

# bridging the gap

Research Informing Policies & Practices  
for Healthy Youth

## Availability of out-of-school physical activity programs in communities around the US

140<sup>th</sup> Annual Meeting of the American Public Health Association  
San Francisco, CA, October 29, 2012

**Christopher M Quinn<sup>1</sup>, Sandy J Slater<sup>1</sup>, Dianne C Barker<sup>2</sup>, Frank J Chaloupka<sup>1</sup>, Lloyd Johnston<sup>3</sup>, Patrick M O'Malley<sup>3</sup>**

*<sup>1</sup> Institute for Health Research and Policy, University of Illinois at Chicago, Chicago, IL*

*<sup>2</sup> Public Health Institute, Oakland, CA*

*<sup>3</sup> Institute for Social Research, University of Michigan, Ann Arbor, MI*

# Presenter Disclosure

Christopher M. Quinn

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

**No relationships to disclose**

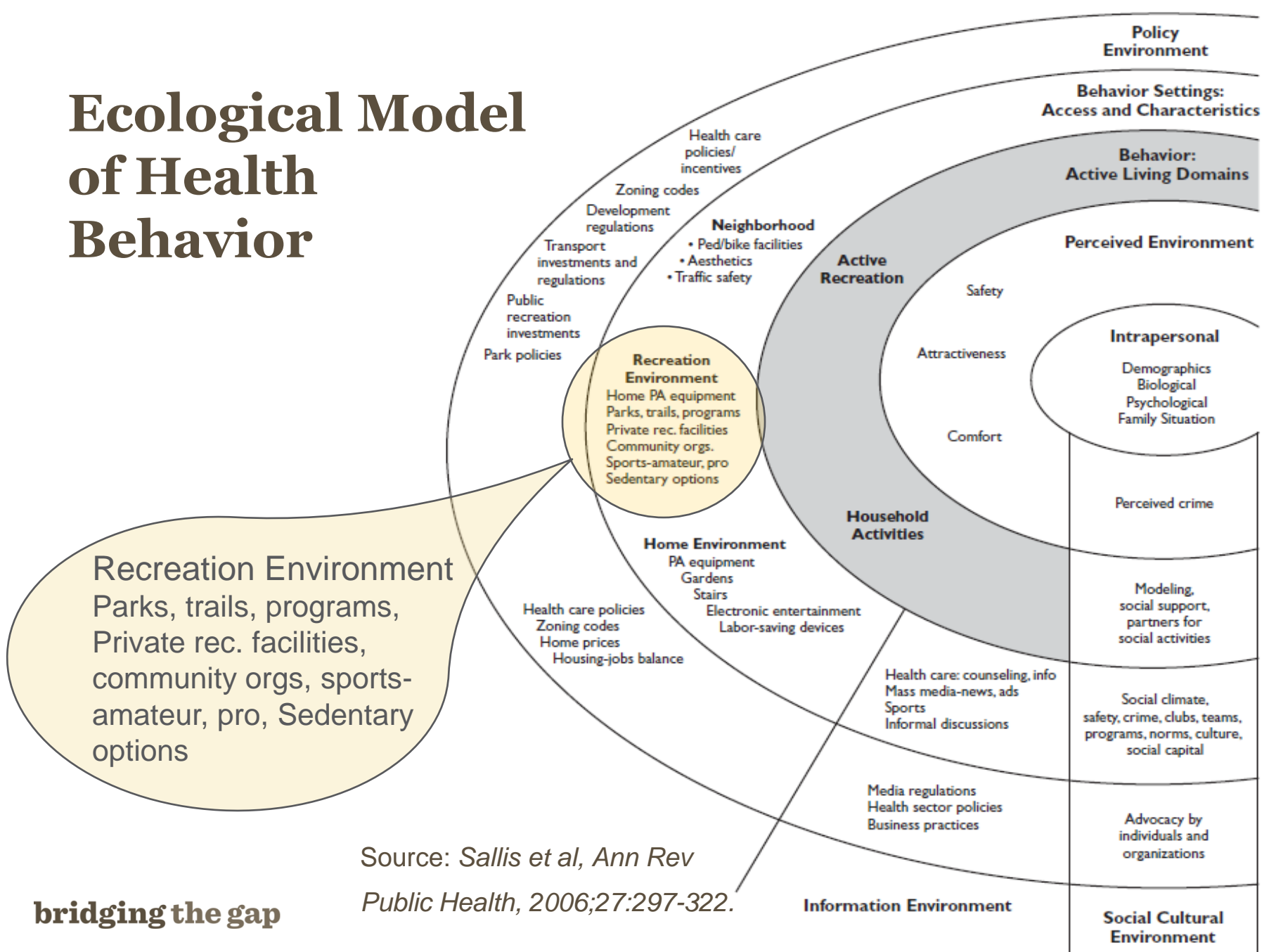


# Bridging the Gap

## Research Informing Practice and Policy for Healthy Youth

- A collaborative effort to assess the impacts of ***policies, programs & other environmental factors*** on a variety of adolescent health-related behaviors
- Focus in recent years on youth eating practices, physical activity, and weight outcomes
- Policy and environmental data linked to the ongoing, National Institute on Drug Abuse-funded, *Monitoring the Future* (MTF) study

# Ecological Model of Health Behavior

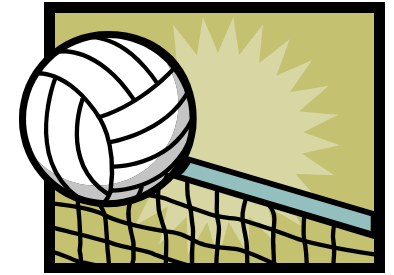


Recreation Environment  
Parks, trails, programs,  
Private rec. facilities,  
community orgs, sports-  
amateur, pro, Sedentary  
options

Source: Sallis et al, *Ann Rev Public Health*, 2006;27:297-322.

bridging the gap

# Background



## Study Objectives

1. Obtain information on the availability of out-of-school physical activity (PA) programs
  - Municipal/town/county (e.g., Park and Recreation Department)
