hassenfeld Child Health Innovation Institute
Patrick Vivier, Hassenfeld Child Health Innovation Institute

SIM BMI Data Work Group Project Schematic

Base File from KIDSNET

Current Care BMI file

Revised Base file Updated with Current Care Data

File sent to each plan with ID# of members with no BMI data in KIDSNET or Current Care

Plans return complete file, de-identified, BMI related codes added, if any

Age at bmi date added, all records are de-identified and analyzed for representativeness of the state

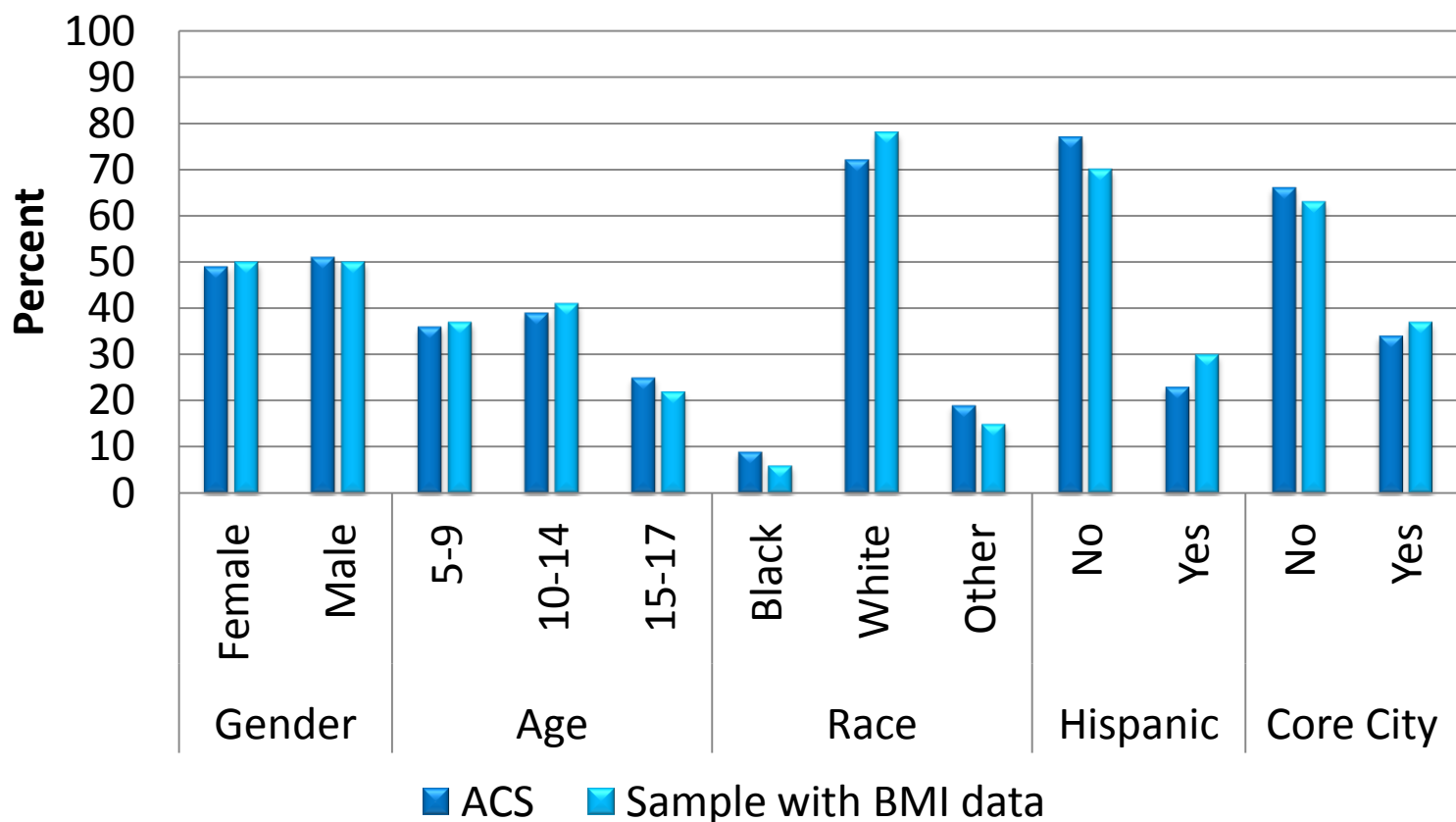| Base File	Current Care BMI file	Revised Base		Plans return	Age at bmi
Children >= 2 < 18 as of 12/31/2016		Current Care		Current Care	Current Care
		WIC BMI data in KIDSNET		WIC BMI data in KIDSNET	WIC BMI data in KIDSNET
		No BMI data	BCBSRI	BCBSRI	BCBSRI
			NHP	NHP	NHP
			UHC	UHC	UHC
				No BMI Data	No BMI Data

