Maximizing Health Impact through Prevention

HEART Coalition ~ 2012

Community Transformation Grant

- **CTG Federal funding addresses upstream causes of chronic disease**
  - **Initial funding cycle: October 2011- varies**
  - **Phase I -Capacity Building Funds (26 grantees nationally) – up to 3 years**
  - **Phase II - Implementation Funds (35 grantees nationally) – 5 years**

- **California Grantees**
  - Phase I – Capacity Building/Planning
    - Fresno County PHD - $500K
    - Kern County PHD - $417K
    - Sierra Health Foundation (for Sacramento County PHD) - $499K
    - Stanislaus County PHD - $294K
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  - Phase II – Implementation
    - Los Angeles County PHD - $9.8M
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    - San Diego County PHD - $3.1M
    - San Francisco County PHD - $815K

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Grant Priorities for Stanislaus County

- Tobacco Free Living
- Increase Use of High Impact Quality Clinical Preventive Services (high blood pressure & high cholesterol)
- Active Living & Healthy Eating

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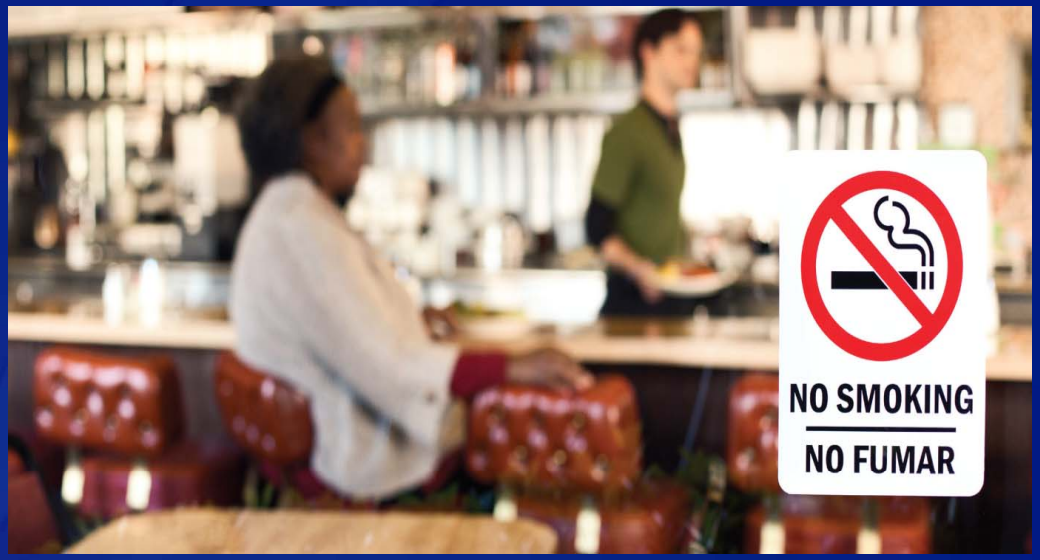
Tobacco-Free Living

Examples Only:

- Smoke-free workplaces
- Multi-unit housing
- Schools and campuses



Clinical Preventive Services to Control CVD Risk Factors

Examples Only:

- Promote linkages between community resources and clinical services
- Use health information technology
- Implement standardized quality measures

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Healthy Eating & Active Living

Examples Only:

- Schools
- Childcare and after-school settings
- Workplaces
- Community design

CTG Core Principles

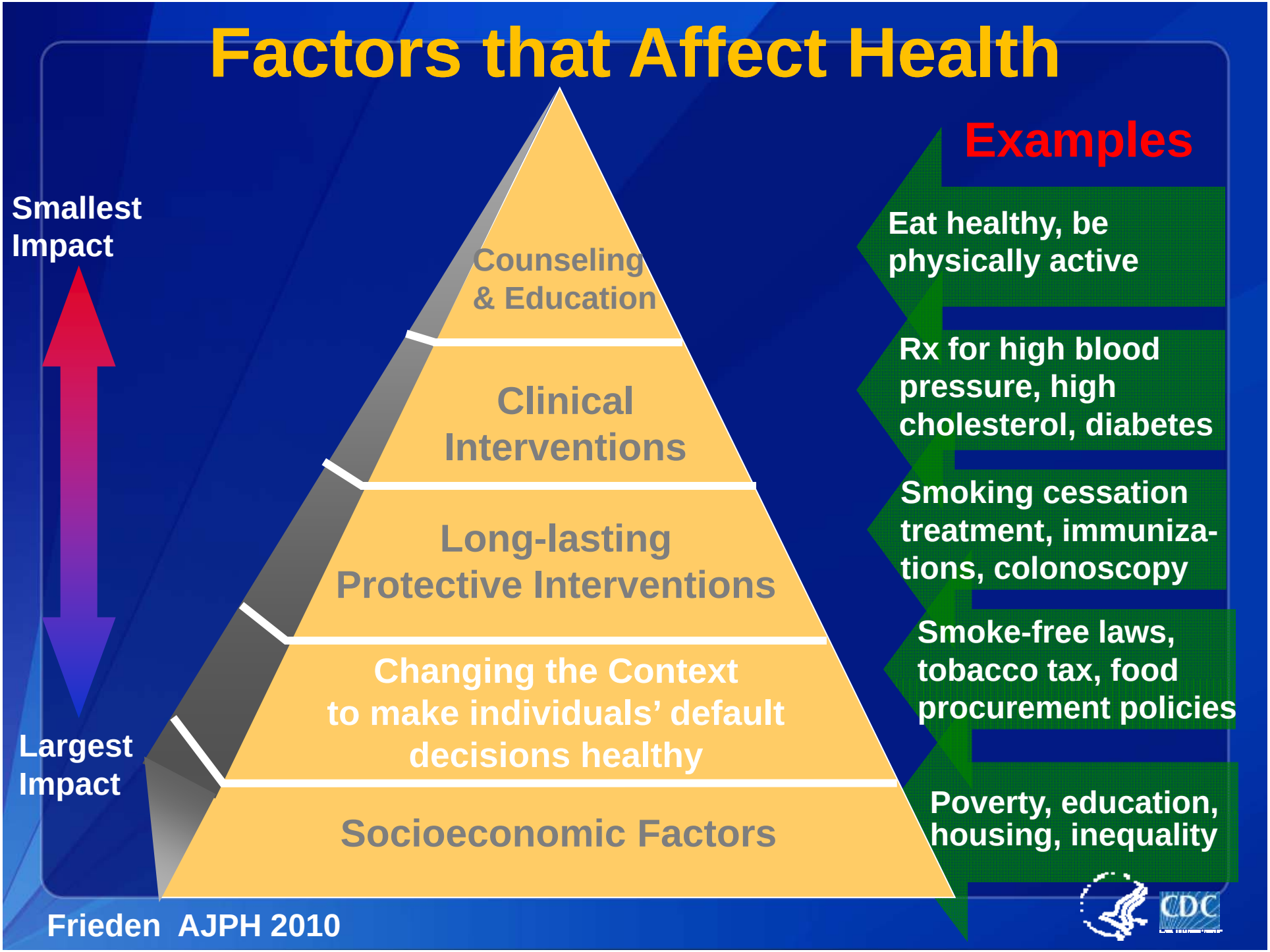
Maximize health impact through prevention

Advance health equity and reduce health disparities

Use and expand the evidence base for local policy and environmental changes that improve health

What is our Road Map for Maximizing Impact?

Factors that Affect Health



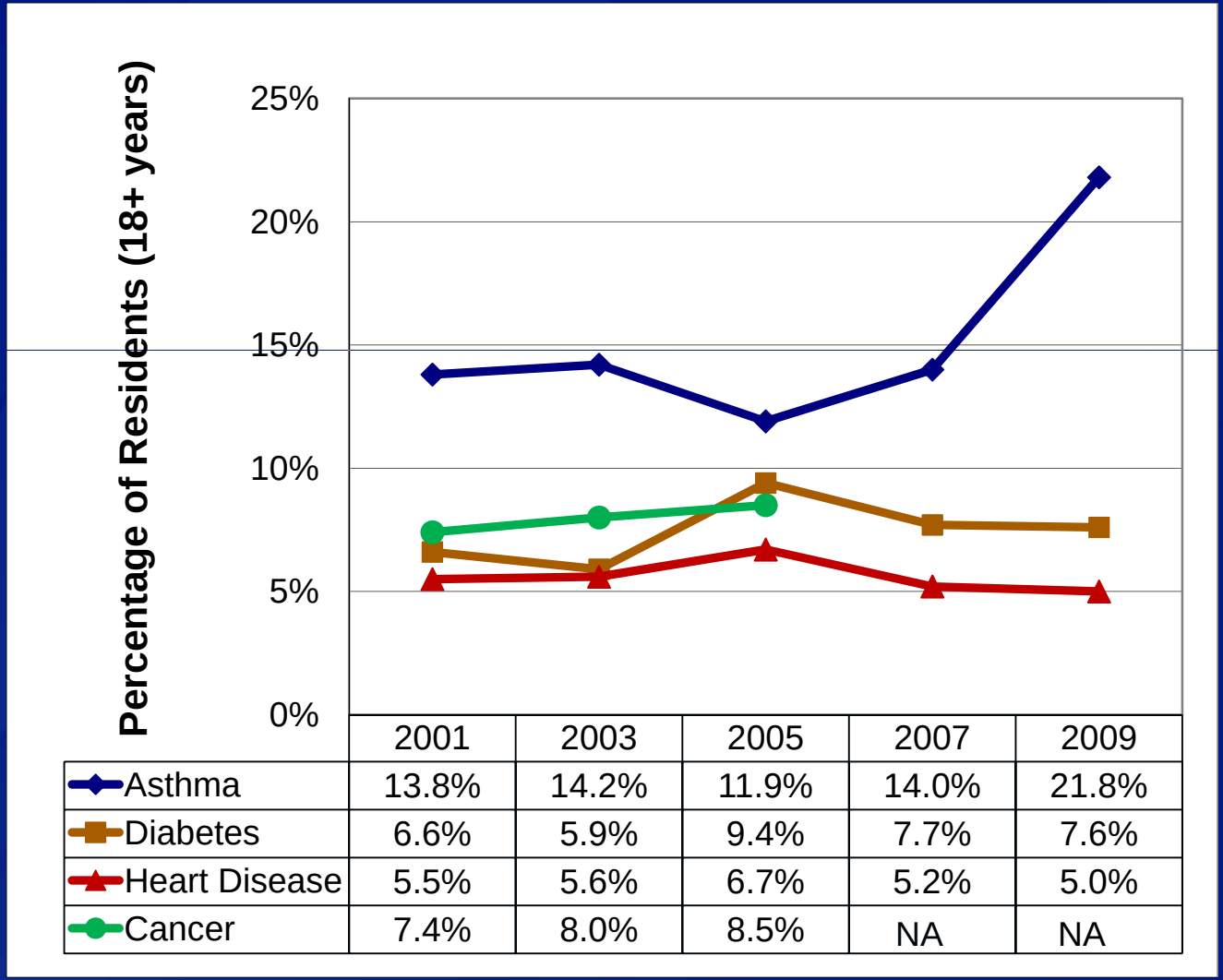
Frieden AJPH 2010

Risk Factors among Adults by Jurisdiction

Behavioral and Health Risk Factor	Jurisdiction	2001	2009	Percent Change
Smoking tobacco (current smoker)	Stanislaus County	22.2%	15.0%	32.4% decrease
	California	17.1%	13.6%	18.3% decrease
Being overweight or obese	Stanislaus County	61.4%	72.2%	17.6% increase
	California	54.9%	59.4%	25.1% increase
Behavioral Risk Factor	**Jurisdiction**	**2001**	**2005**	**Percent Change**
Poor diet	Stanislaus County	53.1%	56.0%	5.5% increase
	California	49.5%	51.3%	3.6% increase
Physical inactivity	Stanislaus County	32.0%	65.5%	104.7% increase
	California	28.5%	63.7%	123.5% increase

Data Source: UCLA's California Health Interview Survey

Chronic Disease Prevalence among Adults



	2001	2003	2005	2007	2009
Asthma	13.8%	14.2%	11.9%	14.0%	21.8%
Diabetes	6.6%	5.9%	9.4%	7.7%	7.6%
Heart Disease	5.5%	5.6%	6.7%	5.2%	5.0%
Cancer	7.4%	8.0%	8.5%	NA	NA

Data Source: UCLA's California Health Interview Survey

Hospitalizations for Chronic Disease

Cost

- Average annual cost for hospitalization of Stanislaus County residents for coronary heart disease, stroke, cancer and diabetes = $378,494,073

Data Source: California Office of Statewide Health Planning and Development, Patient Discharge Data, 1998-2007; as analyzed by the Central Valley Health Policy Institute

Hospitalizations for Chronic Disease

Racial and Ethnic Disparities in Hospitalization Rates[1]

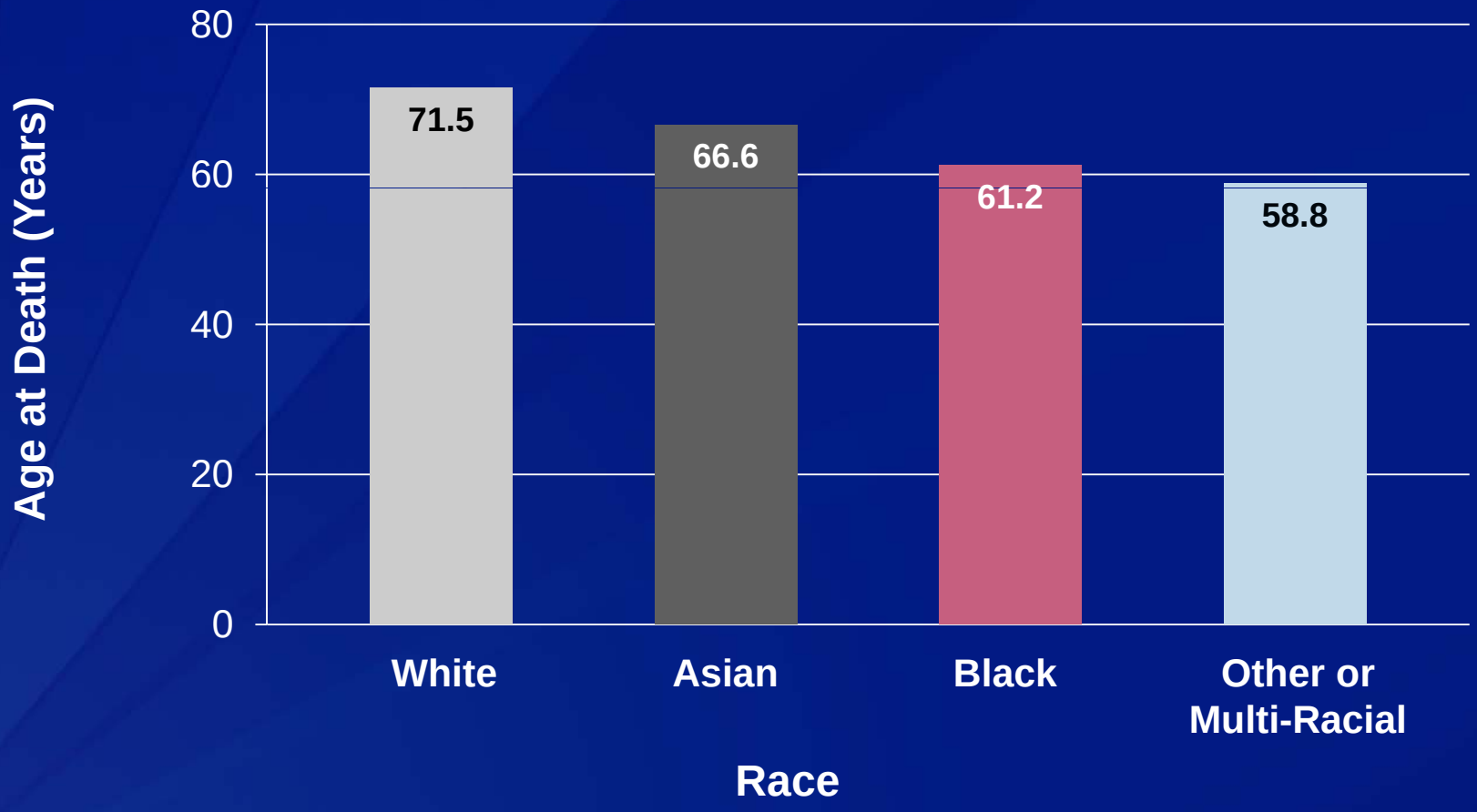
	Chronic Condition				
Group	**CHD**	**Stroke**	**Cancer**	**Diabetes[2]**	**Asthma**
Black	276.8	228.6	558.4	10.6	336.6
White	420.8	363.3	737.7	7.8	121.2
Other Race	111.0	90.1	203.1	3.2	39.6
Hispanic	922.9	757.1	1155.0	14.6	255.5
Non-Hispanic	54.4	56.6	140.7	2.9	33.6

