

New Jersey Public Health Practice-Based Research Network-DACS 71156

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- **Presenter Affiliations: Rutgers New Jersey Medical School**
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The background of the slide features a large, faint watermark of the Rutgers University seal. The seal is circular and contains the text 'RUTGERS UNIVERSITY' and 'THE STATE UNIVERSITY OF NEW JERSEY' around its perimeter. The word 'RUTGERS' is prominently displayed in a large, red, serif font at the top left of the slide.

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Determining the Public Health Costs of Tobacco Prevention and Control: A Comparison of 4 New Jersey Local Health Departments

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April 8, 2015 PHSSR Webinar
New Jersey Public Health PBRN

Toll of Tobacco in New Jersey

- Largest preventable cause of disease and death
- After long decline, NJ adult smoking rate plateaued at 16%*
- NJ revenue for tobacco use prevention and control redirected to other purposes:
 - Tobacco sales tax-generated revenue
 - Master Settlement funds
- CDC recommends \$2-\$3 per capita for NJ tobacco state and community interventions**

*New Jersey Department of Health, Center for Health Statistics, (2013 data)

**Centers for Disease Control and Prevention, Office on Smoking and Health

New Jersey Local Health Departments (LHDs)

- 89* LHDs covering 566 municipalities
- All are units of local government
- Over 50% of revenue is from local sources
- Four jurisdictional structures:
 - Municipal (30)
 - Inter-local (contracting) (35)
 - County (19)
 - Regional Health Commission (5)

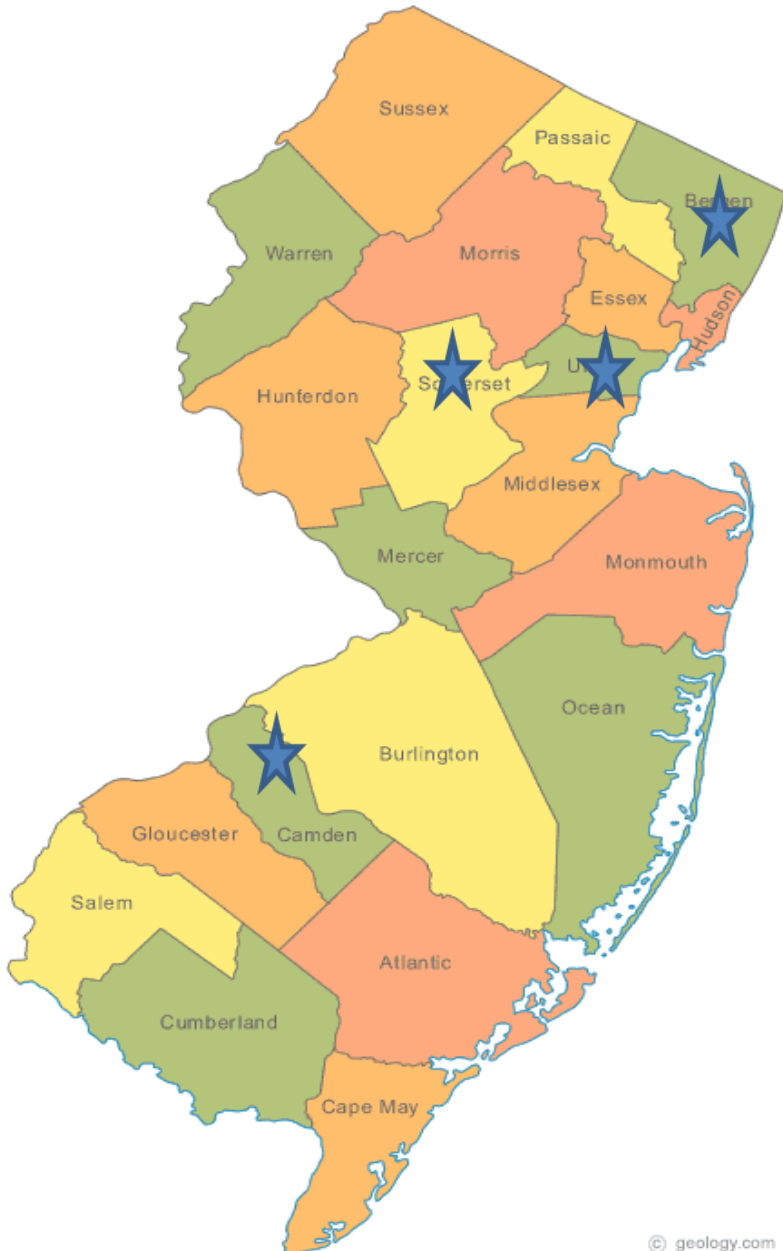
* As of April 2014

Objectives

- To determine elemental and total costs of local public health activities comprising tobacco prevention, reduction, and control
- To contribute to the understanding of costs involved in delivering efficient and effective set of public health services