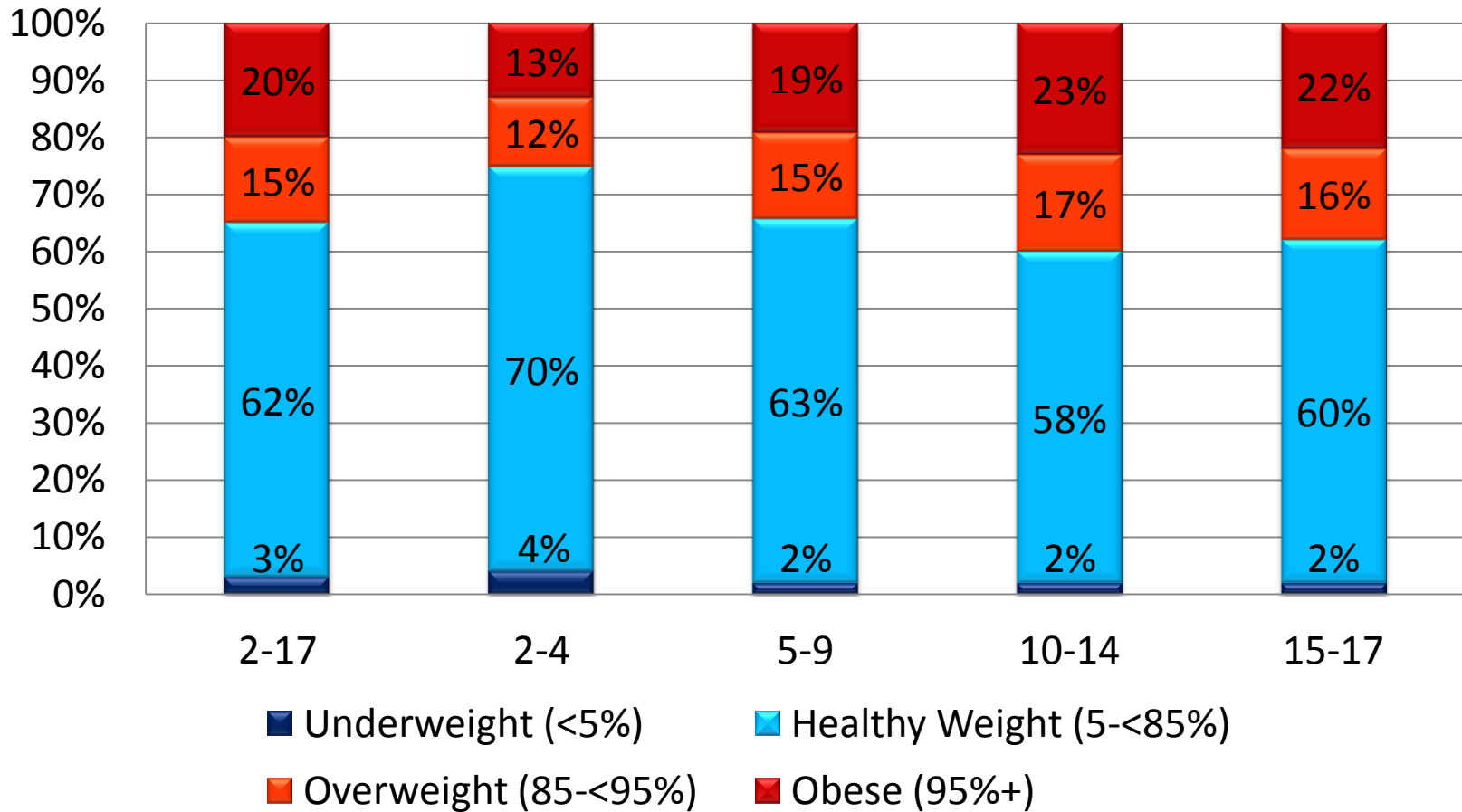**Same exact kids**

Data Fields Collected

- Actual height and weight
- BMI
- ICD9, ICD10 or HCPCS (billing) codes related to BMI
  - Included codes for both children and adults because sometimes adult codes are used for teens

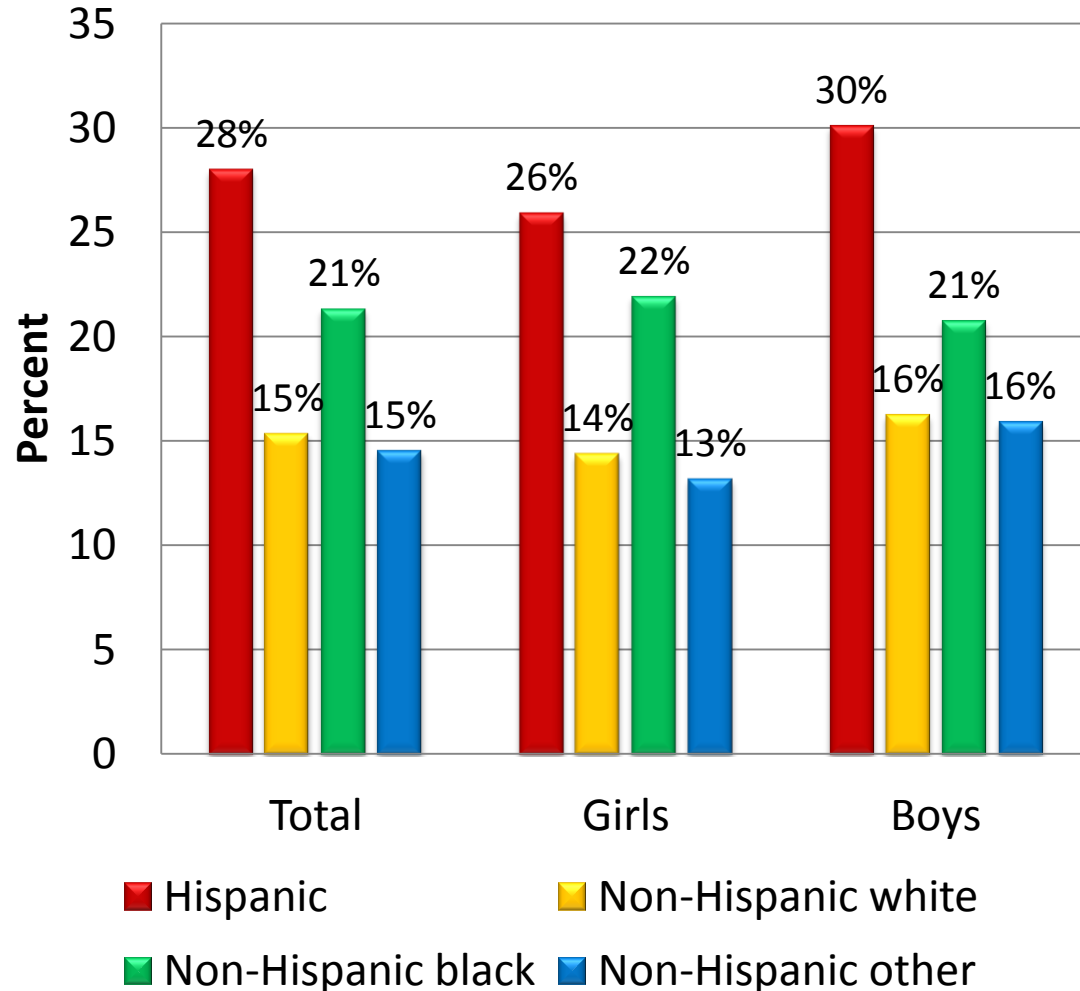| Source	#	%
Current Care	7,446	3.0%
KIDSNET (BMI)	4,636	1.9%
Current Care and KIDSNET both had data	296	0.1%
MCO - Return files (with ICD10 or HCPS code)	29,169	11.8%
MCO - Return files (with BMI_PERCENTILE)	3,012	1.2%
MCO - Return files (with no BMI related data)	77,035	31.1%
Not in MCO file and no BMI data in KIDSNET or Current Care	126,407	51.0%
Total	248,001	