[1]Average annual crude hospitalization rate per 100,000 residents, 1999-2008

[2]Diabetes mellitus without complications

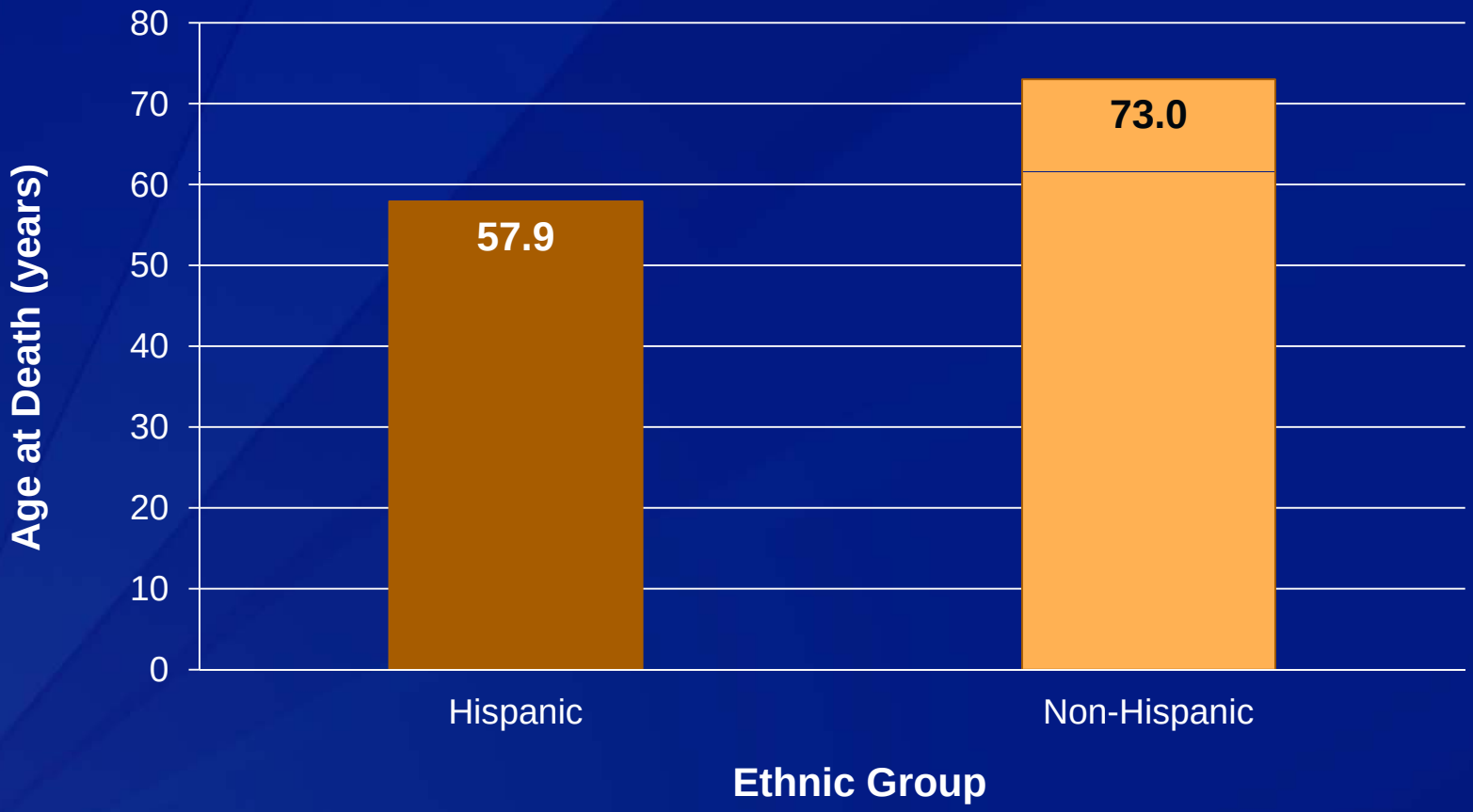
Data Source: California Office of Statewide Health Planning and Development, Patient Discharge Data, 1998-2007; as analyzed by the Central Valley Health Policy Institute

Disparities in Health:
Average Age at Death by Race in Stanislaus County, 2005-2009



Data Source: California Department of Public Health's Death Statistical Master File, 2005-2009

Disparities in Health:
Average Age at Death by Ethnic Group in Stanislaus County, 2005-2009



Data Source: California Department of Public Health's Death Statistical Master File, 2005-2009

Capacity Building Requirements

- ***Component 1:*** **Mobilize the Community**
- ***Component 2:*** **Conduct a county-wide Community Health Assessment**
- ***Component 3:*** **Tell Your Story**
- ***Component 4:*** **Move to Implementation**

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Planned Partnerships

- **Statewide Movement**
- **San Joaquin Valley**
- **Local Health Department Expansion Project**
  1. This new grant will work very closely with the CTG Grant. This grant will be providing the nutrition education to the eligible CalFresh participants, (closer to top of the pyramid) while CTG will be focusing on the environmental and policy changes (bottom of the pyramid)
  2. Perfect partnership!

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Thank You!

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Embarking on our Community Transformation Journey

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Community Transformation Grant

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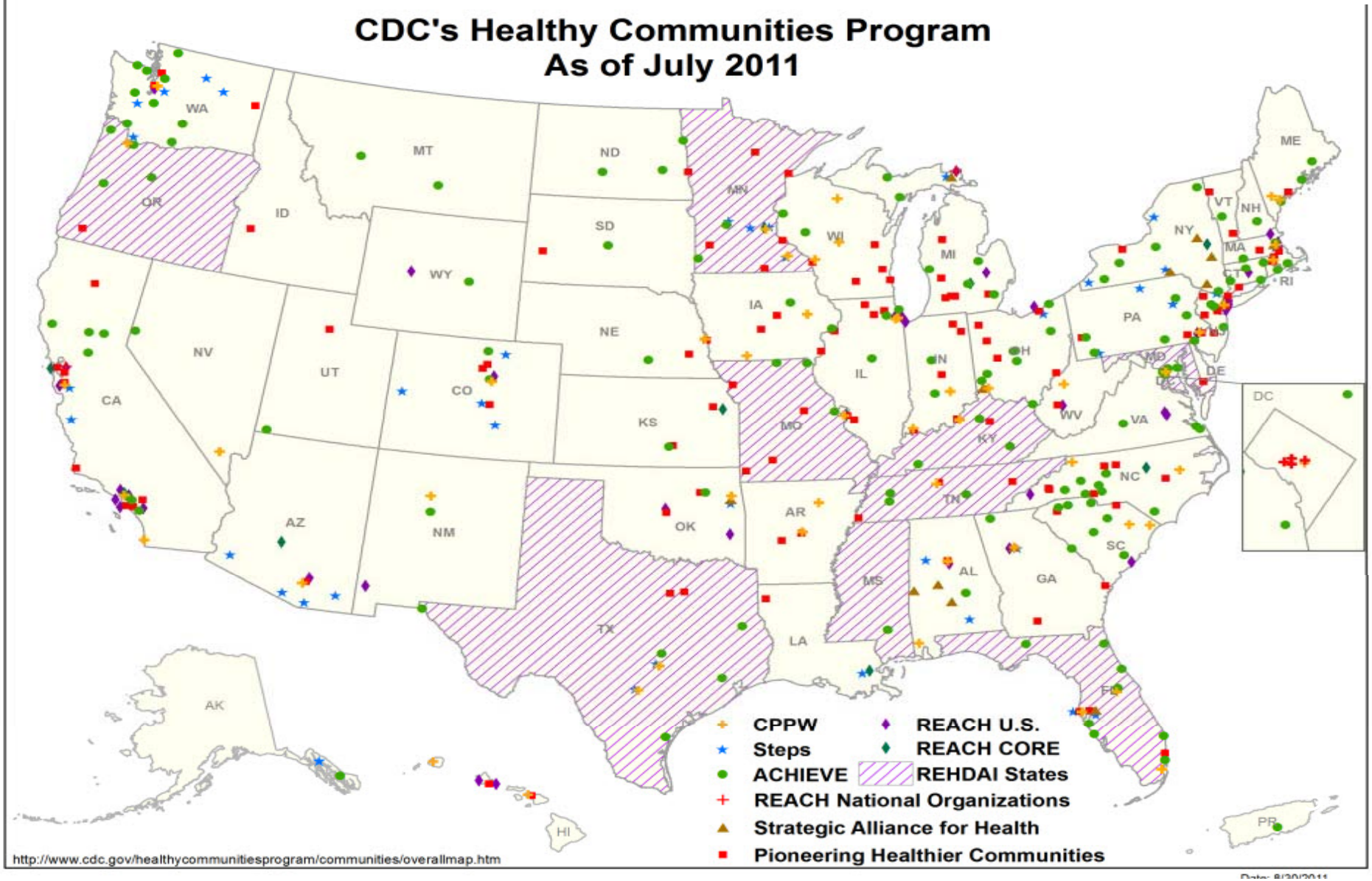
CDC's Community Work

Over 450 Communities and $1 Billion invested in last decade



Overview

WHY a community transformation journey?

- Chronic Diseases and Health disparities
- Legislative and national strategy mandate

WHAT is our CTG Road Map?

- Core Principles and Strategic Directions
- Tell our story

HOW will we achieve transformation?

- Multi-sector approach
- Local tailoring of CTG Road Map
- Working together

Next Steps

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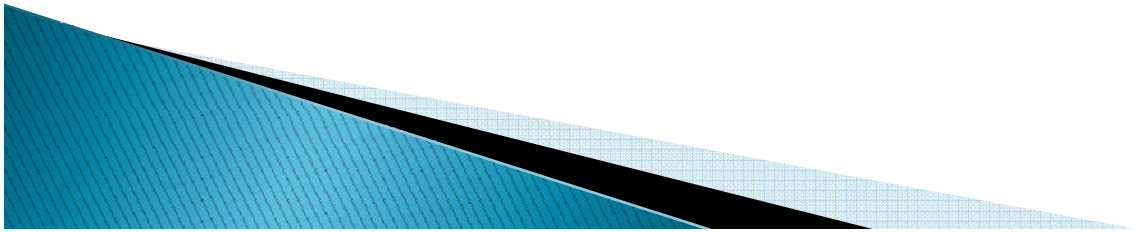
Why a Community Transformation journey?



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Tsunami of Chronic Disease

- Over 2 million heart attacks and strokes occur every year; 800,000 die
- Chronic conditions account for 75% of $2 trillion annual health care costs
- Large Gaps in Clinical Preventive Services:
  - 1 in 3 Americans have high blood pressure
    - Only 47% have it adequately controlled