  - Private businesses or organizations (e.g., sports instruction studio)
2. Determine whether there are systematic differences in PA opportunities by community characteristics
3. Assess the relationship between program and facility availability and youth self-reported PA and sports participation

# Methods



## •Cross-sectional Design

- Nationally representative

## •Community Sample

- Second year sample of public schools from Monitoring the Future (MTF), 2010 and 2011
- Community defined as index school enrollment zone

## •Program Data

- PA business data from Dunn & Bradstreet and InfoUSA using 27 SIC codes
- Local Park & Recreation Department or jurisdiction contacted
- Conducted telephone survey with relevant businesses and jurisdictions

## •Youth Data

- MTF student surveys from 2010-2011
  - 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders in public schools

## Methods

## Measures



## Telephone Surveys

- Questionnaire developed pertaining to availability of programs (instruction, classes or leagues) for youth ages 9, 13, 15, and 17
- Discounts
- Facilities and cooperative agreements (Park & Recreation survey only)

## MTF Surveys

- PA questions include frequency of vigorous exercise and sports participation

# Results

## Sample n and response rates

| Year         | Park & Recreation Survey | Instructional School Survey <sup>a</sup> | MTF Student Sample <sup>b</sup> |
|--------------|--------------------------|--|---------------------------------|
| 2010         | 154 (82%)                | 359 (52%)                                | 20,479                          |
| 2011         | 156 (92%)                | NA                                       | 20,736                          |
| <b>Total</b> | <b>310</b>               | <b>359</b>                               | <b>41,215</b>                   |