Practice Settings

- PBRN-based Partnership of Co-Investigators from NJDOH, LHDs, and Rutgers
- From 15 volunteer LHDs, 4 selected for diversity of population characteristics, geographic location, and administrative structure
- Participating LHDs:
 - 2 Municipal
 - 1 Regional Health Commission
 - 1 County
- Incentive provided to participating LHDs (\$500 gift card)



New Jersey DACS Study Sites

LHD	Jurisdictional Structure	Population of Jurisdiction ³
1	Municipal1	15,184
2	Municipal2	26,674
3	Regional	43,462
4	County	512,854

Key Informant Interviews

- Listing of activities:
 - Inventory of tobacco prevention and control activities in 2013
 - Component breakdown for each activity (production function), including labor and non-labor resources
- Cost and Labor Data:
 - Quantify resources (Personnel hours, supplies, equipment, transportation, facilities)
 - Determine unit cost for each resource (to be multiplied by quantity to estimate cost for resource)
- Interview forms adapted from the Substance Abuse Services Cost Analysis Program (SASCAP™) questionnaires

Cost Estimation

- Perspective: Local health department
- Time frame: Calendar year 2013
- (Retrospective) cost accounting approach
- Counts of resources multiplied by unit costs to estimate cost for resource
- All costs expressed in U.S. dollars 2013

Example of Time Allocation Table

Time Allocation for Personnel: Enforcement of Outdoor Smoke-Free Ordinance														
Column A	Column B	Column C Hours Spent in Specified Year										Column D	Column E	
Job Type	# of people	Receive	Initiate complaint record	Perform investigation	Warn or	Issue	Follow-up visit to site	Education	Attend court	Follow up with	Complete complaint record	Surveillance	Sum of annual hours worked by all staff indicated in Column B	Comments
Administrative														
REHS														
Health Officer														
Health Educator														
Public Health Nurse														
Intern														
Volunteer														
Board Member														
[Job Type]														
TOTAL														

Data Sources

- Activity inventory and breakdown via key informant interviews
- Mixed-source cost data via LHD key informant interviews:
 - Expenditure reports, price lists, payroll, budgets
- Facility opportunity cost estimation:
 - Average office asking rental rate psf for county of LHD
- Volunteer labor opportunity cost estimated by average wage for each volunteer's respective profession
- US Census 2013 Population Estimates Program used for population denominator values