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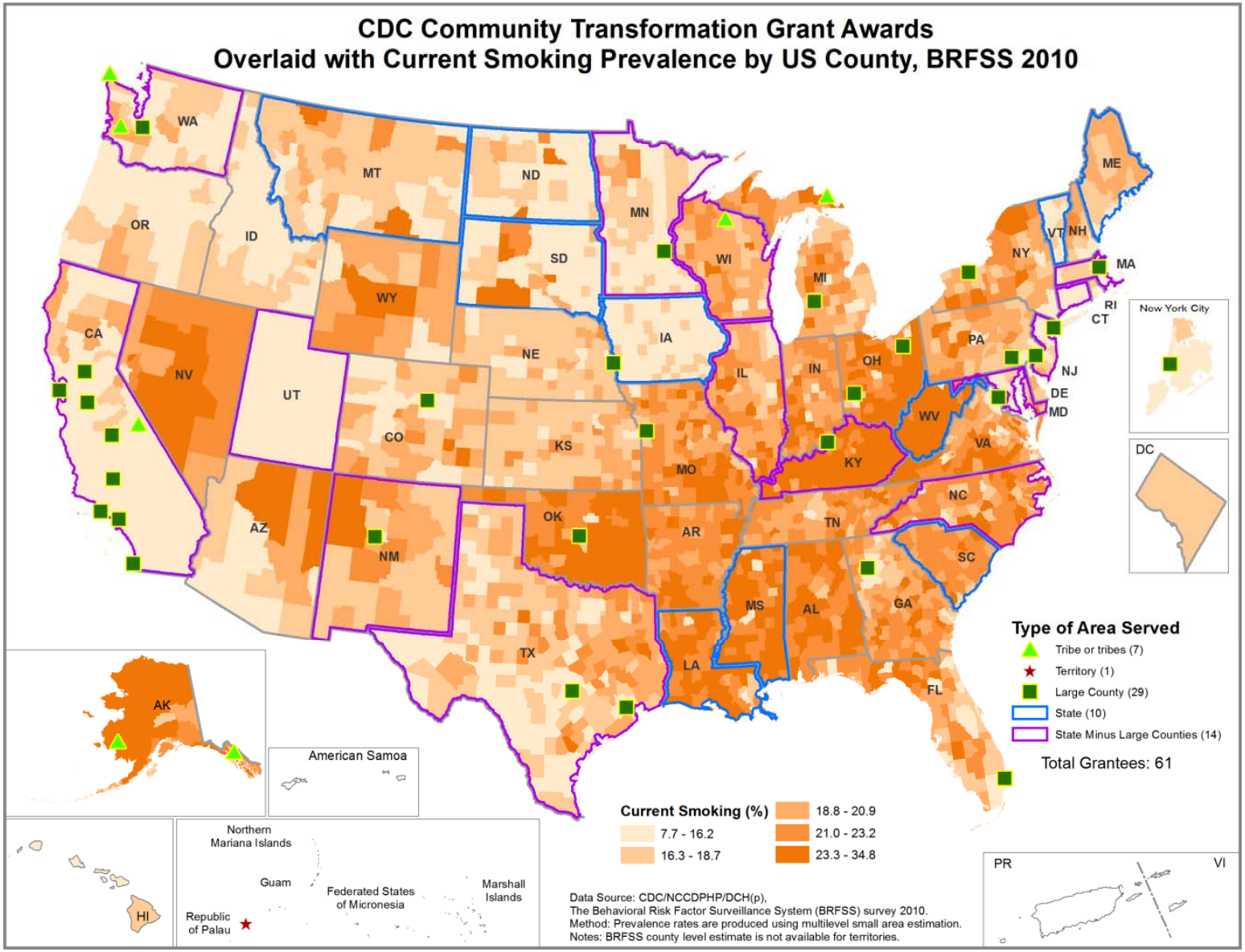
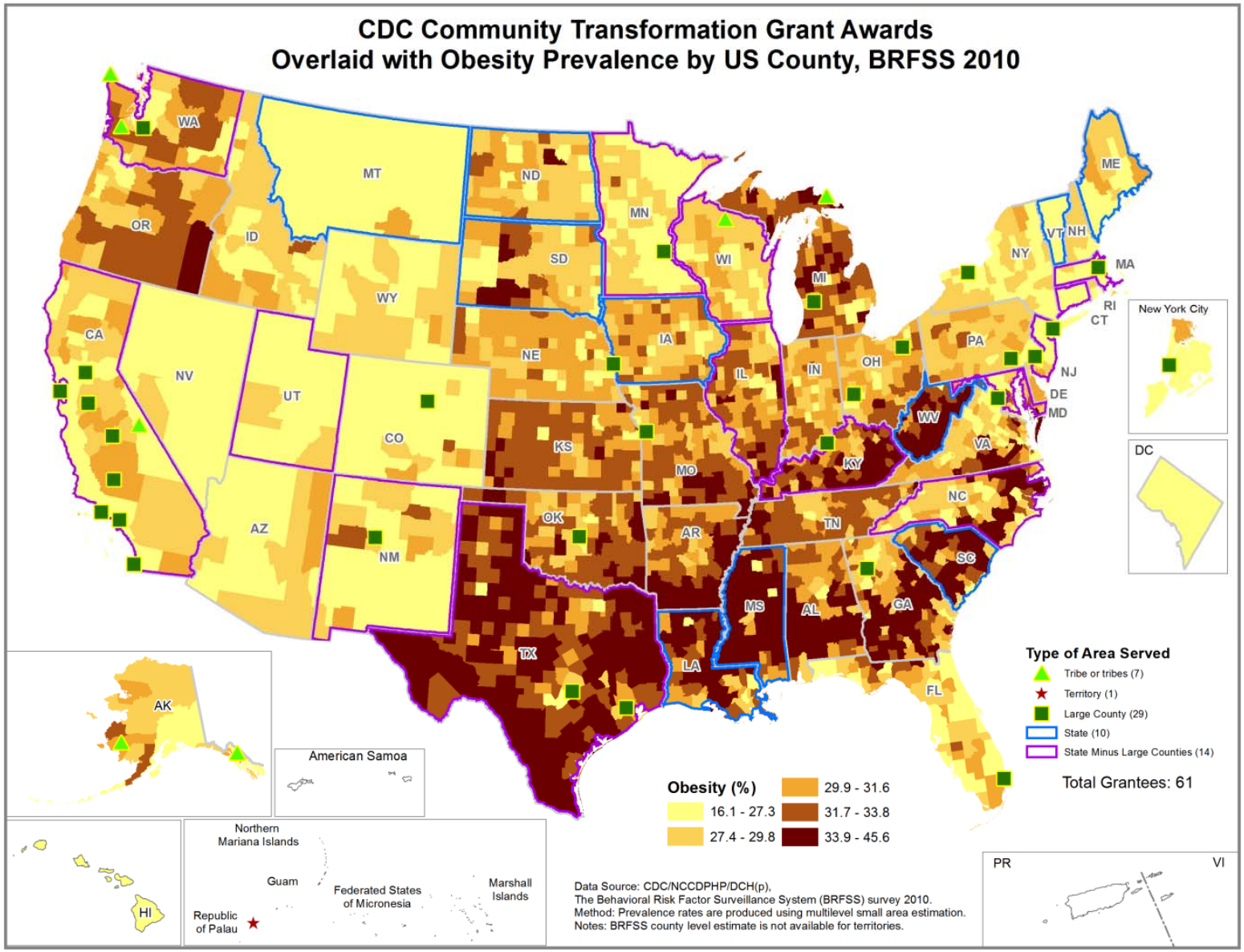
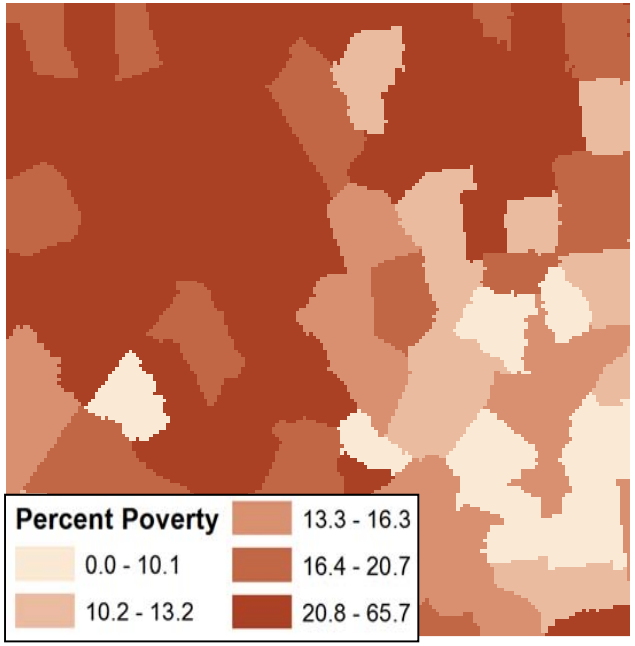
Smoking Prevalence

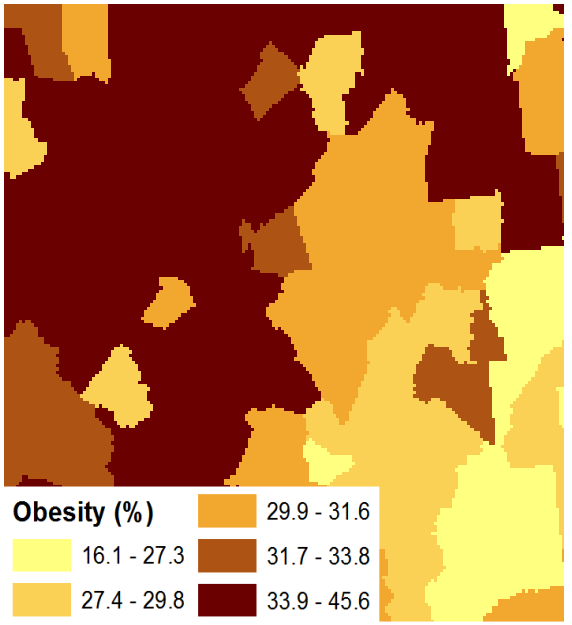


Obesity Prevalence



Place Matters





High poverty concentration has negative effects on health

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The Affordable Care Act Historic Opportunity Authorized CTG Funding

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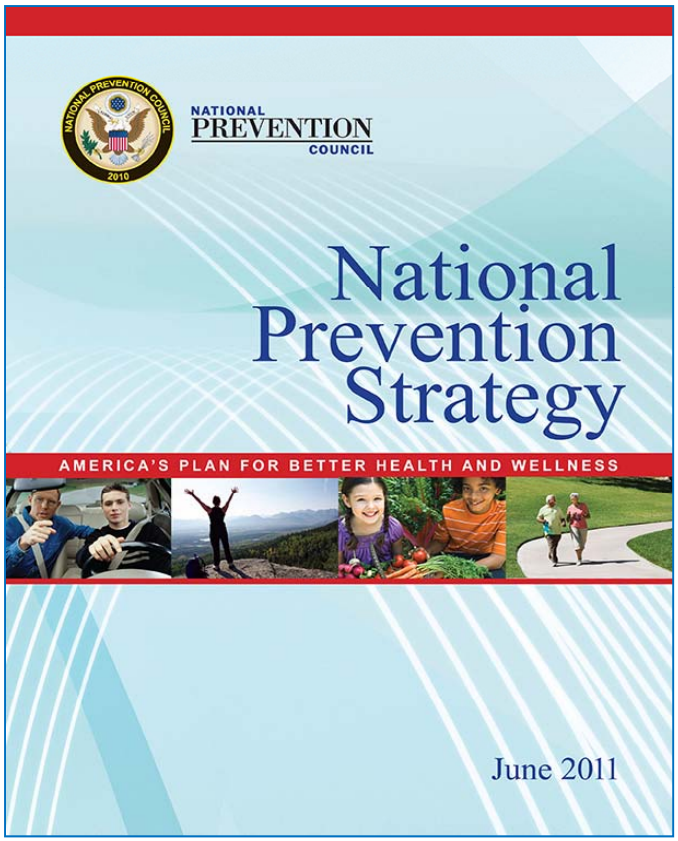
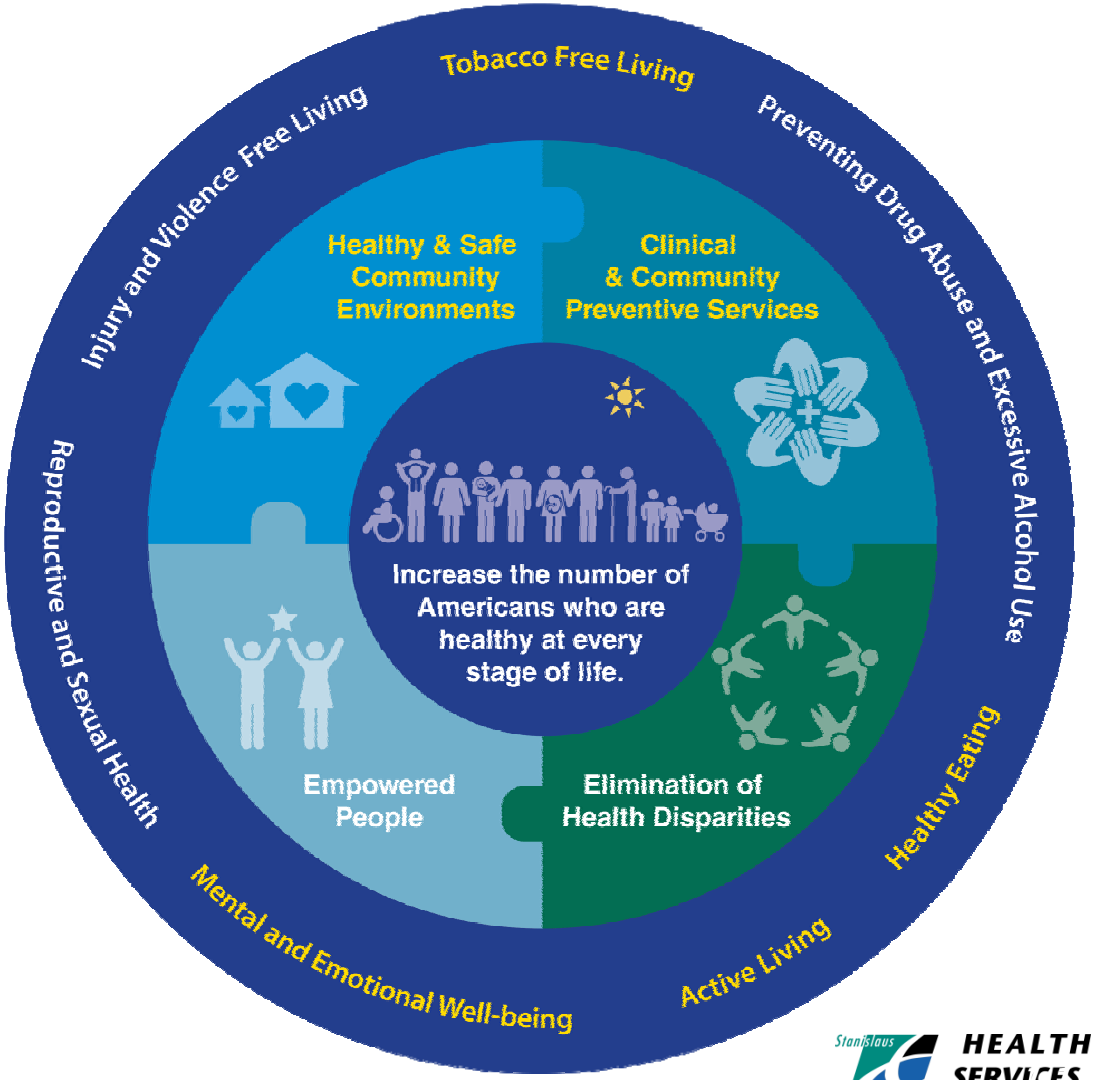
National Prevention Strategy





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Many eyes on CTG

Many Expectations…

What is our Road Map for Community Transformation?

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Grant Priorities for Stanislaus County

- Tobacco Free Living
- High Impact Clinical Preventive Services (high blood pressure,diabetes & high cholesterol)
- Active Living & Healthy Eating

Stanislaus County HEALTH SERVICES AGENCY

CTG Overview

- Core Principles
- Core Capacity Building Requirements

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Core Principles

Use & Expand Evidence Base	• Utility of Proven Strategies • Enhance Community Efforts • Fill Gaps
Maximize Health Impact	• Jurisdiction-wide • Policy & Environmental Change Strategies
Advance Health Equity	• Impact All Members of the Community

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Using Evidence-Based Approaches

Strategies we implement will have a greater chance of succeeding.

Efficient:	Ensure:	Empower:
Use of limited resources	Utility of proven interventions	Create maximum impact

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What is our Road Map for Maximizing Impact?

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Maximizing Impact Policy Development

- **Pursue jurisdiction-wide policy and environmental changes that:**
  - **Impact many people, frequently, in a comprehensive way**
- **Work together and build capacity**
- **Use focused strategies**
  - **Evidence-based**

    or
  - **Innovative**

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What is our Road Map for Advancing Health Equity?