American Community Survey vs. Project Sample with BMI Data = Representative Sample

BMI Category by Age Group

	2-17	2-4	5-9	10-14	15-17
Obese (95%+)	20%	13%	19%	23%	22%
Overweight (85-<95%)	15%	12%	15%	17%	16%
Healthy Weight (5-<85%)	62%	70%	63%	58%	60%
Underweight (<5%)	3%	4%	2%	2%	2%

■ Underweight (<5%) ■ Healthy Weight (5-<85%)

■ Overweight (85-<95%) ■ Obese (95%+)

Obesity: Racial/Ethnic Disparities

- 28% of Hispanic children & 21% of black children are obese

- Nearly one-third of Hispanic boys are obese

Obesity Rates by Town & County

Towns:

Lowest:

Barrington (7%)
East Greenwich (9%),
Glocester (11%)

Highest:

Providence (26%)
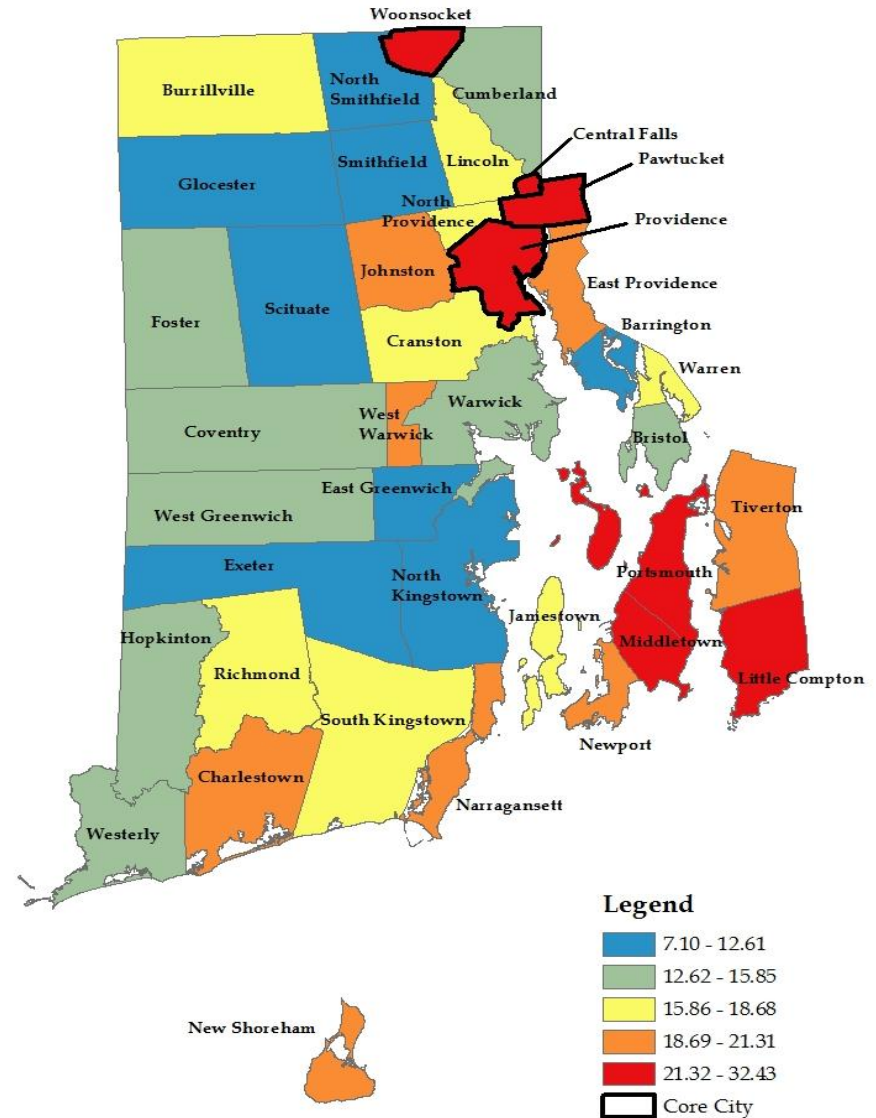Central Falls (29%)
Little Compton (32%)
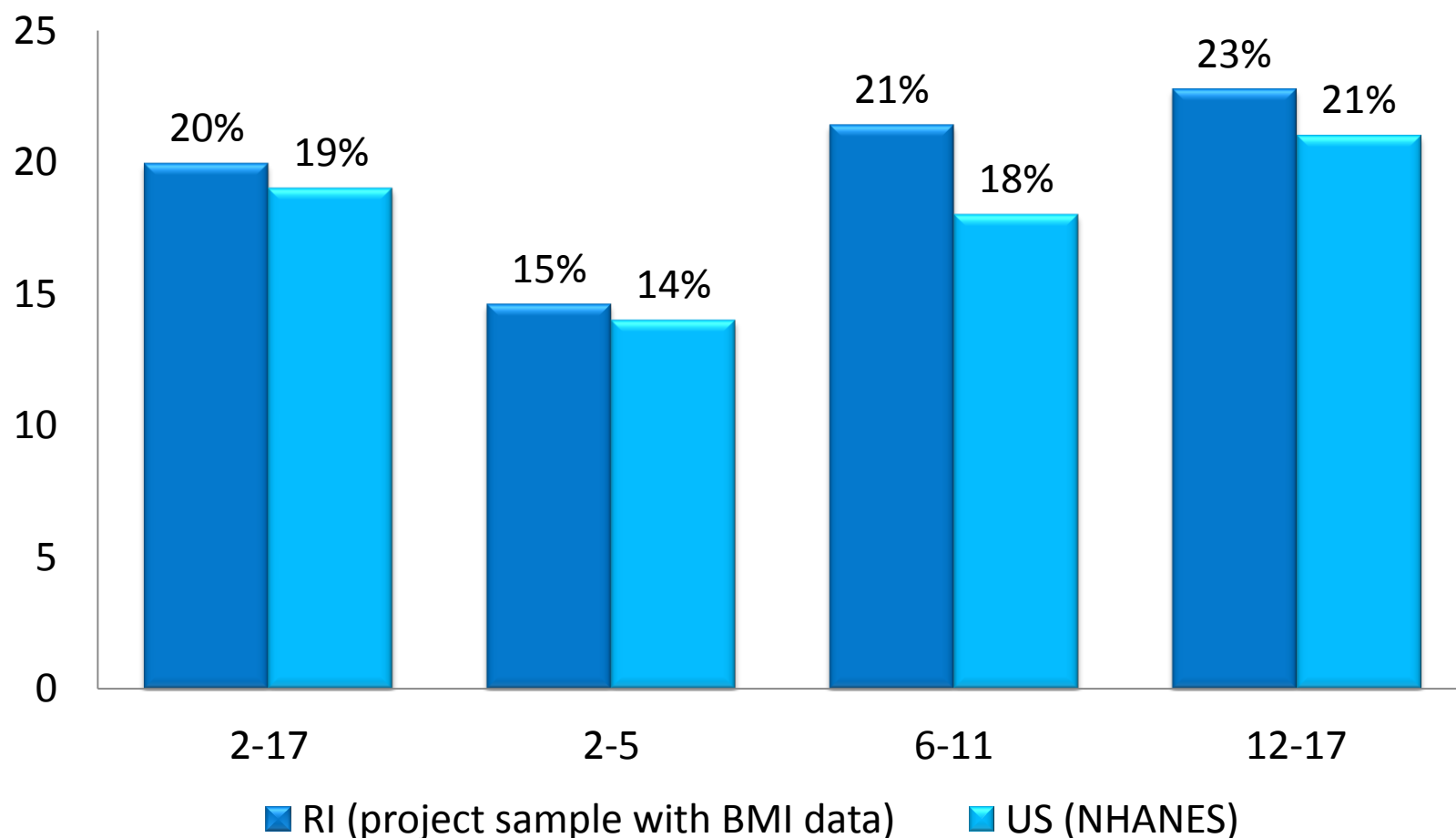
Counties:

Lowest:

Bristol County (13%)

Highest:

Newport County &
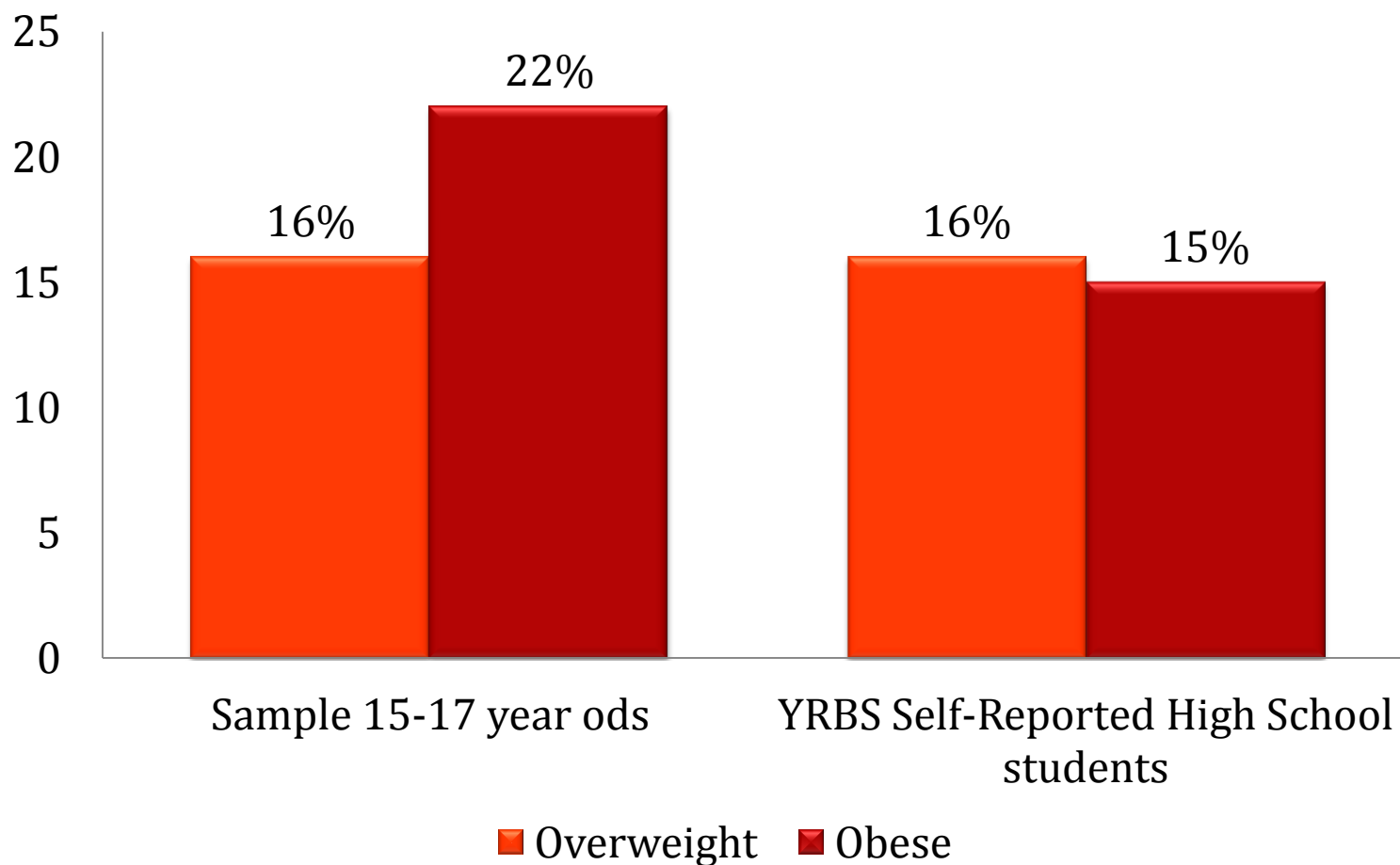Providence County (22%)