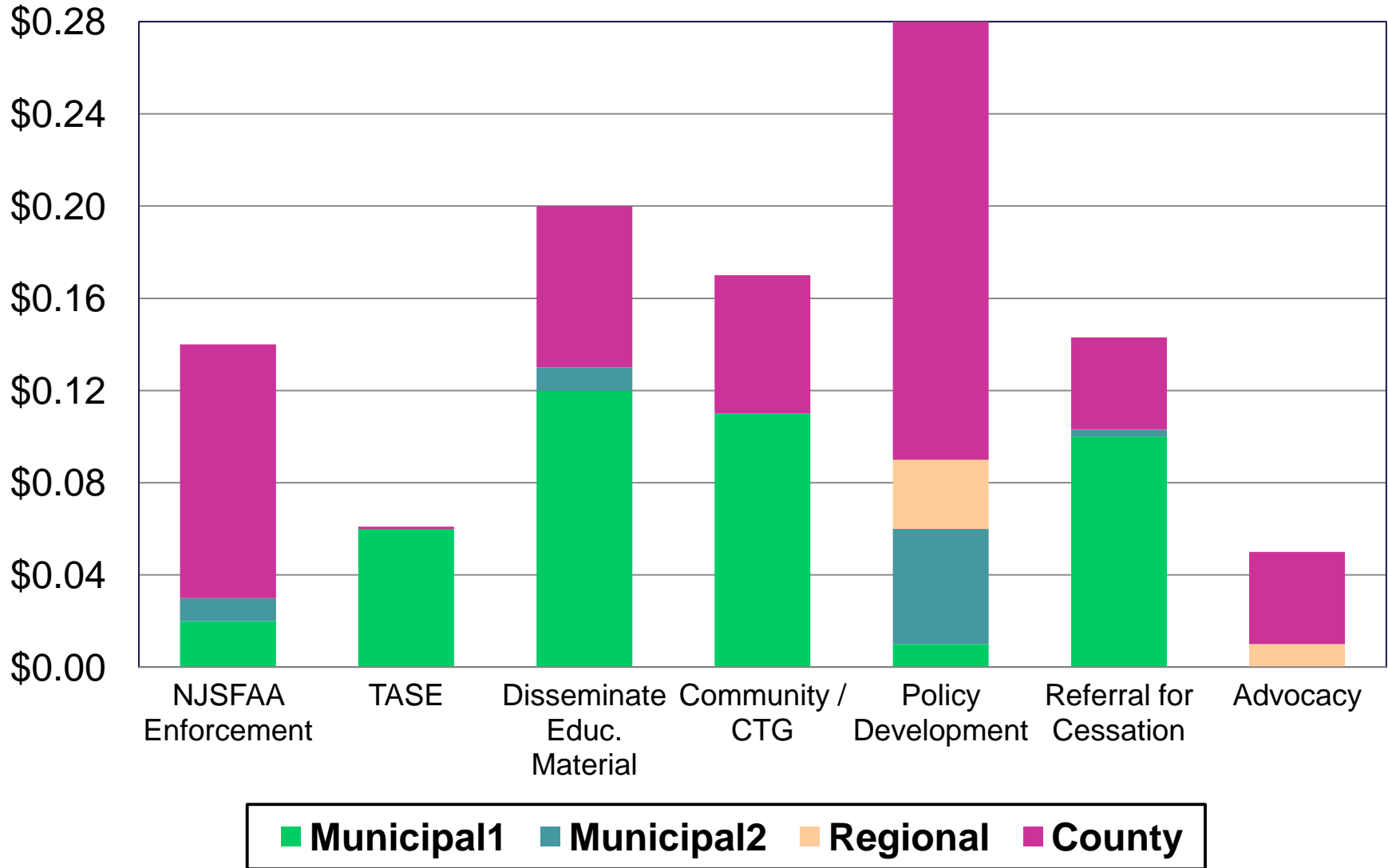
Tobacco Prevention and Control Activities

Select Activities for CY 2013	Number of LHDs
Policy development	4
Enforcement of the NJ Smoke-free Air Act (NJSFAA)	3
Referral for tobacco cessation	3
Dissemination of educational materials	3
Tobacco Age of Sale Enforcement (TASE)	2
Community Involvement / Community Transformation Grant	2
Implementation of tobacco cessation	1*
Educational mass media	1*
Regional tobacco-use surveillance	1*
* County LHD	