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Common Public Health Approach

Either

Reduce health disparities

Or

Achieve jurisdiction-wide health impact

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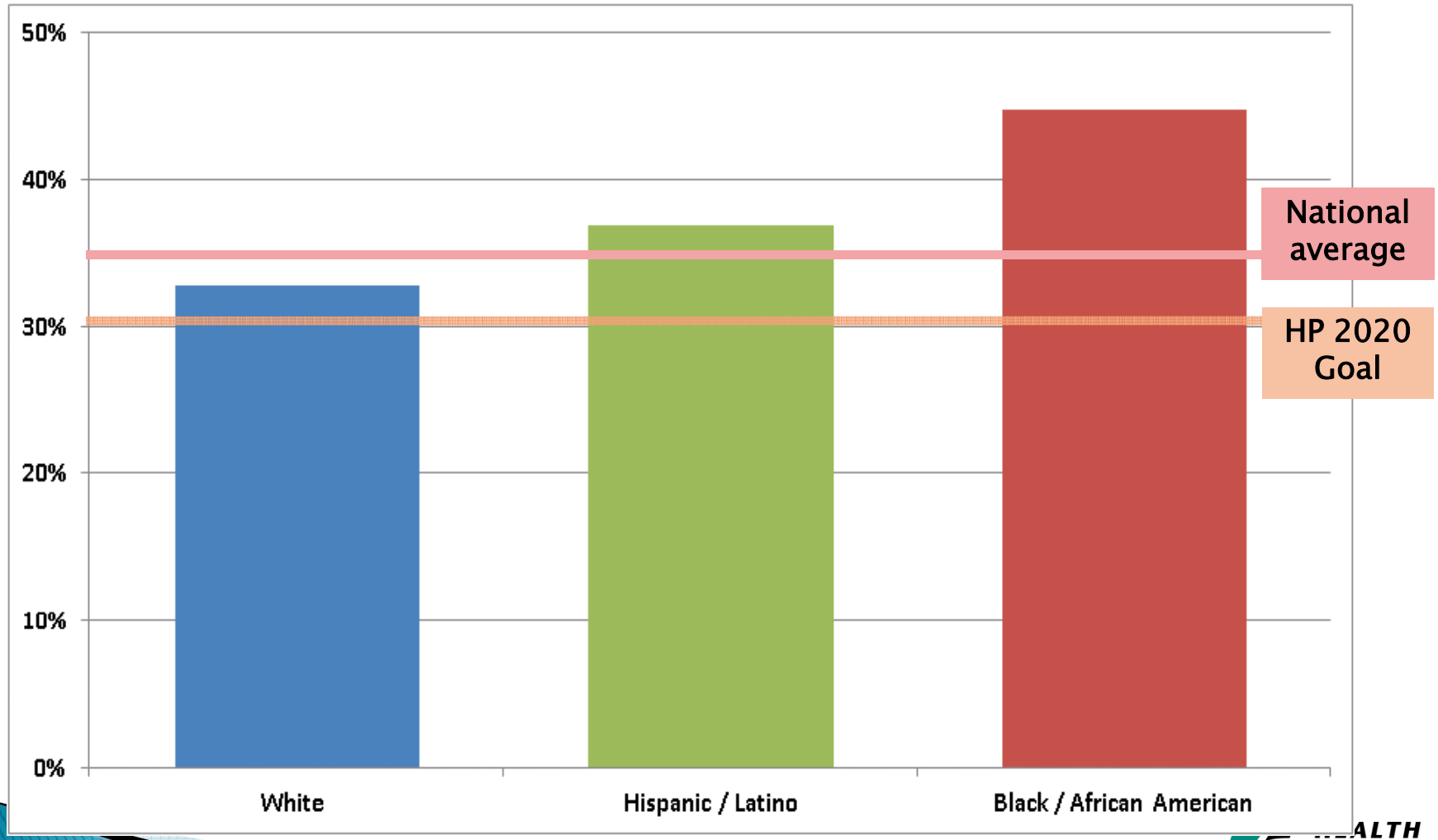
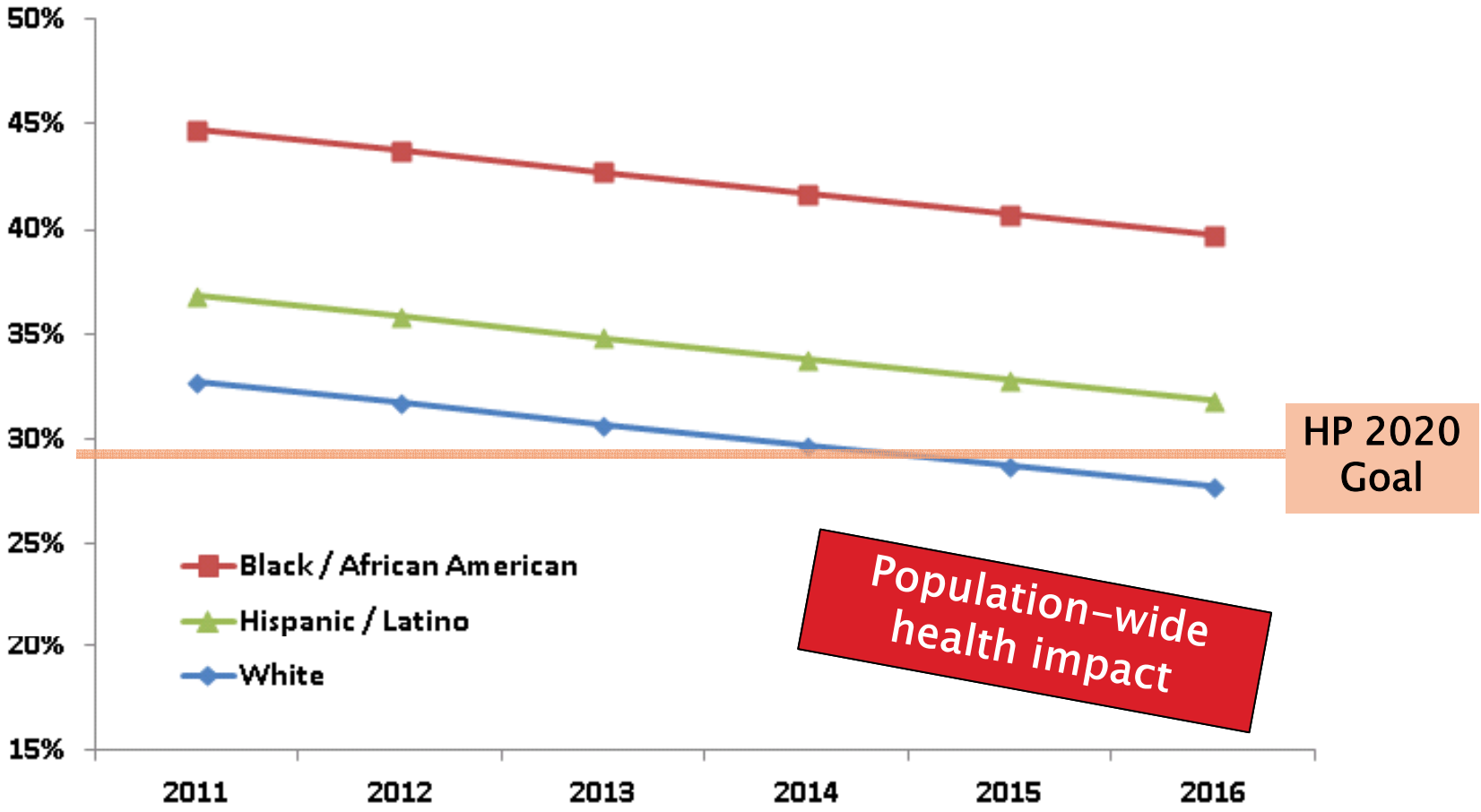
Percent of adults who are obese (by race/ethnicity)



Source: NHANES, 2008 (National Center for Health Statistics)

Percentage of adults who are obese [hypothetical projection]



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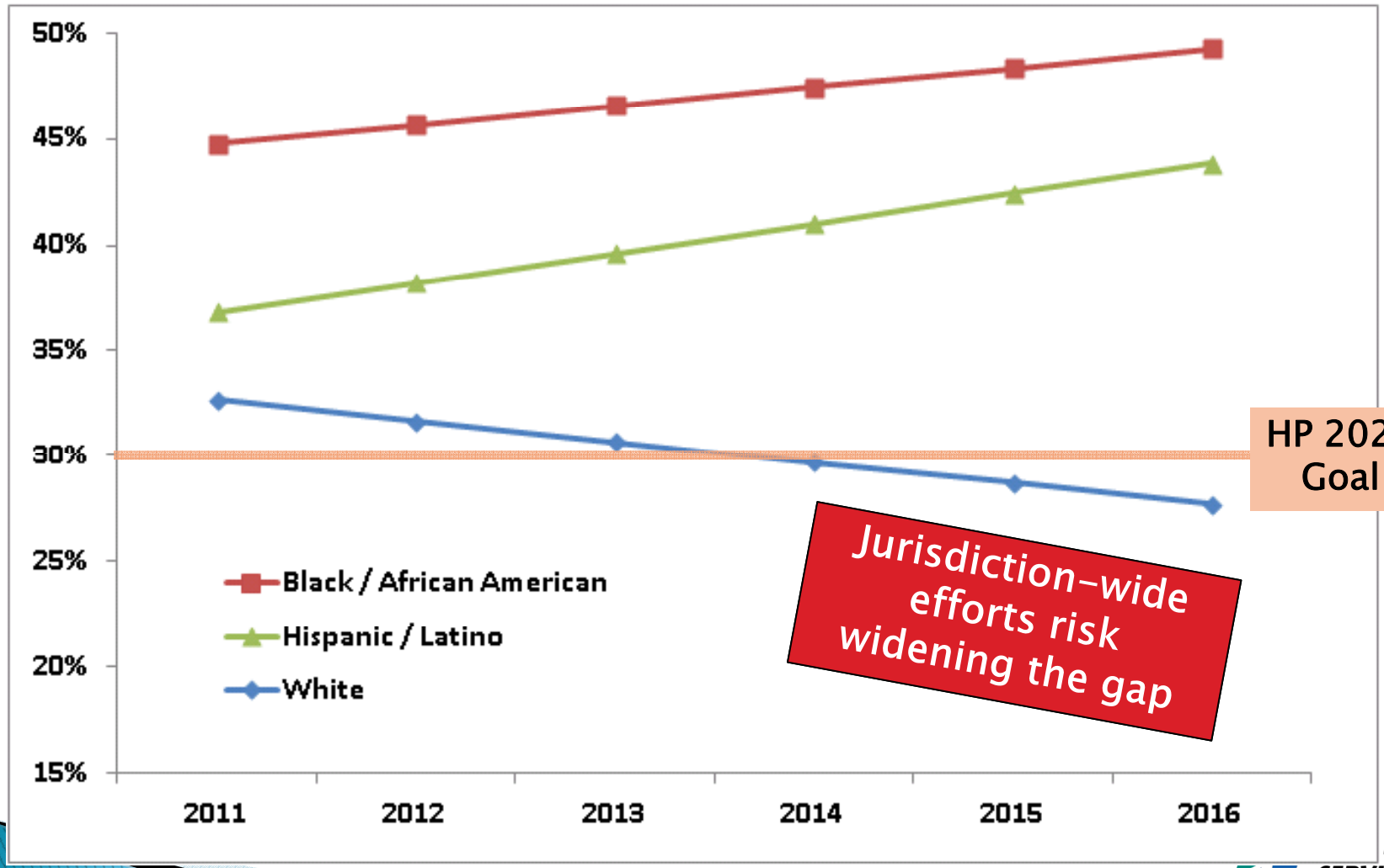

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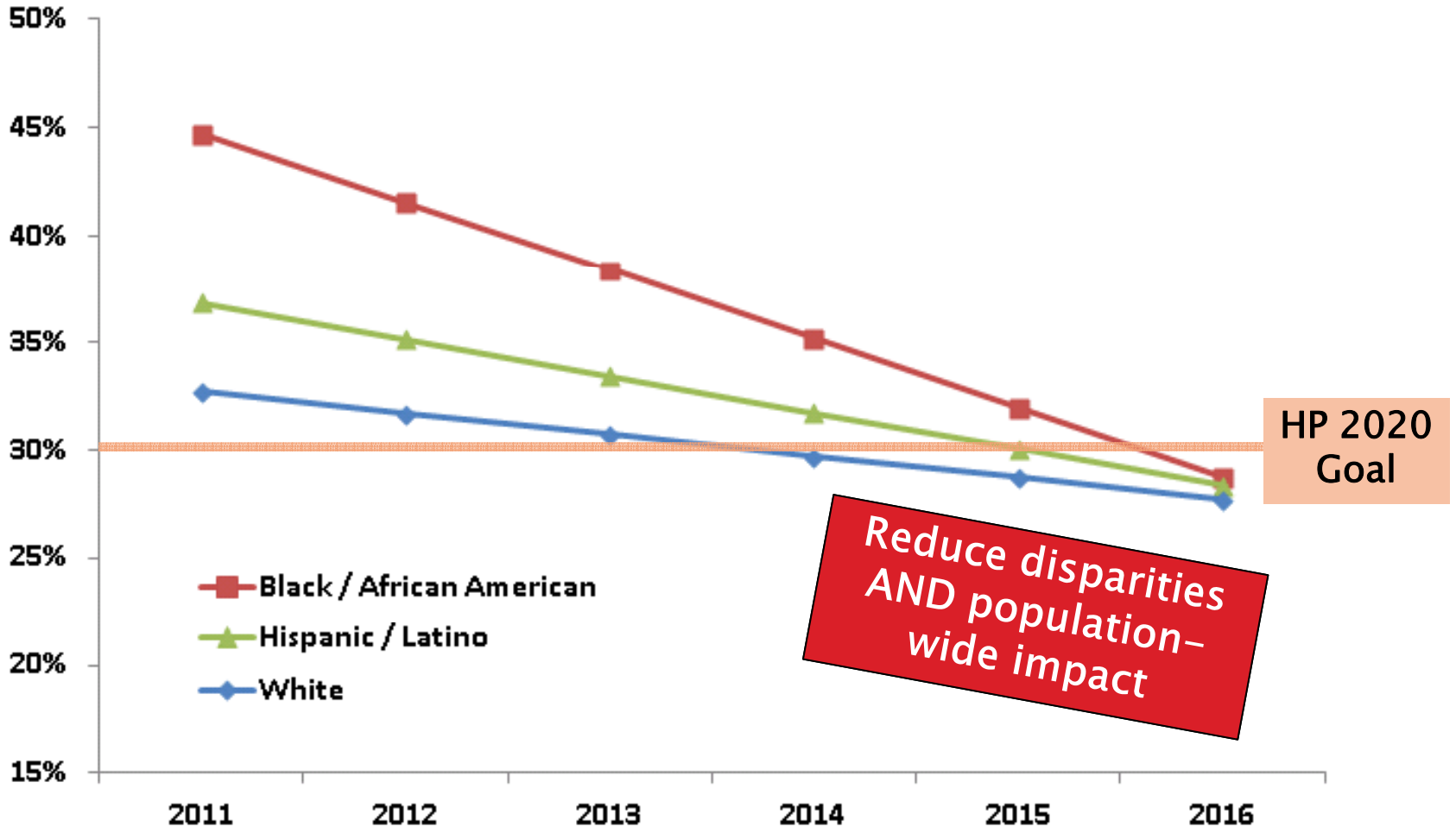

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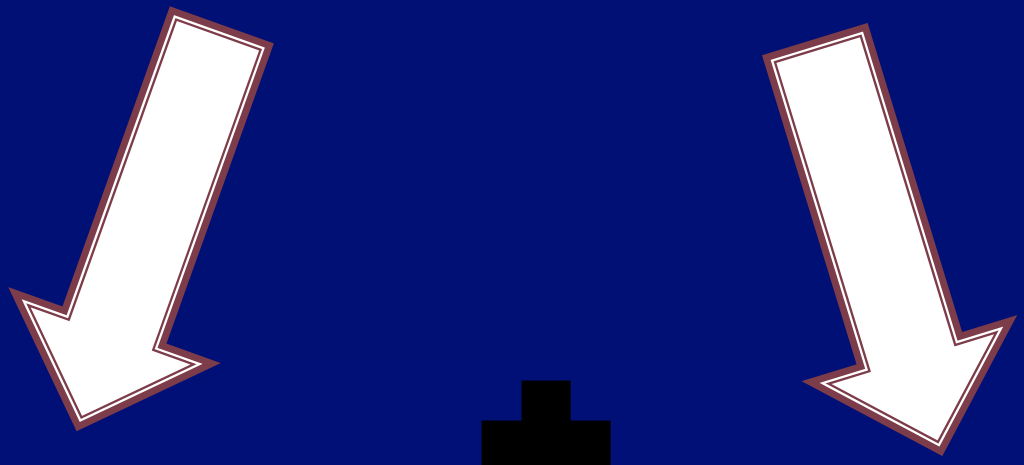
Twin Approach to Health Equity