Compared to National Clinical Rates

US rates:
https://www.cdc.gov/nchs/products/databriefs/db288.htm,
NHANES 2015-2016

Compared to State Self-Reported Data

State Update on Regulatory/Legislative Options

- Regulatory Options
- Legislative Options

THANK YOU

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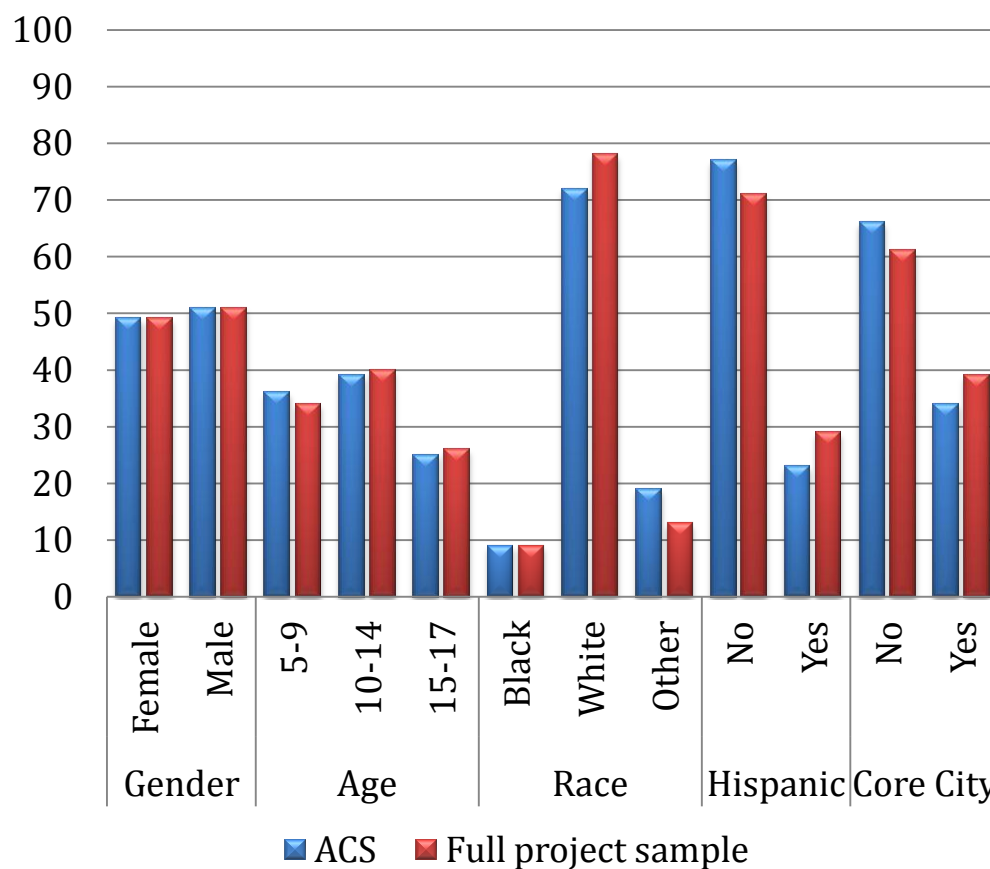Melissa Lauer, Executive Office of Health & Human Services
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ACS vs. Full Project Sample

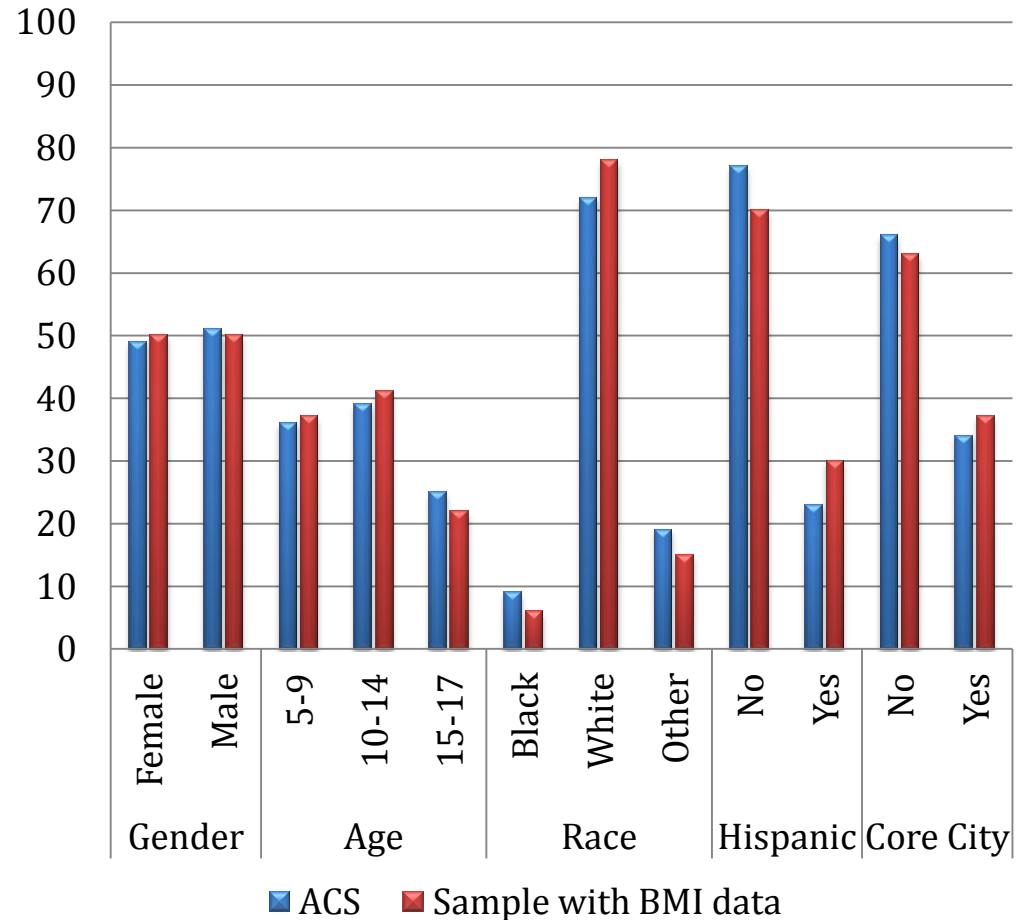|	ACS 2012-2016 (ages 0-17)		BMI project sample (ages 2-17)	
	Count	%	Count	%
Total	212,406	100	248,001	100
Gender				
Female	103,587	49	121,206	49
Male	108,819	51	126,708	51
Missing	-		87	
Age*				
5-9	56,610	36	71,478	34
10-14	62,248	39	83,239	40
15-17	38,781	25	55,434	26
Race**				
Black	19,284	9	14,366	9
White	153,172	72	124,778	78
Other	39,950	19	21,309	13
Missing	-		87,548	
Hispanic				
No	163,038	77	88,179	71
Yes	49,368	23	35,836	29
Unknown	-		123,986	
Core City				
No	140,847	66	151,527	61
Yes	71,559	34	96,474	39