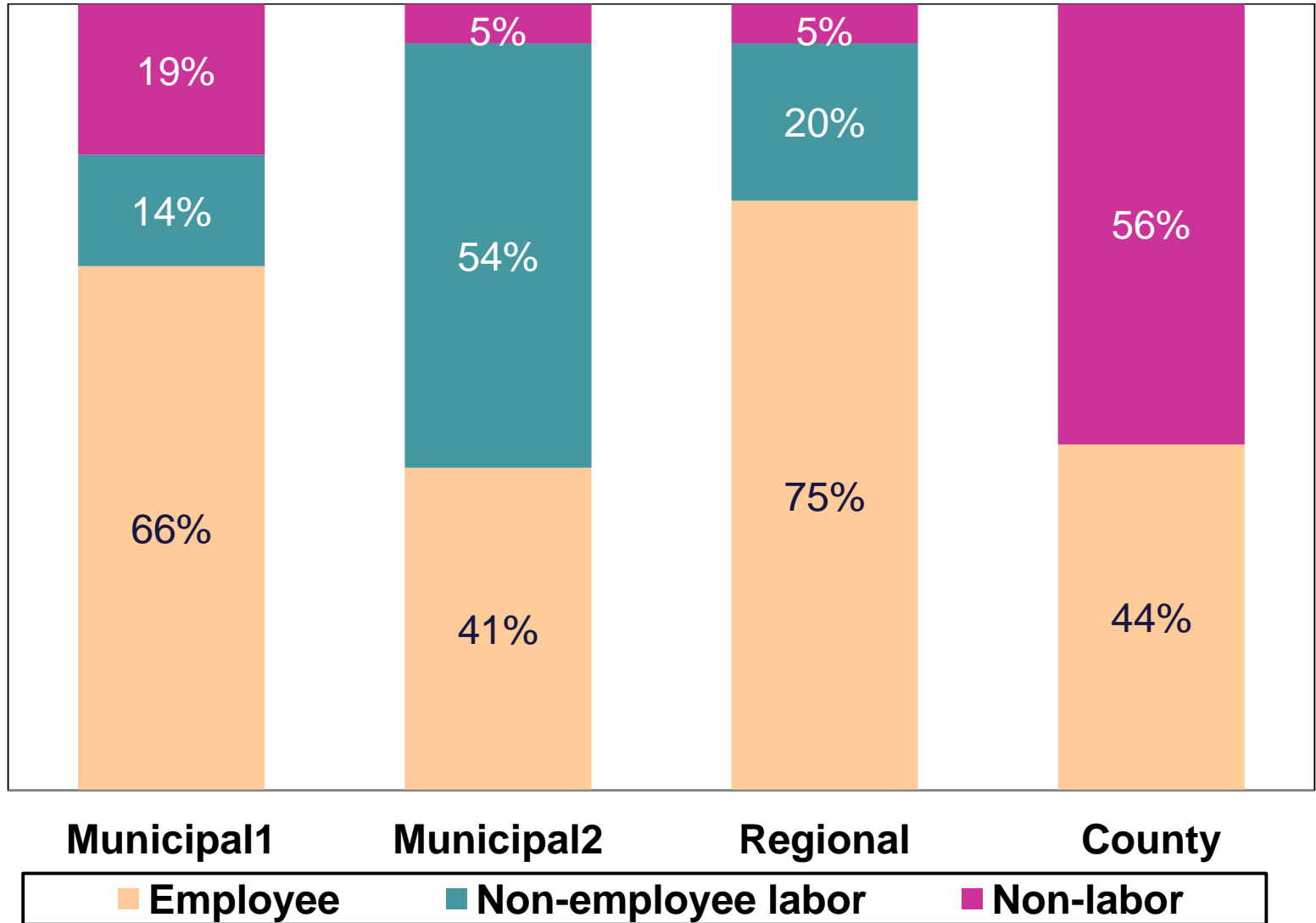
Tobacco activity and costs by LHD

LHD Type	# of Activities	Population	Total Cost (\$)	Cost per capita (\$)
Municipal1	7	15,184	6,144	0.41
Municipal2	5	26,674	1,912	0.07
Regional	2	43,462	1,726	0.04
County	12	512,854	406,487	0.79