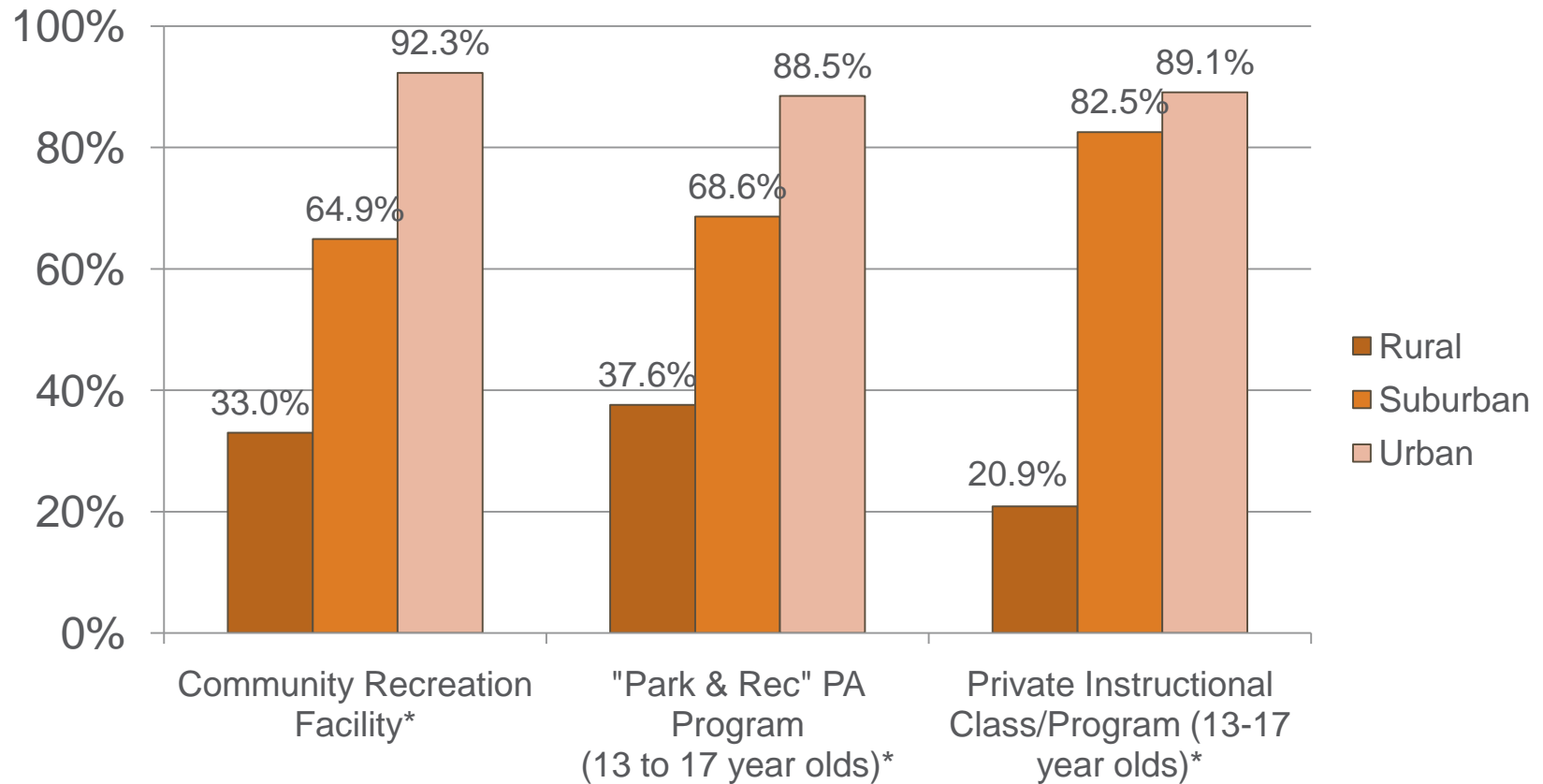
<sup>a</sup> Data across 143 communities available for 2010