Both *And*



Population-wide interventions

+

Targeted interventions

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Core Requirements

Mobilize the Community

Community Health Assessment

Strategic Planning – Implementation Plan

Tell Your Story

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Community Health Assessment

- **Assessment of Community Attitudes about Policy Change**
  - Researched the Community Readiness for Community Change Model
  - Identified specific topic areas for assessment
  - Need to identify additional key informants
- **Policy Scan for Tobacco**
  - Utilizing Local Grades generated by the American Lung Associate and existing and model policies from Public Health Law & Policy
  - Intern is searching city and county ordinances to identify gaps
- **Policy Scan for HEAL**
  - Identified policy areas (i.e. schools, worksites, etc.)
  - Selected Public Health Law & Policy as subcontractor
- **Assessment of Community Assets**
  - Identifying an Asset Mapping Tool to inventory existing resources and initiatives
- **Summary of Existing Health Data**
  - Have obtained, analyzing existing data sources about the County's health
- **Feedback from Communities Experiencing Disparities**
  - Selected Samuels & Associates as subcontractor

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Telling Our Story

- Continuous process
  - Initial
  - During
  - After

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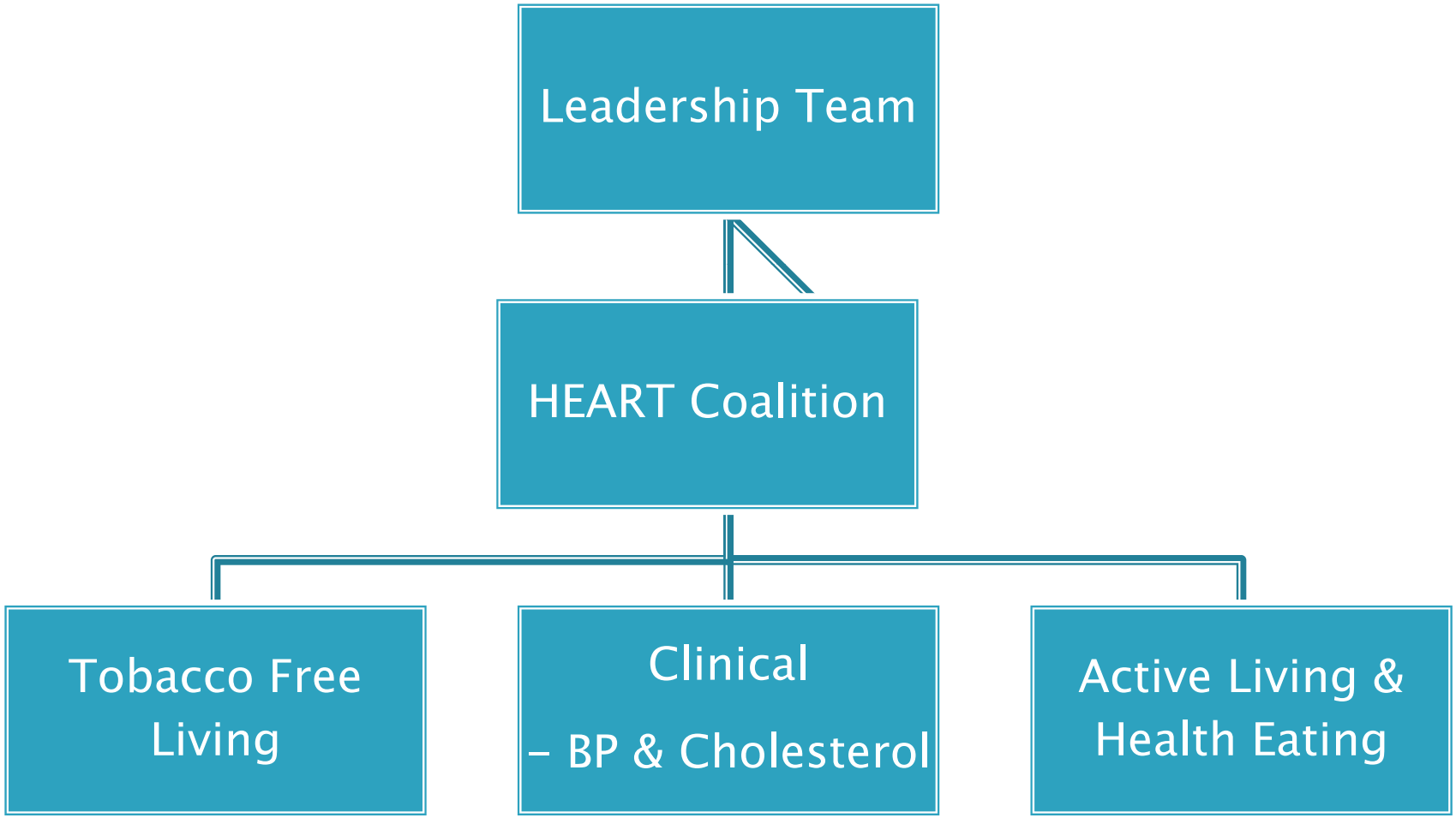
Mobilize the Community



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Mobilize the Community

- Collaborative Effort
- Maximize Talent and Skills
- Identify Policies that Impact Social Norm
- Develop a Plan to Improve Health

Outcome: Develop an Implementation Plan targeting the three priority areas

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Ad Hoc Committees

- Tobacco Free Living
- Increase Use of High Impact Quality Clinical Preventive Services (high blood pressure, high cholesterol, diabetes)
- Active Living & Healthy Eating

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Questions

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Local Health Department Expansion Project Overview

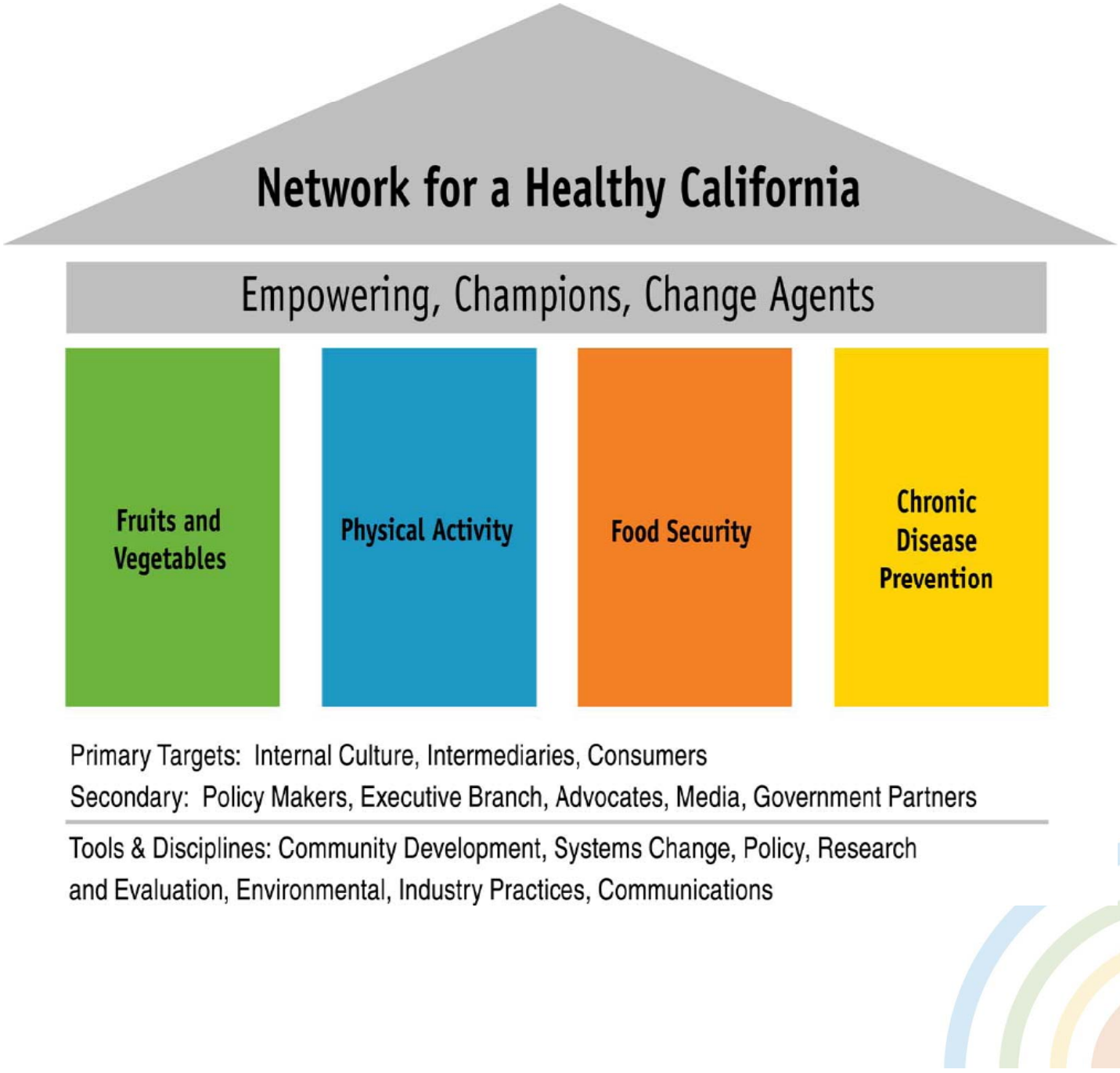
Transition from SNAP-Ed to NEOP

Stephanie Borba, PHNI

Project Coordinator

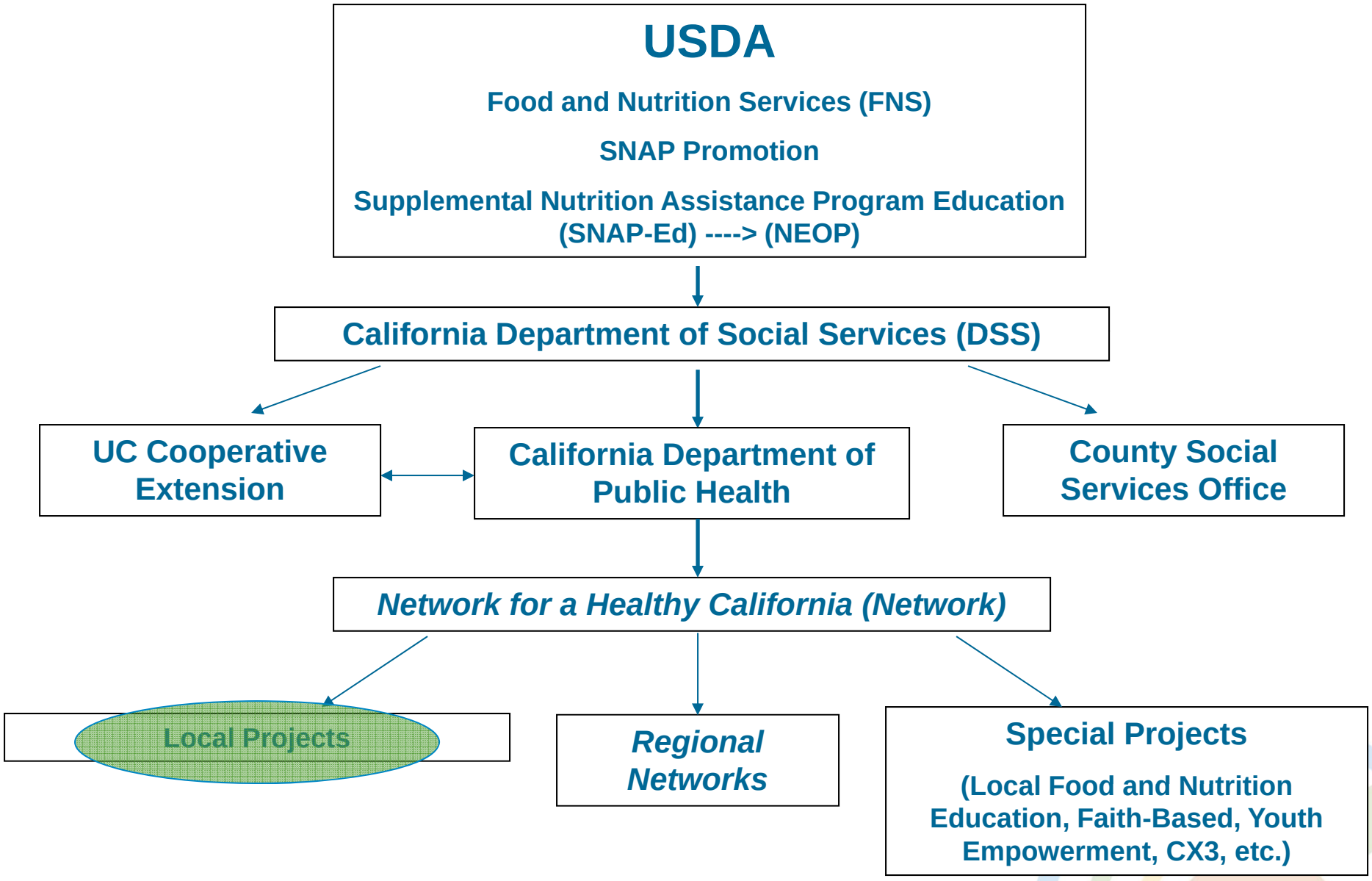
Mission Statement & Goals

The mission of the *Network for a Healthy California (Network)* is to create innovative partnerships that empower low-income Californians to increase fruit and vegetable consumption, physical activity and food security with the goal of preventing obesity and other diet-related chronic diseases.


Network for a Healthy California
Empowering, Champions, Change Agents
Fruits and Vegetables
Physical Activity
Food Security
Chronic Disease Prevention
Primary Targets: Internal Culture, Intermediaries, Consumers
Secondary: Policy Makers, Executive Branch, Advocates, Media, Government Partners
Tools & Disciplines: Community Development, Systems Change, Policy, Research and Evaluation, Environmental, Industry Practices, Communications

The Social-Ecological Model

Network Funding Structure



Funding Transition

- Due to matching funds that were required in the past Network lost almost half of the LHDs recently (inc. Stanislaus)
- Opportunity came for FFY 2012 to transition to a grant vs. match generated funding.
- 1 year transitional funding grant for LHDs
- FFY 2013 all Network funded contractors will have the new grant funding.

FFY 2012 Funding

- **New CDSS and CDPH initiative for FFY 2012: 20 counties were selected including Stanislaus.**
  - **Criteria: eligible population, poverty rates and obesity rates.**
- **Grant requires LHD coordination with CSS**
  - **Coordinate efforts to implement nutrition education interventions**
  - **Increase nutrition education and food security ***
  - **Establish successful lasting partnership**

* Restriction: Focus must be on CalFresh promotion cannot do CalFresh outreach

Transition to NEOP

- Healthy, Hunger Free Kids Act of 2010
- Three year implementation plan just came out March 2012 (Implementing NEOP)
- Still waiting on the federal rules supposed to be Jan. 2012 but should be out soon.
- California Obesity Prevention Plan

Network / NEOP Target Audience

- Persons participating in, or eligible for CalFresh
- Incomes >130% of FPL.
- Not higher than 185% of the FPL.
- At least 50% of the target population must meet these income guidelines.
- Can use GIS, Free/Reduced Meal Participation Data, or Proxy Sites.
- All interventions are focused in qualifying areas only.