Per Capita Cost: Select Activities, by LHD



Tobacco Activity Cost Structure, by LHD

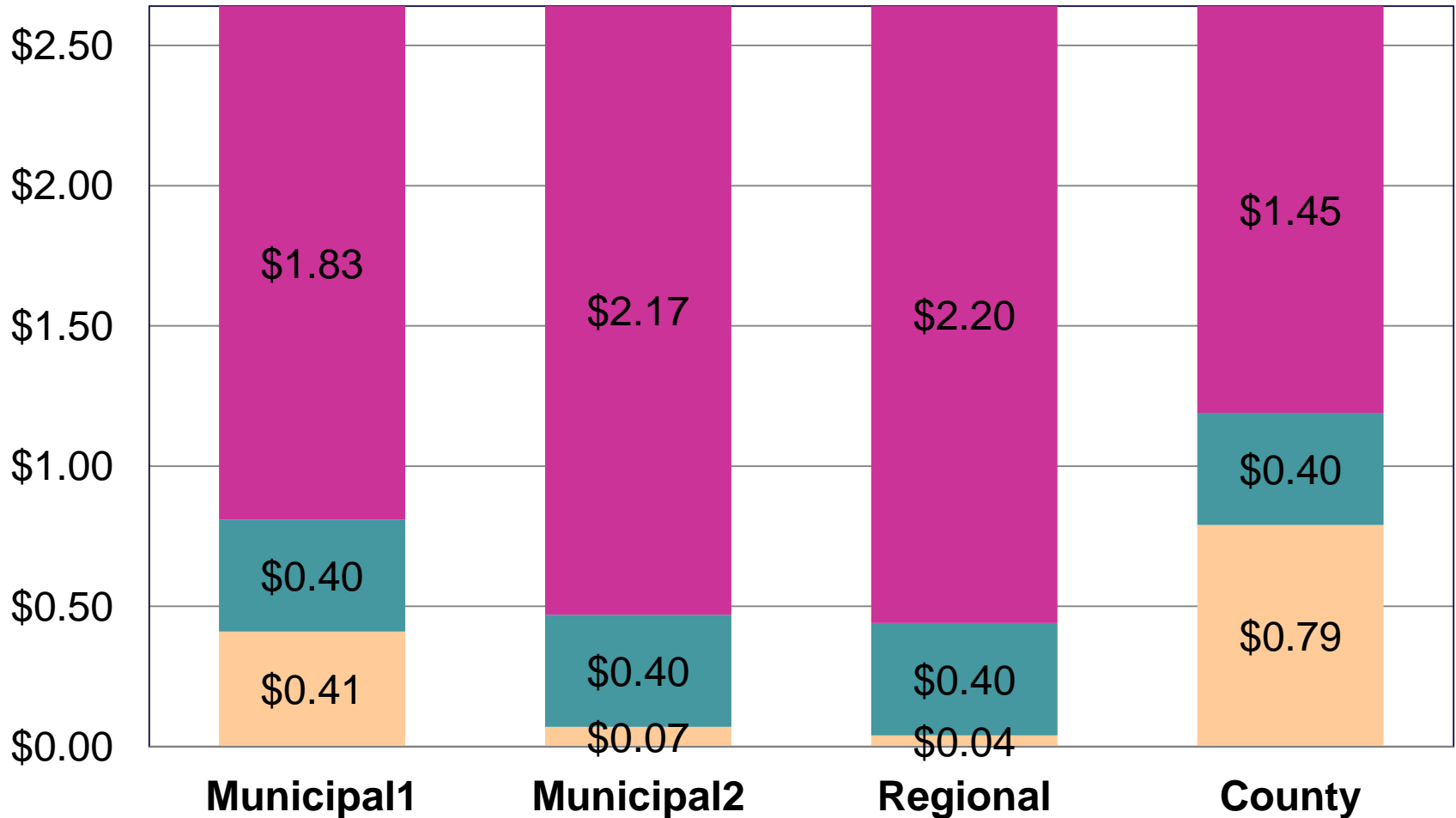


Total Cost Including State Expenditure

- State-level *per capita* tobacco spending for FY 2013: \$0.40* (mostly federal funds)
- Adding this to LHD costs, *per capita* spending on state and community interventions: \$0.44 - \$1.19

*New Jersey Department of Health, Division of Family Services, Community Health and Wellness, Office of Tobacco Control. FY 2013 NJ Tobacco Expenditures.

Per Capita Allocation: LHD, State, CDC Recommended



■ LHD Per Capita
 ■ LHD & State Per Capita
 ■ CDC Rec. Per Capita

Conclusions

- None of the 4 LHDs met CDC-recommended annual *per capita* allocation of \$2.64-\$3.29 for NJ State and Community Tobacco Interventions
- Our data demonstrate insufficient resources for LHDs to confront the leading cause of morbidity and mortality

Limitations

- LHDs do not maintain labor data in the component-based format used by SASCAP™
- Time intensive data collection
- While LHD staff were supportive and enthusiastic, LHDs lack time resources to participate easily in public health services and systems research
- Possible measurement error due to the retrospective and self-report design
- Our data do not include non-governmental tobacco control efforts, e.g., partner activities

Implications for Public Health Policy and Practice

- These data can be used to advocate for additional resources where the CDC-recommended per capita funding for tobacco control is not met
- Adds to public health knowledge of mechanisms through which costs, information, and labor produce health promotion and protection services, programs, and policies
- Elucidation of true costs of local tobacco control is needed to attain the goal of delivering foundational public health services at the community level

Next Steps

- Conclude data analysis
- Share findings with PBRN partners
- Prepare manuscript for publication

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 - Kevin Sumner, Local Health Department
 - Nancy Raymond, Local Health Department
 - Judith Migliaccio, Local Health Department
 - Koren Norwood, Local Health Department
 - Paschal Nwako, Local Health Department

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