<sup>b</sup> PA questions vary by survey form, so response samples are smaller



# Results

## Physical Activity Opportunities by Urbanization

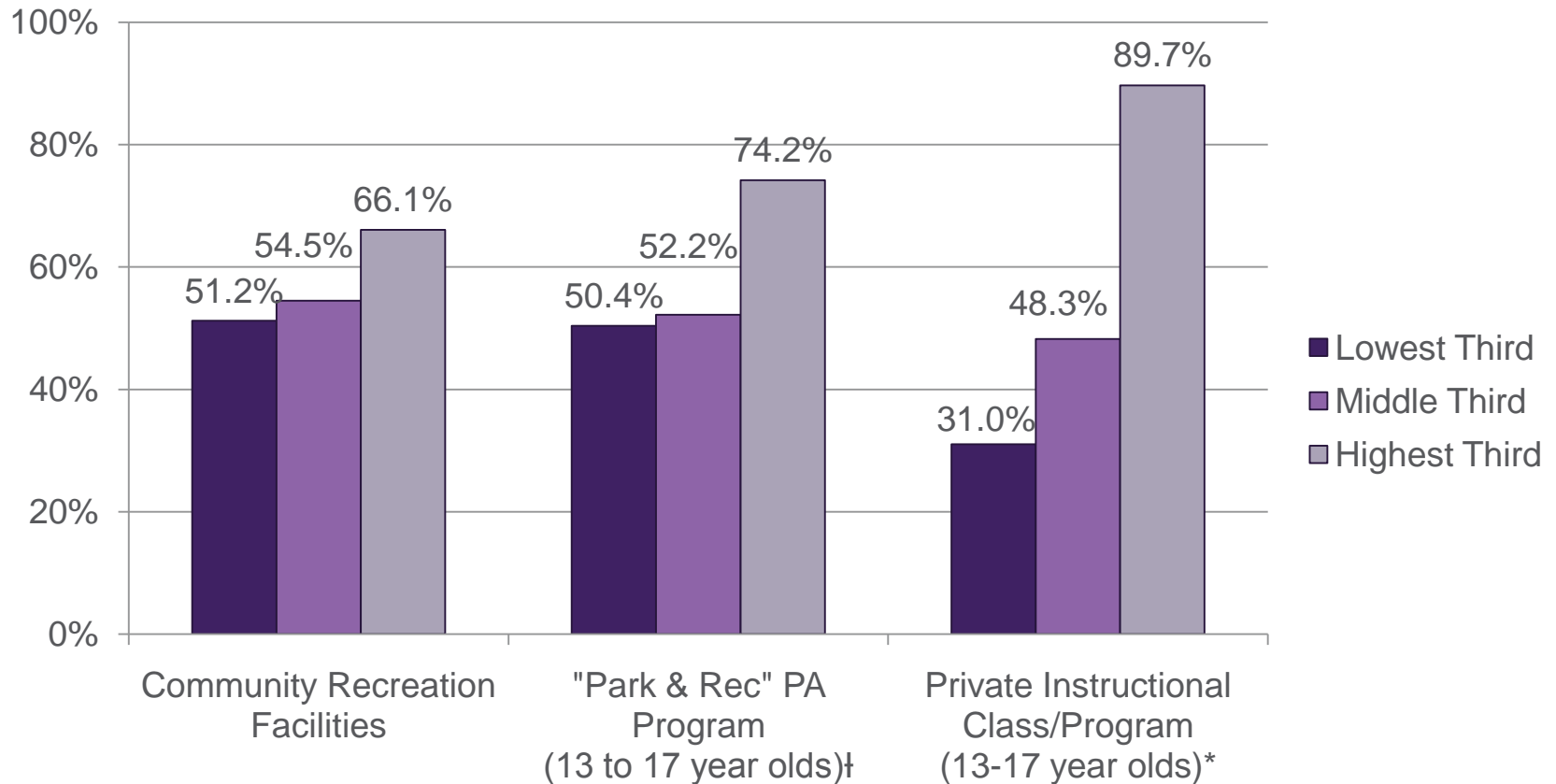


\* p<0.0001

**bridging the gap**

# Results

## Physical