All comparisons statistically significant, p<.001 except for gender

*Data not shown for ages 2-4 because ACS only provides ages 0-4

**Other includes children classified as American Indian/Alaskan Native, Asian, Hawaiian, multi-race, and other

ACS vs. Project Sample with BMI Data

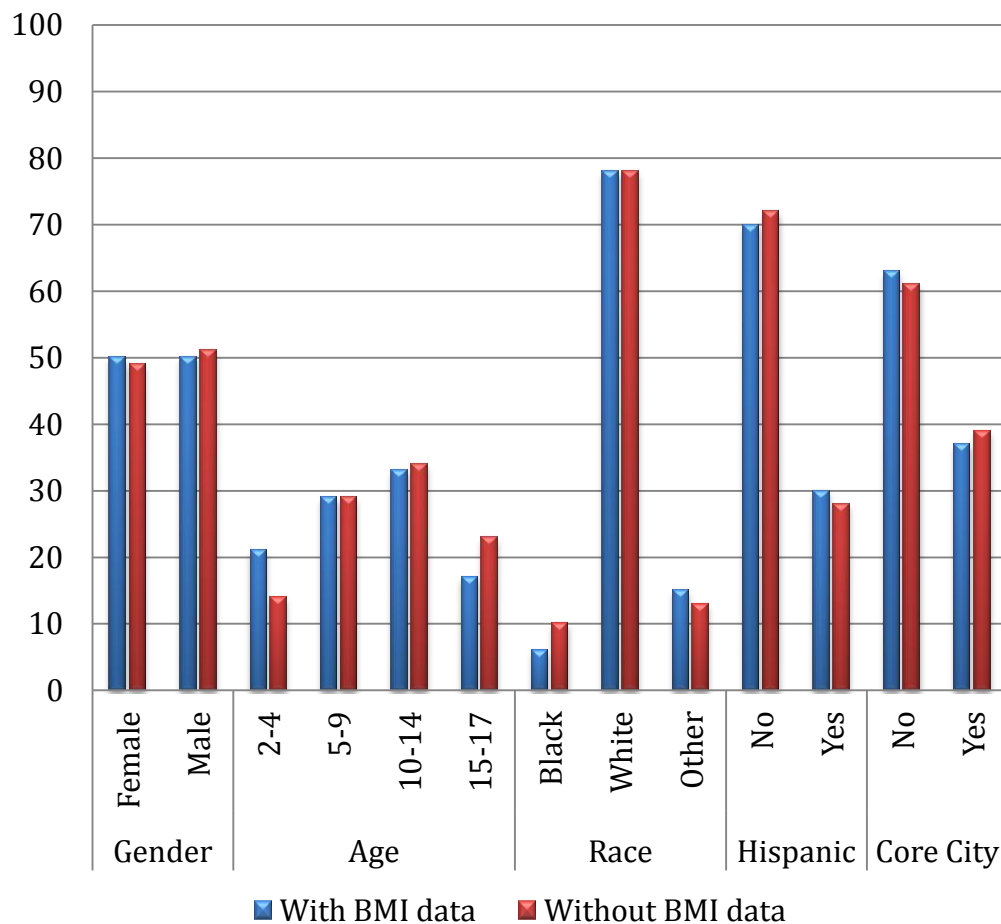|	ACS 2012-2016 (ages 0-17)		KidsNet sample with BMI data (ages 2-17)	
	Count	%	Count	%
Total	212,406	100	41,394	100
Gender				
Female	103,587	49	20,563	50
Male	108,819	51	20,831	50
Missing	-		-	
Age*				
5-9	56,610	36	12,107	37
10-14	62,248	39	13,474	41
15-17	38,781	25	7,030	22
Race**				
Black	19,284	9	2,119	6
White	153,172	72	25,571	78
Other	39,950	19	4,960	15
Missing	-		8,744	
Hispanic				
No	163,038	77	19,024	70
Yes	49,368	23	8,321	30
Unknown	-		14,049	
Core City				
No	140,847	66	26,259	63
Yes	71,559	34	15,135	37