Network Campaigns and Programs

- **Consists of targeted campaigns and programs that focus on increasing fruit and vegetable consumption and physical activity messages.**

Goals & Requirements

- **Goals:**
  - **Increase F/V consumption & PA**
  - **Heavy emphasis on collaboration with CSS/CNAP**
  - **Establish action plans for next year**
- **Requirements:**
  - **Facilitate nutrition classes (one-time & series)**
  - **Collaborate with ongoing community efforts in health promotion (WIC, HEAL, etc)**
  - **Rethink Your Drink**
  - **Complete CX3 Assessment share w/ stakeholders**
  - **Recruit Champion Moms**
  - **Assessment and Quality Assurance**

FFY 2012 Progress

- Funding began October 2011 (11 month due to delay)
- Executed contract received March 2012 unfortunately fell behind on intervention progress…BUT we have still:
  - Established solid partnerships with all 5 contractors and UCCE
  - Conducted training with contractors for nutrition education
  - Began 2012 CX3 evaluation of Stanislaus County working in 5 areas
  - Developed plans for all nutrition classes

Moving Forward

- Executed contract we have now hired all staff and can begin our nutrition classes and interventions
- Continue with CX3 evaluation Tier 2 will be complete
- Further State trainings with contractors
- *Rethink Your Drink* Campaign this summer
- New funding for Innovative Projects
  - Focus: Reforming CalFresh process and adding a nutrition component
  - Secondary focus: Providing more nutrition support to area Head Start programs

Questions

Stephanie Borba, PHNI

Local Health Department Expansion Project

Health Services Agency

(209)525-4809

sborba@schsa.org

**** If interested in "Community Nutrition Toolbox Kit" training in April Please contact me or Heather Duvall.**

Healthy Housing with Smokefree Policies

Stanislaus Advocacy Action Team Training
May 18, 2012

StAAT
Stanislaus Advocacy Action Team

Training Objectives

As a result of this training, you will…

- Gain information about secondhand and thirdhand smoke, and the health hazards it creates
- Be able to describe three local policy strategies available to reduce exposure to secondhand and thirdhand smoke in the home
- Have a general awareness of the key activities needed to implement the policy strategies

Training Agenda

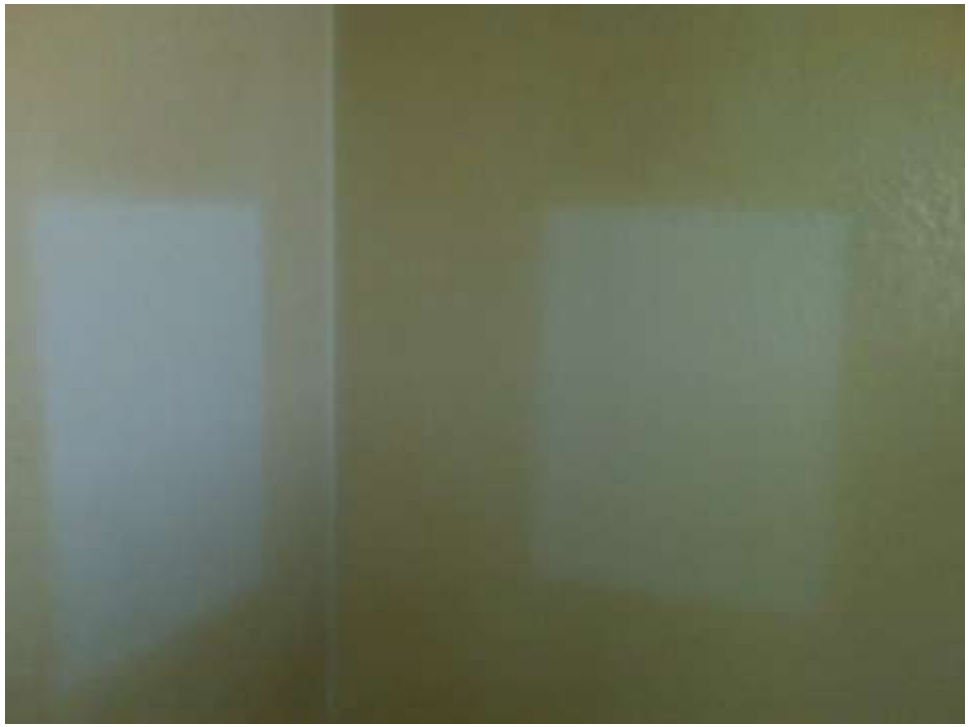
- An Overview of Secondhand and Thirdhand Smoke
  - Exposure in Housing Environments
- Smokefree Housing Policies
  - Types of Policy Strategies
- Policy Development Steps
  - Phases for Policy Advocacy

Secondhand Smoke (SHS)

- A mixture of gases and fine particles that drifts from the burning tobacco or exhaled by a smoker
- Contains more than 7,000 chemicals
  - hundreds are toxic
  - 70 can cause cancer

Thirdhand Smoke (THS)

- Residue from smoke that sticks to surfaces and in dust and is re-emitted and re-suspended back into the air
- Forms additional hazardous compounds that covers surfaces



Exposure to SHS and THS in Multi-Unit Housing

SHS

- Drifts between homes through windows, vents and other openings like plumbing and electrical outlets
- Ventilation systems cannot effectively clean smoke from the air
- As much as 65% of the air in an apartment may be coming from neighboring units

THS

- Toxins re-emit back into the air months after smoking stops
- Lingers and continues to pose a health risk much longer than SHS
  - even 2 months after a smoker has moved out
- Cleaning and painting a unit doesn't fully prevent the re-emission of toxins

Health Risks of Exposure to SHS and THS

SHS

- Lung, other cancers
- Heart disease, attacks
- Lung diseases
- Risks for Children
  - Causes asthma and triggers asthma attacks
  - Bronchitis
  - Ear infections
  - Missed school days

THS

- Health risk may be greatest for young children who are touching and ingesting these particles
- Long-term re-emission may pose risks to next tenants, even with no smoking in the home

Policy Intervention Strategies
Overview and Definitions

- Voluntary Policies
  - Adopted and enforced by the property owner
- Local Ordinance
  - Adopted by City Council or County Board of Supervisors
- Resolutions
  - Adopted by elected boards to show support for property owners who implement voluntary smoke-free housing policies
  - Adopted by community organizations or coalitions to advocate for voluntary policies or ordinance adoption

Policy Intervention Strategies

Policy Strengths Comparison

Voluntary

- Easier and quicker adoption process
- Adaptive to individual landlords and properties
- Successful policies require the support of the landlord and should have support of tenants

Ordinance

- Stronger long-term change
- More enforceable with mandated policies
- More consistent across properties within the jurisdiction
- Requires support from landlords, tenants and key opinion leaders

Policy Advocacy Process

- Preliminary Investigation and Assessment
- Strategy and Planning
- Recruitment
- The Campaign
- Implementation and Evaluation

SUCCESS IN POLICY CAMPAIGNS:

Five Phases to Victory

PHASE 1 – PRELIMINARY INVESTIGATION AND ASSESSMENT (4–8 WEEKS)

Preliminary Investigation and Assessment

- Purpose: solidify your policy goal
- Assess the political environment
  - Balance of power
  - Local problems or issues
  - Collect related data
- Gather input from others
  - Conduct informal interviews of others in your agency/group about past experiences with the same or similar issues

Strategy and Planning

- Purpose: plan the strategy using the Midwest Academy Strategy Chart
- Use the information gathered during the investigation phase
- Establish a rough timeline for activities
- Involve others
  - Core members of the campaign team
  - Include technical or legal experts
  - Key community leaders

Recruitment

- Purpose: reach beyond the core supporters to build a campaign team
- Conduct activities specifically to recruit
  - There will be a variety of roles to fill, recruit strategically to fill any gaps in resources
- Train all recruited volunteers
- Hold a campaign kick-off event
  - Energize your campaign team
  - Launch the public campaign

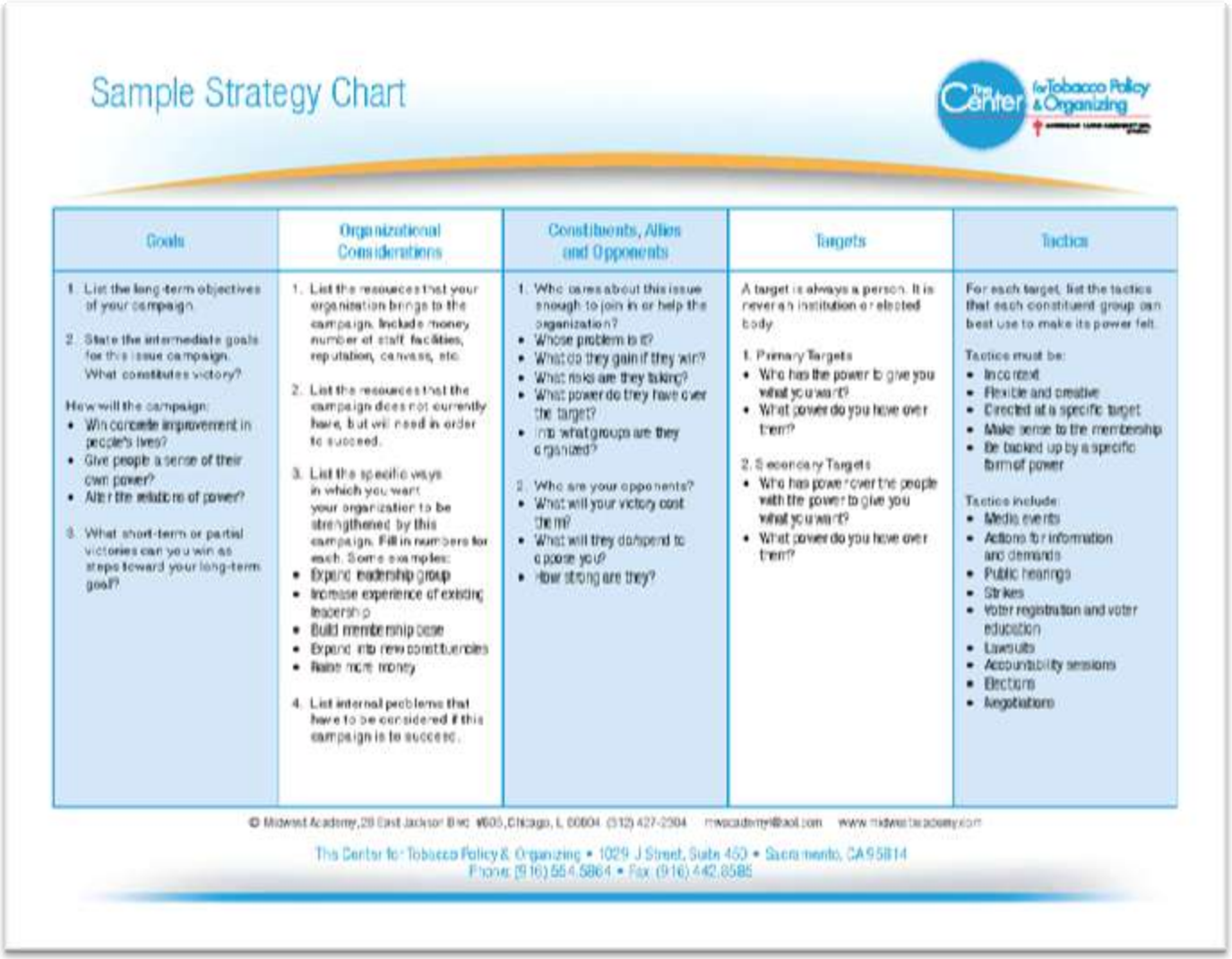
The Campaign

- Purpose: carry out the strategy!
- Begin by reviewing the strategy chart
  - Inform newly added team members
  - Review tactics to ensure buy-in
- Develop four key action groups:
  - Policy and Planning (the thinkers)
  - Media Outreach (the writers)
  - Action (the doers)
  - Speakers bureau (the talkers)

Implementation and Evaluation

- Purpose: make sure the policy is properly announced and enforced
- Renew existing and forge new relationships with key public officials
- Publicize the policy to enlist public support
- Evaluate the effectiveness of the policy
  - Did tenant complaints about smoking or cigarette litter decrease?
  - Did turnover costs for the landlord go down?

Midwest Academy Strategy Chart



Sample Strategy Chart

The Center for Tobacco Policy & Organizing

Goals	Organizational Considerations	Constituents, Allies and Opponents	Targets	Tactics
1. List the long-term objectives of your campaign. 2. State the intermediate goals for this issue campaign. What constitutes victory? How will the campaign: • Win concrete improvement in people's lives? • Give people a sense of their own power? • Alter the relations of power? 3. What short-term or partial victories can you win as steps toward your long-term goal?	1. List the resources that your organization brings to the campaign. Include money, number of staff, facilities, reputation, canvass, etc. 2. List the resources that the campaign does not currently have, but will need in order to succeed. 3. List the specific ways in which you want your organization to be strengthened by this campaign. Fill in numbers for each. Some examples: • Expand membership group • Increase experience of existing leadership • Build membership base • Expand into new constituencies • Raise more money 4. List internal problems that have to be considered if this campaign is to succeed.	1. Who cares about this issue enough to join in or help the organization? • Whose problem is it? • What do they gain if they win? • What risks are they taking? • What power do they have over the target? • Into what groups are they organized? 2. Who are your opponents? • What will your victory cost them? • What will they do/spend to oppose you? • How strong are they?	A target is always a person. It is never an institution or elected body. 1. Primary Targets • Who has the power to give you what you want? • What power do you have over them? 2. Secondary Targets • Who has power over the people with the power to give you what you want? • What power do you have over them?	For each target, list the tactics that each constituent group can best use to make its power felt. Tactics must be: • Incorrect • Flexible and creative • Directed at a specific target • Make sense to the membership • Be backed up by a specific form of power Tactics include: • Media events • Actions for information and demands • Public hearings • Strikes • Voter registration and voter education • Lawsuits • Accountability sessions • Elections • Negotiations

The Center for Tobacco Policy & Organizing • 1029 J Street, Suite 450 • Sacramento, CA 95814
Phone: (916) 554-5864 • Fax: (916) 442-8585

Healthy Housing Review

- Secondhand and Thirdhand Smoke
  - definitions, exposure and health hazards
- Policy Intervention Strategies
  - Voluntary vs. Ordinance
- Five Advocacy Phases for Policy Success
  - Midwest Academy Strategy Chart

StAAT
Stanislaus Advocacy Action Team

Thank You!

Questions?