Activity Opportunities by Median Household Income



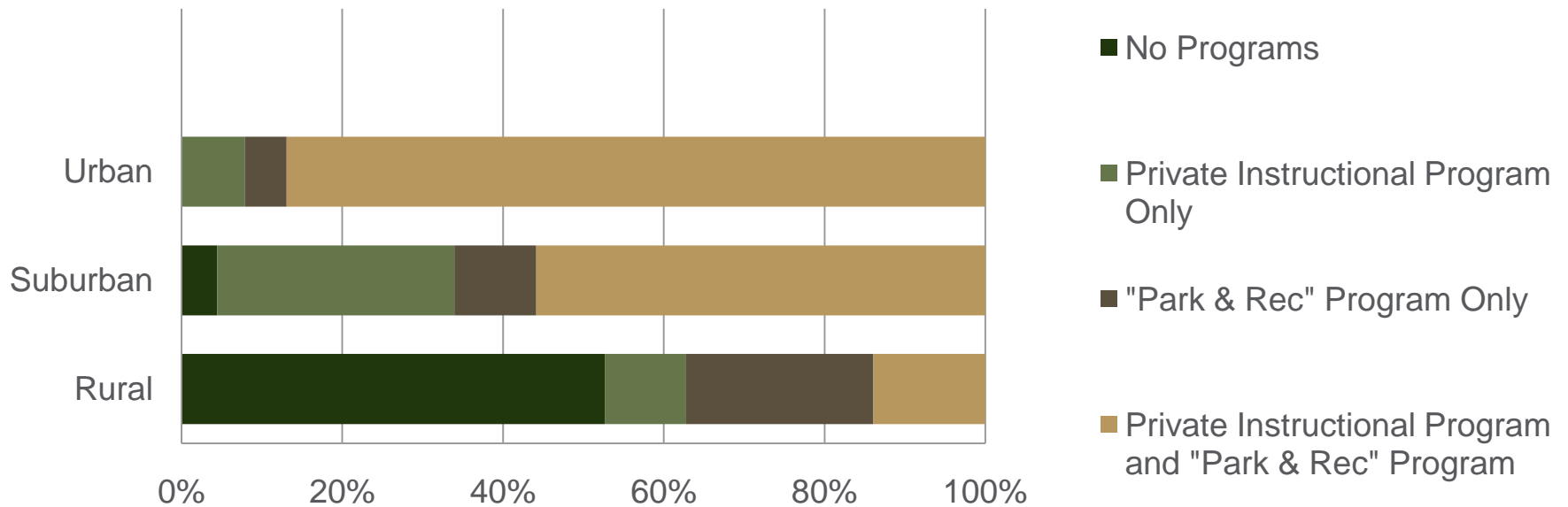
† p<0.01  
\* p<0.0001

**bridging the gap**

# Results

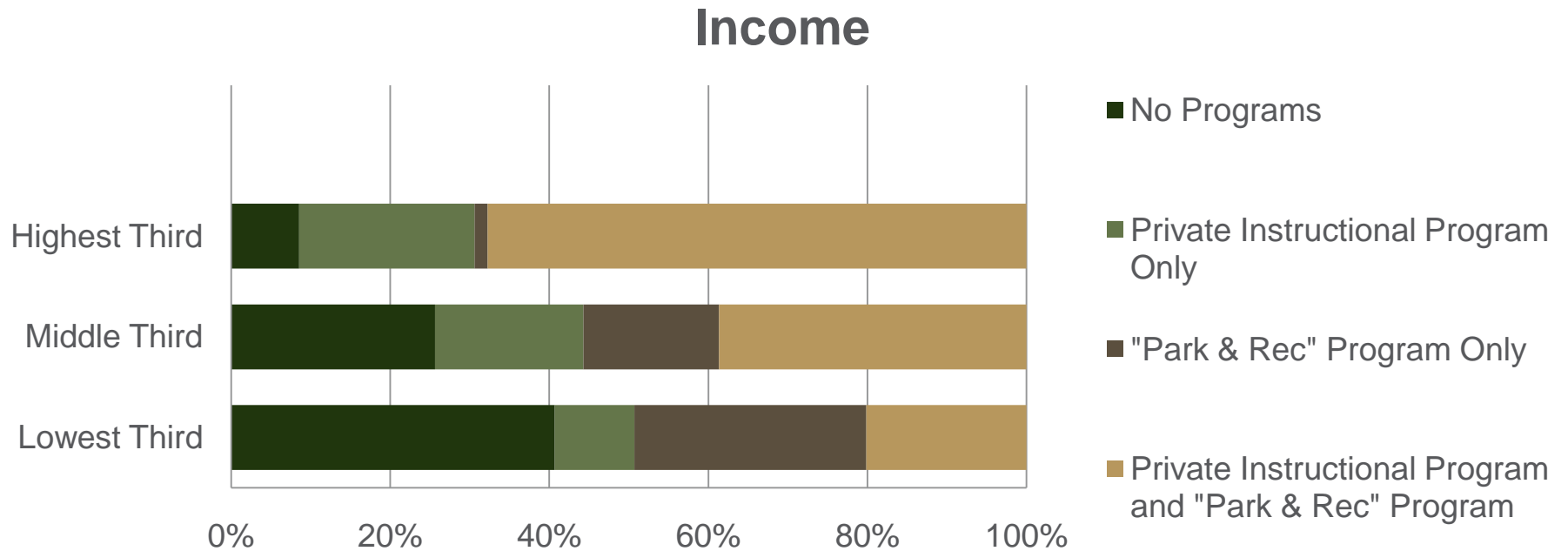
## Public vs. Private Physical Activity Opportunities, 2010