All comparisons statistically significant, p<.001

*Data not shown for ages 2-4 because ACS only provides ages 0-4

**Other includes children classified as American Indian/Alaskan Native, Asian, Hawaiian, multi-race, and other

Project Sample with vs. without BMI Data

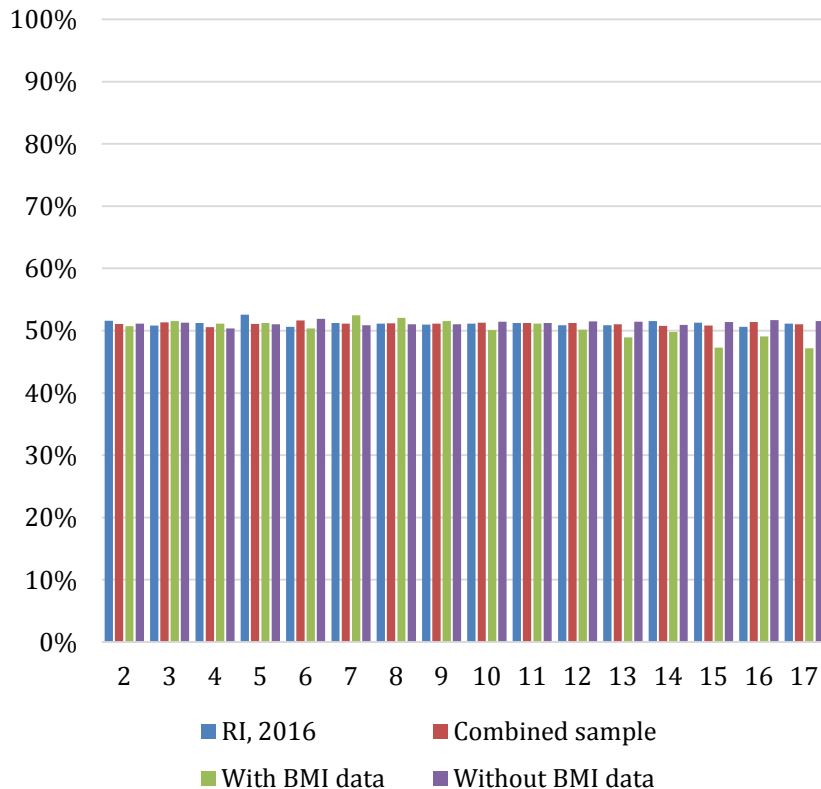|	KidsNet sample with BMI data (ages 2-17)		KidsNet sample without BMI data (ages 2-17)	
	Count	%	Count	%
Total	41,394	100	206,607	100
Gender				
Female	20,563	50	100,643	49
Male	20,831	50	105,877	51
Missing	-		*87*	
Age*				
2-4	8,783	21	29,067	14
5-9	12,107	29	59,371	29
10-14	13,474	33	69,765	34
15-17	7,030	17	48,404	23
Race*				
Black	2,119	6	12,247	10
White	25,571	78	99,207	78
Other	4,960	15	16,349	13
Missing	*8,744*		*78,804*	
Hispanic				
No	19,024	70	69,155	72
Yes	8,321	30	27,515	28
Unknown	*14,049*		*109,937*	
Core City				
No	26,259	63	125,268	61
Yes	15,135	37	81,339	39

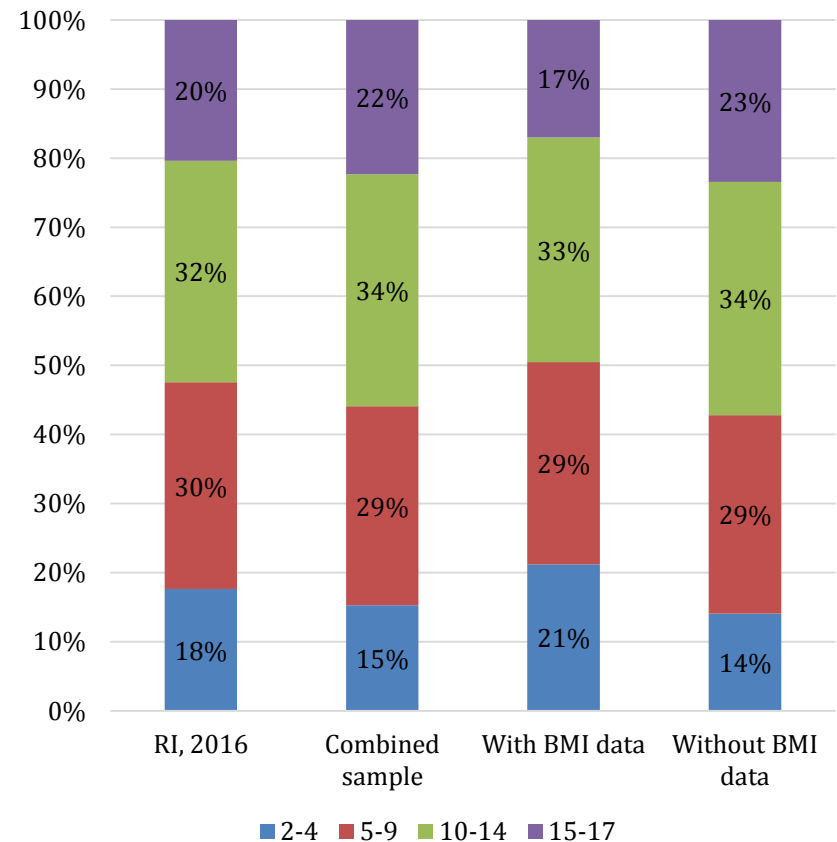*All comparisons statistically significant, p<.001*

*Other includes children classified as American Indian/Alaskan Native, Asian, Hawaiian, multi-race, and other