Ken Fitzgerald, Project Director
Stanislaus Advocacy Action Team
Stanislaus County Office of Education

238-1381 **kfitzgerald@stancoe.org**

Secondhand Smoke (SHS) Factsheet

www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/general_facts/index.htm

Overview

Secondhand smoke is a mixture of gases and fine particles that includes—

- Smoke from a burning cigarette, cigar, or pipe tip,[1]
- Smoke that has been exhaled or breathed out by the person or people smoking, and[1]
- More than 7,000 chemicals, including hundreds that are toxic and about 70 that can cause cancer.[2]

Most exposure to secondhand smoke occurs in homes and workplaces. Secondhand smoke exposure also continues to occur in public places such as restaurants, bars, and casinos and in private vehicles.[3]

Health Effects: Children

In children, secondhand smoke causes the following:[3]

- Ear infections
- More frequent and severe asthma attacks
- Respiratory symptoms (e.g., coughing, sneezing, shortness of breath)
- Respiratory infections (i.e., bronchitis, pneumonia)
- A greater risk for sudden infant death syndrome (SIDS)

In children aged 18 months or younger, secondhand smoke exposure is responsible for—

- an estimated 150,000–300,000 new cases of bronchitis and pneumonia annually, and
- approximately 7,500–15,000 hospitalizations annually in the United States.[4]

Health Effects: Adults

In adults who have never smoked, secondhand smoke can cause heart disease and/or lung cancer.[3]

Heart Disease

- For nonsmokers, breathing secondhand smoke has immediate harmful effects on the cardiovascular system that can increase the risk for heart attack. People who already have heart disease are at especially high risk.[3,5]
- Nonsmokers who are exposed to secondhand smoke at home or work increase their heart disease risk by 25–30%.[3]

- Secondhand smoke exposure causes an estimated 46,000 heart disease deaths annually among adult nonsmokers in the United States.[6]

Lung Cancer

- Nonsmokers who are exposed to secondhand smoke at home or work increase their lung cancer risk by 20–30%.[3]
- Secondhand smoke exposure causes an estimated 3,400 lung cancer deaths annually among adult nonsmokers in the United States.[6]

There is no risk-free level of contact with secondhand smoke; even brief exposure can be harmful to health.[3]

Estimates of Secondhand Smoke Exposure

When a nonsmoker breathes in secondhand smoke, the body begins to metabolize or break down the nicotine that was in the smoke. During this process, a nicotine byproduct called cotinine is created. Exposure to nicotine and secondhand smoke can be measured by testing saliva, urine, or blood for the presence of cotinine.[3]

Secondhand Smoke Exposure Has Decreased in Recent Years

- Measurements of cotinine have shown how exposure to secondhand smoke has steadily decreased in the United States over time.[3,7]
  - 1988–1991, approximately 87.9% of nonsmokers had measurable levels of cotinine.
  - 1999–2000, approximately 52.5% of nonsmokers had measurable levels of cotinine.
  - 2007–2008, approximately 40.1% of nonsmokers had measurable levels of cotinine.
- The decrease in exposure to secondhand smoke over the last 20 years is due to the growing number of laws that ban smoking in workplaces and public places, the increase in the number of households with smoke-free home rules, and the decreases in adult and youth smoking rates.[8,9]

Many in the United States Continue to be Exposed to Secondhand Smoke[7]

- An estimated 88 million nonsmokers in the United States were exposed to secondhand smoke in 2007–2008.
- Children are at particular risk for exposure to secondhand smoke: 53.6% of young children (aged 3–11 years) were exposed to secondhand smoke in 2007–2008.
- While only 5.4% of adult nonsmokers in the United States lived with someone who smoked inside their home, 18.2% of children (aged 3–11 years) lived with someone who smoked inside their home in 2007–2008.

Disparities in Secondhand Smoke Exposure

Racial and Ethnic Groups

- Although declines in cotinine levels have occurred in all racial and ethnic groups, cotinine levels have consistently been found to be higher in non-Hispanic black Americans than in non-Hispanic white Americans and Mexican Americans.7,8,9 In 2007–2008:
  - 55.9% of non-Hispanic blacks were exposed to secondhand smoke.
  - 40.1% of non-Hispanic whites were exposed to secondhand smoke.
  - 28.5% of Mexican Americans were exposed to secondhand smoke.

Low Income

- Secondhand smoke exposure tends to be high for persons with low incomes: 60.5% of persons living below the poverty level in the United States were exposed to secondhand smoke in 2007–2008.7

Occupational Disparities

- Occupational disparities in secondhand smoke exposure decreased over the past two decades, but substantial differences in exposure among workers remain. African-American male workers, construction workers, and blue collar workers and service workers are among some of the groups who continue to experience particularly high levels of secondhand smoke exposure relative to other workers.10

Eliminating smoking in indoor spaces is the only way to fully protect nonsmokers from secondhand smoke exposure. Separating smokers from nonsmokers, cleaning the air, and ventilating buildings does not eliminate secondhand smoke

References

1. National Toxicology Program. **Report on Carcinogens, Twelfth Edition**. Research Triangle Park (NC): U.S. Department of Health and Human Sciences, National Institute of Environmental Health Sciences, National Toxicology Program, 2011 [accessed 2012 Mar 1].

2. U.S. Department of Health and Human Services. **A Report of the Surgeon General: How Tobacco Smoke Causes Disease: What It Means to You.** Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010 [accessed 2011 Mar 11].

3. U.S. Department of Health and Human Services. **The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General**. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006 [accessed 2011 Mar 11].

4. United States Environmental Protection Agency. **Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders**. Washington: U.S. Environmental Protection Agency, Office of Research and Development, Office of Health and Environmental Assessment, 1992 [accessed 2011 Mar 11].

5. Institute of Medicine. **Secondhand Smoke Exposure and Cardiovascular Effects: Making Sense of the Evidence**. Washington: National Academy of Sciences, Institute of Medicine, 2009 [accessed 2011 Mar 11].

6. Centers for Disease Control and Prevention. **Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses—United States, 2000–2004**. Morbidity and Mortality Weekly Report 2008;57(45):1226–8 [accessed 2011 Mar 11].

7. Centers for Disease Control and Prevention. **Vital Signs: Nonsmokers' Exposure to Secondhand Smoke—United States, 1999–2008**. Morbidity and Mortality Weekly Report 2010;59(35):1141–6 [accessed 2011 Mar 11].

8. Pirkle JL, Bernert JT, Caudill SP, Sosnoff CS, Pechacek TF. **Trends in the Exposure of Nonsmokers in the U.S. Population to Secondhand Smoke: 1988–2002**. Environmental Health Perspectives 2006;114(6):853–8 [accessed 2011 Mar 11].

9. Centers for Disease Control and Prevention. **Fourth National Report on Human Exposure to Environmental Chemicals**. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Environmental Health, 2009 [accessed 2011 Mar 11].

10. Arheart KL, Lee DJ, Dietz NA, Wilkinson JD, Clark III JD, LeBlanc WG, Serdar B, Fleming LE. **Declining Trends in Serum Cotinine Levels in U.S. Worker Groups: The Power of Policy**. Journal of Occupational and Environmental Medicine 2008;50(1):57–63 [cited 2011 Mar 11].

For Further Information

Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Office on Smoking and Health
E-mail: tobaccoinfo@cdc.gov
Phone: 1-800-CDC-INFO
Media Inquiries: Contact CDC's Office on Smoking and Health press line at 770-488-5493.

When smokers move out and non-smokers move in: residential thirdhand smoke pollution and exposure

Georg E Matt, Penelope J E Quintana, Joy M Zakarian, et al.

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When smokers move out and non-smokers move in: residential thirdhand smoke pollution and exposure

Georg E Matt,[1] Penelope J E Quintana,[2] Joy M Zakarian,[3] Addie L Fortmann,[4] Dale A Chatfield,[5] Eunha Hoh,[2] Anna M Uribe,[2] Melbourne F Hovell[2]

[1]Department of Psychology, San Diego State University, San Diego, California, USA
[2]Graduate School of Public Health, San Diego State University, San Diego, California, USA
[3]San Diego State University Research Foundation, San Diego, California, USA
[4]San Diego State University/University of California at San Diego Joint Doctoral Program in Clinical Psychology, San Diego, California, USA
[5]Department of Chemistry, San Diego State University, San Diego, California, USA

Correspondence to
Georg E Matt, Department of Psychology, San Diego State University, San Diego, California 92182-4611, USA;
gmatt@sciences.sdsu.edu

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ABSTRACT

Background This study examined whether thirdhand smoke (THS) persists in smokers' homes after they move out and non-smokers move in, and whether new non-smoking residents are exposed to THS in these homes.

Methods The homes of 100 smokers and 50 non-smokers were visited before the residents moved out. Dust, surfaces, air and participants' fingers were measured for nicotine and children's urine samples were analysed for cotinine. The new residents who moved into these homes were recruited if they were non-smokers. Dust, surfaces, air and new residents' fingers were examined for nicotine in 25 former smoker and 16 former non-smoker homes. A urine sample was collected from the youngest resident.

Results Smoker homes' dust, surface and air nicotine levels decreased after the change of occupancy ($p<0.001$); however dust and surfaces showed higher contamination levels in former smoker homes than former non-smoker homes ($p<0.05$). Non-smoking participants' finger nicotine was higher in former smoker homes compared to former non-smoker homes ($p<0.05$). Finger nicotine levels among non-smokers living in former smoker homes were significantly correlated with dust and surface nicotine and urine cotinine.

Conclusions These findings indicate that THS accumulates in smokers' homes and persists when smokers move out even after homes remain vacant for 2 months and are cleaned and prepared for new residents. When non-smokers move into homes formerly occupied by smokers, they encounter indoor environments with THS polluted surfaces and dust. Results suggest that non-smokers living in former smoker homes are exposed to THS in dust and on surfaces.

INTRODUCTION

Secondhand smoke (SHS) is composed of sidestream smoke emitted from the smouldering tip of a cigarette (80% to 90%) and exhaled mainstream smoke (10% to 20%). It contains a complex and dynamic mixture of more than 4000 chemical compounds in the form of gases and particulate matter, and has been classified as a human carcinogen and an indoor air pollutant.[1–4] Immediately after emission, tobacco smoke undergoes physical and chemical changes, and the mixture of chemical compounds interacts with the environment.

The combination of tobacco smoke pollutants remaining in an indoor environment has been referred to as residual tobacco smoke pollution or, more popularly, thirdhand smoke (THS).[5 6] THS includes a mixture of semivolatile compounds found in SHS that have sorbed or settled on surfaces of an indoor space and are later re-emitted into the air. THS also encompasses particulate matter that has deposited and accumulated on surfaces and in dust, or has become trapped in carpets, upholstery, fabrics and other porous materials commonly found in indoor environments. THS also may contain secondary pollutants created from reactions of tobacco smoke pollutants with oxidants and other compounds in the environment.

The constituents of THS that have been identified so far include nicotine, 3-ethenylpyridine (3-EP), phenol, cresols, naphthalene, formaldehyde and tobacco-specific nitrosamines (some absent in freshly emitted tobacco smoke).[7 8] THS exposure results from the involuntary inhalation, ingestion, or dermal uptake of THS pollutants in the air, in dust and on surfaces. It includes inhalation exposure to compounds re-emitted into the air from indoor surfaces and particles resuspended from deposits, and dermal and ingestion exposure to compounds partially derived from cigarette smoke and resulting particles that have settled, deposited and accumulated on surfaces and dust. Some of the compounds in THS are odorant and are experienced as an unpleasant, stale tobacco smoke odour on smokers, in rooms in which smoking has occurred, or on non-smokers or objects that have been in smokers' environments.

Research suggests that THS pollutants in dust, air and on surfaces in homes and cars may persist as long as months after the last known tobacco use occurred.[9 10] Evidence collected in field and controlled laboratory studies shows that indoor environments in which tobacco is regularly smoked become reservoirs of tobacco smoke pollutants, potentially leading to the involuntary exposure of non-smokers to THS in the absence of concurrent smoking and long after smoking has taken place.[11–13] Our previous research found that infants of smoking mothers were exposed to tobacco smoke pollutants through THS even though their mothers had strict indoor smoking bans and never smoked near their children.[9]

This study examined homes of smokers and non-smokers who were about to move out to better understand the persistence of THS during a change of occupancy. Before the first occupants moved out, we measured levels of THS in their homes and the extent to which non-smoking residents were involuntarily exposed to tobacco smoke. We revisited these homes after new non-smoking residents

moved in to determine the extent to which the homes remained polluted with THS and the extent to which new non-smoking residents were exposed to THS.

METHODS

Study design

This study relied on a quasiexperimental design, comparing non-smoker and smoker homes and their residents before (part 1) and after (part 2) a change of occupancy. For part 1, 150 participants were recruited who were planning to move out of a private residence (ie, house, condominium, or apartment) within the next month. Participants were interviewed, environmental sampling was conducted and children's urine samples were collected for analysis of cotinine concentration. For part 2, we recruited the new residents who moved into the part 1 homes. These residents were interviewed, environmental sampling was conducted, and urine samples were collected from the youngest residents.

Inclusion criteria

For part 1, residents were eligible to participate if they were age 18 or older, spoke English, had lived in their current home for at least 6 months, reported that everyone in their household was planning to move within the next month and also that (to the best of their knowledge) the home would be reoccupied after they moved out. In addition, they met criteria for classification as either a 'smoker home' (n=100) or a 'non-smoker home' (n=50). Smoker homes were those in which residents had smoked indoors during at least 5 of the past 6 months, including the current and most recent month, and had smoked a minimum of seven cigarettes per week inside the home during the week prior to study measures. Non-smoker homes were those where no smokers had lived and no visitors had smoked indoors during the past 6 months, and where a *target child* (under age 12, not breastfeeding) who had not been exposed to any SHS in the past month resided full time. For smoker homes, a target child was selected if there was a resident under age 12 who lived in the home full time and was not breastfeeding. Six smoker homes that were measured in part 1 were disqualified because residents smoked fewer than seven cigarettes inside the home during the week preceding study measures, and their data were not included in the following analyses.

For part 2, new residents were eligible if they were age 18 or older, spoke English or Spanish, had not smoked any cigarettes since they moved into the home and if no visitors had smoked inside the home since the new residents moved in. The youngest resident who lived in the home full time and was not breastfeeding was designated the target child.

Participants

Participants received US$100–US$200 for completing an interview, providing urine samples and allowing the collection of environmental samples. All procedures were approved by the San Diego State University Institutional Review Board.

Part 1 recruitment

For part 1, participants were recruited through advertisements in local print (n=82) and electronic news media (n=4), San Diego County Women, Infants, and Children Supplemental Food and Nutrition Program (WIC) offices (n=52), referrals from friends, relatives, or coworkers (n=4), flyers distributed in military housing (n=1) and postcard mailers to a commercially available list of smokers (n=1).

Part 2 recruitment

After part 1 residents confirmed they had moved, research assistants delivered or mailed up to 12 recruitment letters and flyers to the same homes, requesting that new residents contact the research office by telephone for eligibility screening. Homes were visited at varied times of the day on weekdays and weekends, and screening was conducted in person if the new residents were present and agreed. If a home was still vacant and we were unable to gain access through the property manager or owner (6%) or new residents had not responded 6 months after part 1 measures were completed (12%), the home was disqualified from part 2. New residents of 26% of homes were disqualified due to smoking, the part 1 residents did not move from 18% of homes, the new residents declined to participate in 6% of homes, we were unable to schedule measures with 2%, and 1% of homes were completely renovated.

Part 2 measures were completed for 25 former smoker homes and 16 former non-smoker homes. Seven of these homes (four non-smoker and three smoker) were measured while vacant, with permission from the property manager or owner, as no new residents had moved in after 3 months. There were no statistically significant differences in air, surface, finger, or dust nicotine contamination for homes that were measured while vacant versus occupied (all $p>0.23$).

There were no significant differences for any part 1 measures of home contamination or target children's SHS exposure between smoker homes that did or did not participate in part 2. Compared to non-smoker homes that did not participate in part 2, those that participated exhibited higher mean nicotine concentration levels in living room air ($p=0.031$) and on residents' fingers ($p=0.014$) at part 1.

Participant and home characteristics

See table 1 for participant and home characteristics at part 1 and part 2.

Table 1 Participant and home characteristics

Characteristic	Part 1 Non-smoker homes N=50	Part 1 Smoker homes N=94	Part 2 Non-smoker homes N=16	Part 2 Smoker homes N=25
Participant				
Female	86%	75%	85%	76%
Age, years* †	33	38	26	27
Race/ethnicity				
White	38%	37%	46%	38%
Hispanic	28%	12%	46%	19%
Black	24%	31%	8%	29%
Other	10%	20%	0%	14%
Target child				
Female	44%	44%	29%	0%
Age, years*	4.0	4.3	2.9	3.4
Race/ethnicity				
White	24%	19%	29%	14%
Hispanic	26%	25%	43%	57%
Black	22%	31%	0%	29%
Other	28%	25%	29%	0%
Number of residents living in home* †	4	2	3	2
Square footage of home* †	767	591	764	666
Household income* †	US$37220	US$25500	US$32000	US$34000

*Median.
†$p<0.01$ (two sided) part 1 smoker versus non-smoker homes.