### Urbanization



# Results

## Public vs. Private Physical Activity Opportunities, 2010



# Results

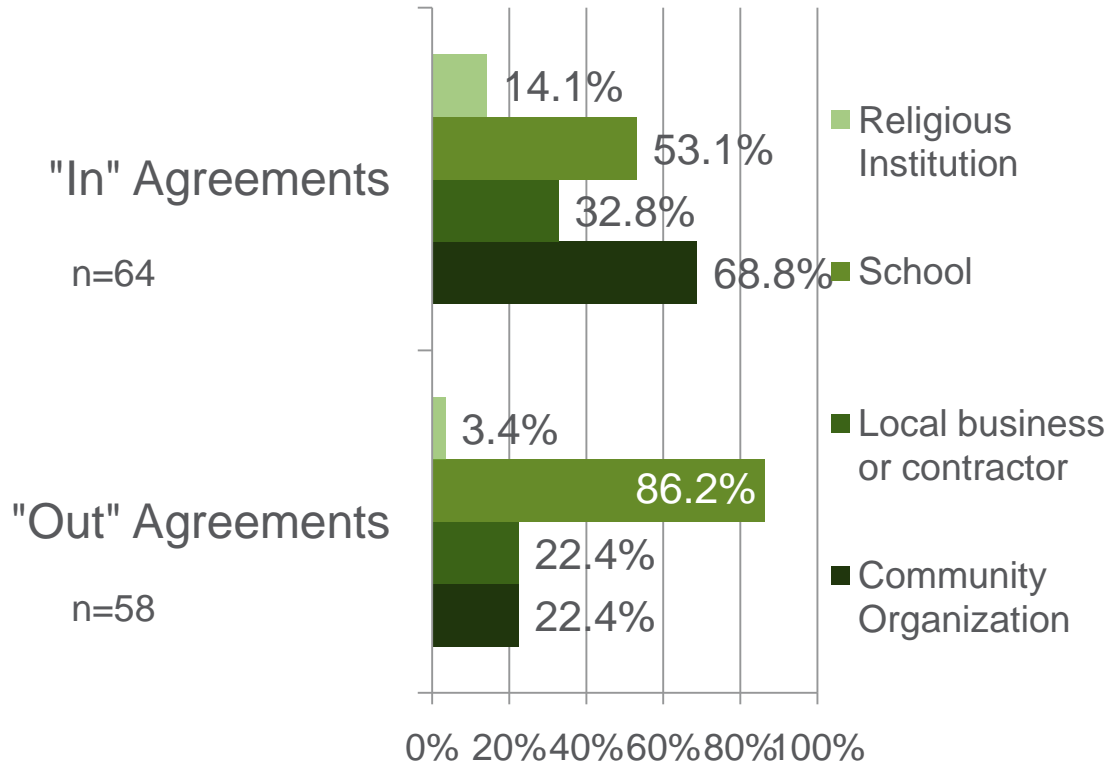
## Park and Recreation Survey - Cooperative Agreements (2011)

### •“In Agreements”

- Outside group utilizes municipal/ town/county facilities for PA programs
- Most common in urban communities (90.8%), compared to suburban (79.6%) and rural (50.3%) areas,  $p=.0121$

### •“Out Agreements”

- Partnership with outside entity to run Community PA programs at non-Park & Rec location (e.g., local business, school)