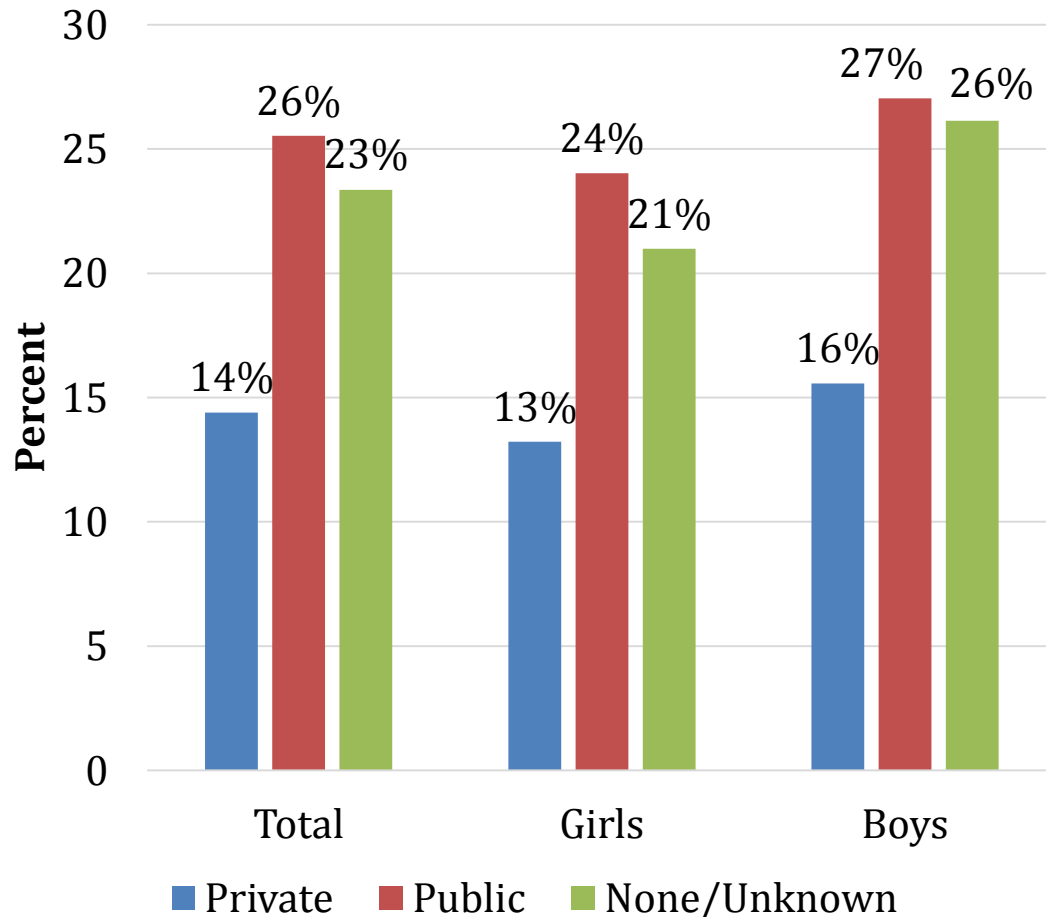# Age and Gender Distribution: Comparing Census to BMI Project Sample

Percent male, by single year of age

Legend: ■ RI, 2016 ■ Combined sample ■ With BMI data ■ Without BMI data

Age distribution

	RI, 2016	Combined sample	With BMI data	Without BMI data
15-17	20%	22%	17%	23%
10-14	32%	34%	33%	34%
5-9	30%	29%	29%	29%
2-4	18%	15%	21%	14%

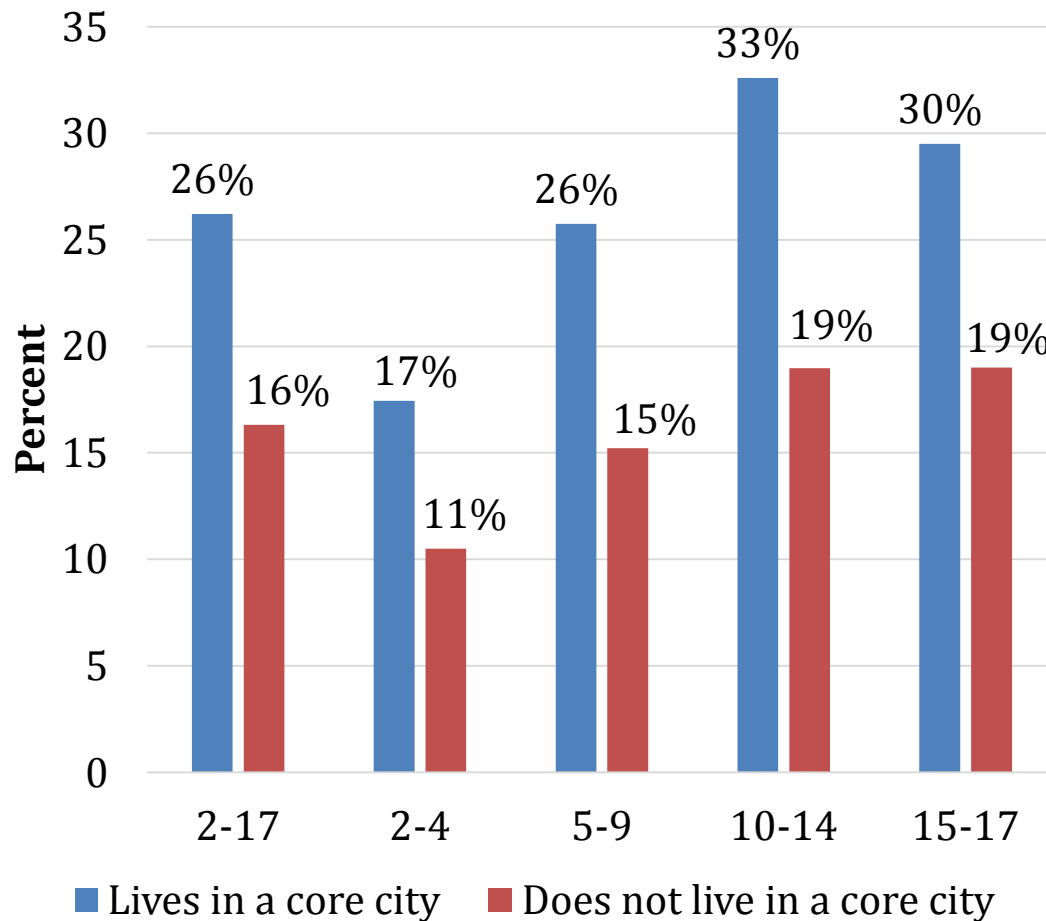Legend: ■ 2-4 ■ 5-9 ■ 10-14 ■ 15-17

Insurance coverage

- Obesity rates are higher for those with public insurance and those with no or unknown coverage

Core city

- One in four children living in a core city are obese

State-level rates

- RI KidsCount Factbook
  - High School Youth Risk Behavior Survey (grades 9-12), 2017: 15%
  - Children under age 18 living in Providence who are active patients of a Providence Community Health Center, 2017: 25%
  - Children age 3-5 enrolled in a Head Start program: 18%
  - Children age 2-4 enrolled in WIC: 18%

BMI project sample: prevalence of obesity among children age 2-17, by sex and age