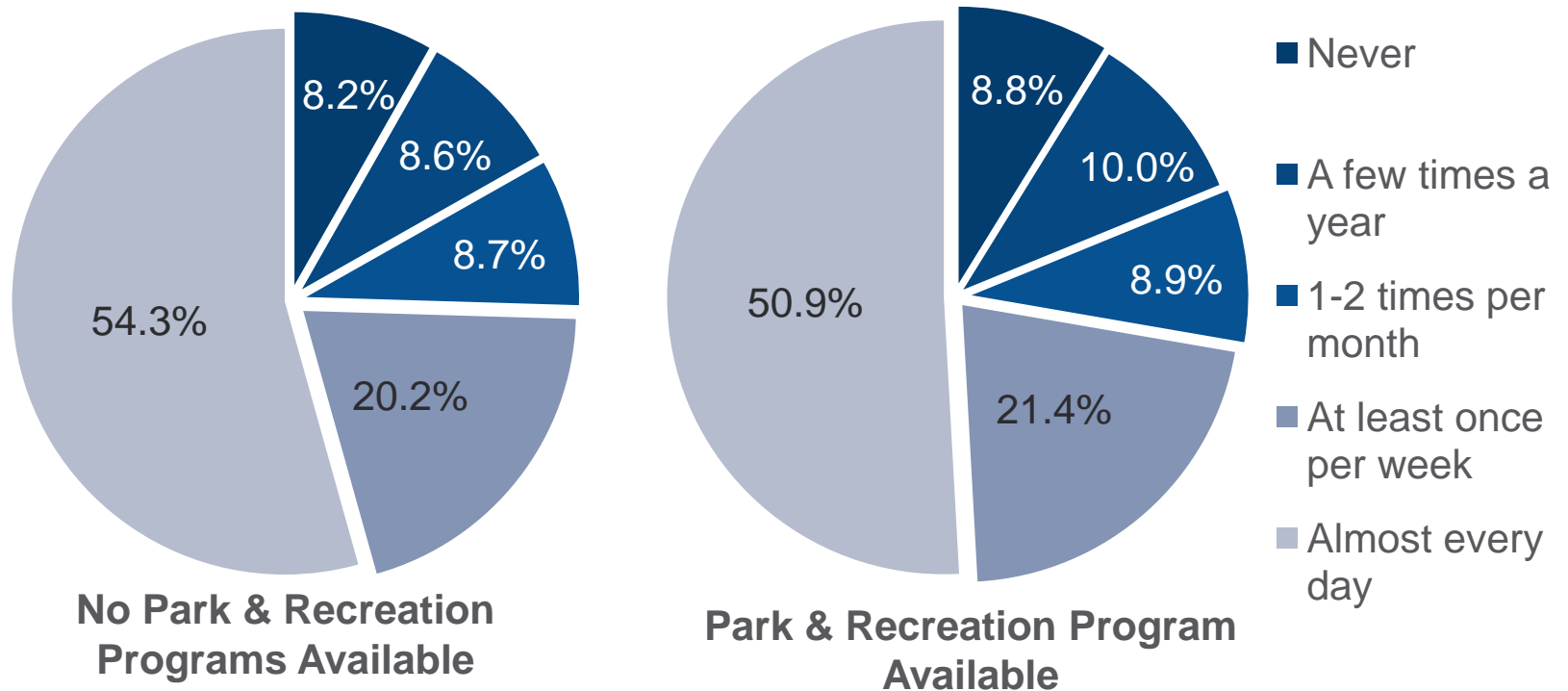
### bridging the gap

# Results

## Youth Physical Activity Measures

“How often do you do actively participate in sports, athletics or exercising?”

Self-Reported Physical Sports Participation of Students in Communities With or Without Park and Recreation Programs, 2010 and 2011 (n=27,274)



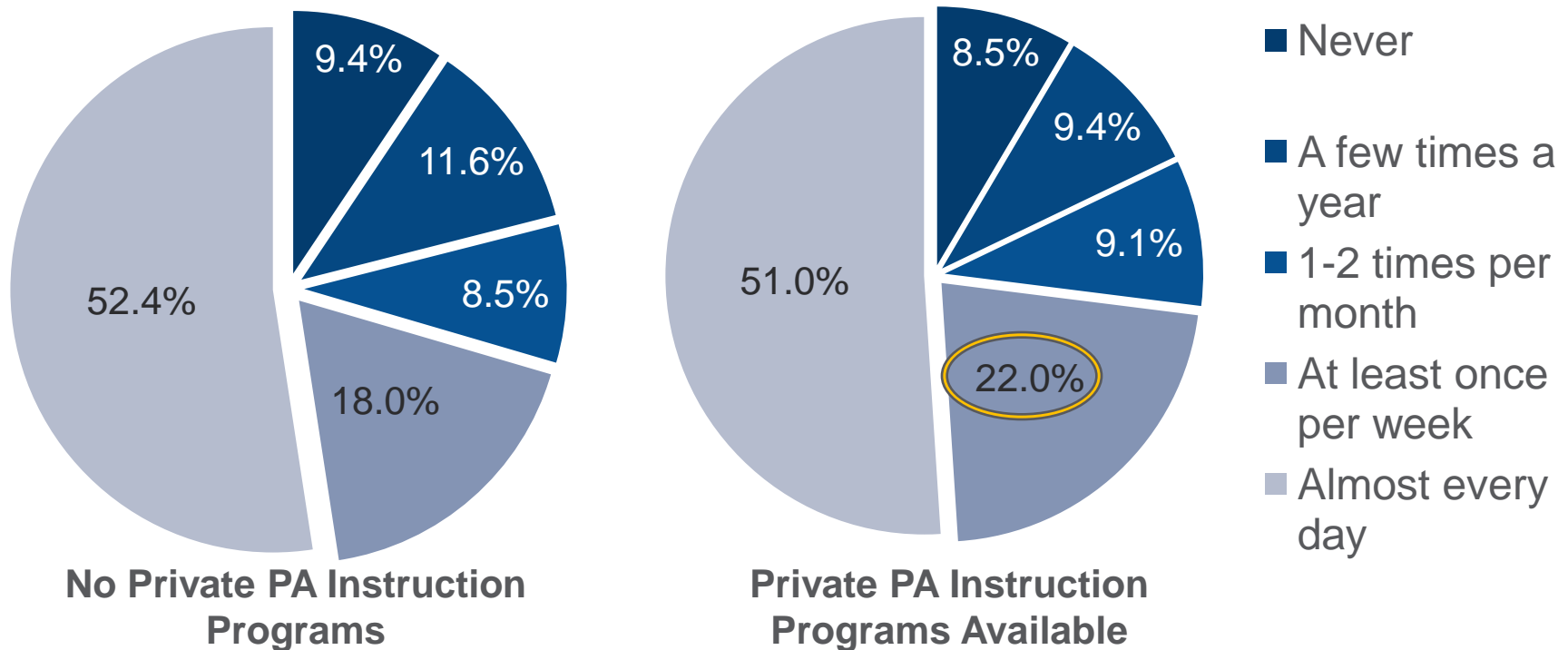
**bridging the gap**

# Results

## Youth Physical Activity Measures

“How often do you do actively participate in sports, athletics or exercising?”

Self-Reported Physical Sports Participation of Students in Communities With or Without Private PA Instruction Programs/Classes, 2010 (n=15,248)



**bridging the gap**

## Discussion

- Significant disparities exist in formal PA program opportunities and public community recreation facilities by urbanization and PA programs by household income
- Cooperative agreements with local organizations, businesses, and schools are common and allow for more extensive PA program options
- Our preliminary analyses suggest that private PA programs are associated with a very modest but statistically significant increase in weekly sports participation, but a decrease in daily participation
  - Maintained when adjusting for gender, race/ethnicity, hours spent on homework, employment, parental education, urban locale, and income



# Discussion and Conclusions

## Limitations

- Unmeasured confounding – Physical education and interscholastic athletic program participation
- Self-reported PA and sports participation subject to recall bias
- Cross-sectional design

## Future Research

- Include private instruction program survey data from 2011
- Additional multivariable analyses
  - Incorporate PE and school-based athletics
  - Stratified analyses by urbanization and gender
- Specific PA program offerings by activity and sports participation by activity type
- Compare community cooperative agreements with school district joint use policies

# Thank you!

Find out more at [bridgingthegapresearch.org](http://bridgingthegapresearch.org)

Christopher Quinn [cquinn5@uic.edu](mailto:cquinn5@uic.edu)

We gratefully acknowledge research support from the Robert Wood Johnson Foundation

**bridging the gap**