Measures

Pairs of research assistants visited participants' homes to conduct in-person interviews and collect environmental samples. Interviews were primarily conducted with the eligible resident who agreed to participate, however questions about smoking inside the home and SHS exposure of non-smokers were asked of each smoker who agreed to participate. If a smoker resident was unavailable, participants provided proxy reports. In smoker homes, samples were collected in the living room and one bedroom (the target child's or a non-smoker's, or the smoker's bedroom in homes with no non-smokers). In non-smoker homes, samples were collected in the living room only.

Indoor smoking and SHS exposure

At each interview, primary interview participants and other parents (spouses or partners living in the home) reported their smoking and the target child's SHS exposure on typical work and non-work days (or week and weekend days if participants didn't work outside the home) during the past 7 days, including exposure from other residents and visitors, and outside of the home including in the car. SHS exposure was defined as the number of cigarettes smoked while the target child was in the same indoor room or car. The target child's weekly exposure to cigarettes in the home and 'total exposure' to all cigarettes in the home, car and elsewhere were computed. These measures have shown acceptable test—retest reliability and validity in relation to cotinine and nicotine assays in our past studies.[14–16]

To examine the test—retest reliability of our measures, selected smoking and SHS exposure questions were asked by telephone again for 32 part 1 respondents who agreed to participate 24–72 h following their home interview. Pearson correlation coefficients for participants' reports at the part 1 interview and 24–72 h retest were r=0.95 for participants' smoking rate inside the home, r=0.92 for other parents' smoking rate inside the home, r=0.90 for visitors' smoking rate inside the home, r=0.97 for participants' overall smoking rate, r=0.89 for other parents' overall smoking rate and r=0.98 for children's SHS exposure from visitors inside the home. Validity correlations between part 1 outcome variables were r=0.61 for living room surface nicotine with dust nicotine, r=0.54 for living room surface nicotine with air nicotine, r=0.63 for living room dust nicotine with air nicotine and r=0.89 for urine cotinine with reported indoor smoking.

Surface nicotine in living room and bedroom

Prescreened cotton wipes (cosmetic 100% cotton facial wipes) were wetted with 1.5 ml of 1% ascorbic acid and wiped over a 100 cm^2 area, typically a wooden door or cabinet unlikely to be frequently cleaned.[9] Nicotine-d_4 was added as an internal standard, then 0.1% aqueous formic acid was added, mixed, and the wipe removed from solution. Then, 1 M KOH (aqueous) was added, vortexed, and 2 ml was transferred to a precleaned solid phase extraction (SPE) column (Isolute C8, International Sorbent Technologies, Hengoed, UK). The column was washed, then the nicotine eluted with acetonitrile/pH4 20 mm ammonium acetate buffer into an amber autosampler phial. Samples were stored at −20C in the dark until analysis. For part 2, samples were collected in a 100 cm^2 area directly adjacent to the area sampled in part 1.

Finger nicotine concentration

A wipe sample of the participant's dominant hand index finger was taken at the home visit. In part 1, this was the smoker or non-smoker about to move out. In part 2, this was the new non-smoking resident. Wipes were prepared and processed as above.

Dust nicotine in living room and bedroom

Dust samples were collected from a 1 m by 1 m area (or from a larger area if needed to collect approximately one-quarter of an inch of dust in a collection bottle) with a High-Volume-Small Surface-Sampler (HVS4, CS3 Inc., Venice, Florida, USA) into methanol-washed amber bottles. Samples were transported cooled, then were weighed and sieved with a stainless steel, methanol-washed, 150 μm mesh sieve to remove large debris such as pet hairs, and weighed again. Samples were stored at −20C until analysis. For analysis of nicotine, 50 mg of sieved dust were used. Samples were processed and analysed in a manner similar to wipe samples except the inlet end of the SPE columns were coupled to a filter cartridge containing a medium porosity filter paper to retain the particulate. Dust concentrations are reported as μg/g (concentration) as well as μg/m^2 (loading). For part 2, samples were collected directly adjacent to the area sampled in part 1.

Air nicotine in living room and bedroom

A passive diffusion monitor badge was used, consisting of a modified 37 mm 3M Organic Vapour Monitor (3-M, St. Paul, Minnesota, USA) with a glass fibre filter coated with a glycerol/phosphoric acid mixture (filter collector was modified from Kuusimaki *et al*).[17] The sampling rate was empirically determined to be 18.4 ml/min. At the home visit, research assistants taped monitors to a wall about 1.5 m (5 feet) above the ground, out of children's reach and away from windows, corners, doors and ashtrays. Inactive monitors were placed in all other rooms of the study homes to enhance reporting accuracy. Research assistants visited the homes 7 days later to retrieve the monitors, and the time in minutes the badge was placed were recorded. Extraction took place as for wipes, as discussed above. For part 2 measures, air monitors were placed in the same exact locations as for part 1.

Urine cotinine concentration

At each part 1 and part 2 home visit, a urine sample was collected from the target child. Samples were obtained using a standard collection cup for older children and adults, or by placing two pieces of a 12.7 cm by 22.9 cm (5 inch by 9 inch) pad (cut into four pieces) in the diaper (TenderSorb Wet-Pruf Abdominal Pads, Kendall # 9190, Kendall, Covidien, Mansfield, Massachusetts, USA). Wet pads were packed into separate sterile 20 ml syringes and expressed into sterile 5 ml plastic phials.

Laboratory analyses

Samples were analysed by D Chatfield at San Diego State University. The method of analysis was by liquid chromatography tandem mass spectrometry (LC-MS-MS) using electrospray ionisation (ESI; Thermo Fisher Scientific, Waltham, Massachusetts, USA). Nicotine was quantified against the internal standard, nicotine-d_4 (CDN Isotopes Inc., Pointe-Claire, Quebec, Canada). The final extracts after sample preparation were injected (1–5 μl) onto a LC silica column (Hypersil, Thermo Fisher Scientific, Waltham, Massachusetts, USA) and separated in hydrophilic interaction chromatography (HILIC) mode using acetonitrile:pH4 20 mM acetate buffer of 70:30 (v/v) at 150 μl/min. Selected reaction monitoring of the MS-MS transitions at 16V collision-induced dissociation (CID) of m/z 163.2 to m/z 117.1 and 130.1 and m/z 167.1 to m/z 121.1 and m/z 134.1 was used for nicotine and the deuterated analogue, respectively. Standard calibration curves were linear over the

concentration range studied, 0.1 to 1000 ng/ml with R^2=0.997. Limits of detection were approximately 0.1 μg nicotine/m^2 for wipe samples, 0.2 μg nicotine/g dust and 0.0053 μg/m^3 in air for a 7 day exposure. The detection limit for urine cotinine was approximately 0.05 ng/ml.

Statistical analyses

Results are presented for study homes that had part 1 and part 2 measures (N=41), and for all part 1 homes (N=144). To control for non-normal distributions and heterogeneous error variances, we subjected response variables to logarithmic transformation and report geometric means. We examined differences in THS pollution and exposure between smoker and non-smoker homes before (part 1) and after (part 2) the change of occupancy using two-sample t tests with unequal variances. Mean changes in THS pollution from part 1 to part 2 were examined with paired t tests. Quantile and Tobit regression analyses for left-censored data were used to explore the contribution of dust, surface and air contamination to participants' finger nicotine and urine cotinine levels. Quantile regression models were examined for 50th and 75th percentiles. Analyses were conducted with Stata IC V. 10.0 and SPSS V. 15.0 statistical software.[18 19] The type I error rate was set at α=0.05, and comparisons between non-smoker and smoker homes were conducted based on directional (one-tailed) hypotheses regarding differences in THS pollution and exposure between non-smoker and smoker homes and between non-smokers residing in former smoker and non-smoker homes. All other hypotheses were tested in a non-directional (two-tailed) fashion.

To investigate how well environmental and biological markers of THS pollution and exposure discriminate between smoker and non-smoker environments, we determined cut-off values for urine cotinine and finger, air, dust and surface nicotine levels that yield the largest per cent difference between correctly identified smoker homes (ie, hits) and incorrectly identified non-smoker homes (ie, false alarms).

RESULTS

Tobacco smoke pollution in homes

Tobacco smoke pollution in smoker and non-smoker homes before the change of occupancy (part 1)

Table 2 shows the geometric means and 95% CIs for the number of cigarettes smoked indoors at home, as well as for nicotine levels in the air, dust and on the surfaces of smoker and non-smoker homes (ie, part 1). Data are reported for all smoker and non-smoker homes, and also separately for the subset of homes for which part 1 and part 2 data were available.

In part 1 smoker homes, participants reported that an average of 60 cigarettes/week were smoked indoors; 52% had 1 smoking resident, 44% had 2 and 4% had 5 smoking residents. In part 1 non-smoker homes, participants reported that no residents had smoked at all in the past 6 months, and that no cigarettes were smoked inside the home for at least 6 months prior to study measures.

Replicating findings from our earlier research, smoker homes showed significantly elevated levels (all p<0.001) of nicotine in the air, in household dust and on surfaces. Air nicotine concentrations were 35–98 times higher than those found in non-smoker homes. The 2 major reservoirs for THS in smoker homes, dust and surfaces, showed nicotine levels approximately 12–21 and 30–150 times higher, respectively, than the reference levels in non-smoker homes. Note that nicotine concentrations in dust were approximately equivalent in living rooms and bedrooms.

Table 2 Tobacco smoke pollution in smoker and non-smoker homes before (part 1) and after (part 2) the change of occupancy

	Part 1: original occupants, N mean (95% CI)	Part 2: new non-smoker occupants, N mean (95% CI)
Indoor smoking, cigarettes/week		
All non-smoker homes	50 0	16 0
All smoker homes	94 60.17 (49.60 to 72.96)	25 0
Same non-smoker homes	16 0	16 0
Same smoker homes	25 68.57 (46.94 to 99.94)	25 0
Air nicotine, μg/m^3		
Living room:		
All non-smoker homes	50 0.02 (0.01 to 0.03)	16 0.14 (0.00 to 0.34)
All smoker homes	81* 1.86 (1.38 to 2.44)	23 0.20 (0.07 to 0.34)
Same non-smoker homes	16 0.04 (0.00 to 0.07)	16 0.14 (0.00 to 0.34)
Same smoker homes	19 1.96 (1.01 to 3.34)	19 0.23 (0.07 to 0.41)
Bedroom:		
All smoker homes	74† 1.44 (1.00 to 1.97)	22 0.12 (0.04 to 0.19)
Same smoker homes	19 1.55 (0.75 to 2.73)	19 0.13 (0.05 to 0.22)
Surface nicotine, μg/m^2		
Living room:		
All non-smoker homes	50 1.6 (0.8 to 3.0)	16 1.5‡ (0.4 to 3.7)
All smoker homes	94 98.7 (61.2 to 158.6)	24 10.0‡ (3.1 to 28.6)
Same non-smoker homes	16 1.4 (0.3 to 3.6)	16 1.5‡ (0.4 to 3.7)
Same smoker homes	24 211.7 (85.2 to 523.9)	24 10.0‡ (3.1 to 28.6)
Bedroom:		
All smoker homes	87 50.1 (29.4 to 84.7)	23 7.5 (1.9 to 24.4)
Same smoker homes	23 66.1 (24.8 to 173.5)	23 7.5 (1.9 to 24.4)
Dust nicotine, μg/g		
Living room:		
All non-smoker homes	50 2.9 (1.1 to 4.0)	16 2.3§ (1.0 to 4.4)
All smoker homes	93 39.6 (30.0 to 52.2)	25 10.9§ (6.4 to 18.2)
Same non-smoker homes	16 2.7 (1.1 to 5.3)	16 2.3§ (1.0 to 4.4)
Same smoker homes	25 47.6 (26.6 to 84.7)	25 10.9§ (6.4 to 18.2)
Bedroom:		
All smoker homes	76 30.7 (22.2 to 42.2)	23 11.0 (6.0 to 19.6)
Same smoker homes	23 40.4 (23.1 to 70.2)	23 11.0 (6.0 to 19.6)
Dust nicotine, μg/m^2		
Living room:		
All non-smoker homes	49 3.6 (2.2 to 5.6)	16 3.1 (0.8 to 8.3)
All smoker homes	92 58.8 (40.9 to 84.3)	25 7.6 (3.6 to 15.3)
Same non-smoker homes	15 4.2 (1.3 to 10.6)	15 3.4 (0.8 to 9.6)
Same smoker homes	25 76.2 (33.1 to 173.8)	25 7.6 (3.6 to 15.3)
Bedroom:		
All smoker homes	73 51.0 (34.7 to 74.8)	21 7.3 (3.0 to 16.3)
Same smoker homes	21 75.4 (36.7 to 153.9)	21 7.3 (3.0 to 16.3)

*Part 1 living room air monitors were not placed in nine smoker homes because residents were moving in <7 days, and air monitors were not returned by residents of four smoker homes.
†Part 1 bedroom air monitors were not placed in nine smoker homes because residents were moving in <7 days, or in six studio apartments, and were not returned by residents of five smoker homes.
‡p=0.0059 (directional) part 2 non-smoker versus former smoker homes.
§p=0.0002 (directional) part 2 non-smoker versus former smoker homes.

Change in tobacco smoke pollution when smokers moved out and non-smokers moved in (part 1 vs part 2)

Of the homes that participated in part 2, smoker homes were vacant a median of 62 days and non-smoker homes were vacant a median of 34 days after part 1 residents moved out. Part 2 measures were obtained a median of 33 days after new residents moved into former smoker homes, and a median of 32 days after new residents moved into former non-smoker homes. Smoker homes were more likely than non-smoker homes to get new flooring in the bedroom, kitchen and living room, and were more likely to have the kitchen painted (as reported by part 2 participants; all χ^2 p<0.05).

Table 2 shows that tobacco pollutants as measured by nicotine concentrations significantly decreased when smokers moved out (part 1) and new non-smoking residents moved into the same homes (part 2) (all p<0.001). The largest reductions in smoker homes were observed for nicotine on living room surfaces (95% reduction), and the smallest for dust nicotine concentration (i.e., nicotine per gram of dust) in living rooms and bedrooms (75% reduction). For former non-smoker homes, nicotine levels stayed approximately equivalent to their original levels, suggesting stable levels of background nicotine pollution.

Thirdhand smoke pollution in former smoker homes compared to former non-smoker homes (part 2)

Table 2 shows results comparing THS levels in homes of non-smokers (part 2) who moved into former smoker and non-smoker homes. Homes formerly occupied by smokers showed significantly higher levels of nicotine on living room surfaces (1.52 vs 10.04 μg/m^2, p=0.0059) and in living room dust (2.27 vs 10.94 μg/g, p=0.0002). On average, nicotine contamination was seven times higher on living room surfaces and five times higher in living room dust in former smoker homes compared to former non-smoker homes. Dust nicotine loadings (ie, nicotine per m^2) were higher in smoker as compared to non-smoker homes, but this elevation was not as marked as for dust concentration and was not statistically significant (p=0.07).

Exposure to tobacco smoke pollutants in homes

SHS and THS exposure in smoker and non-smoker homes before change of occupancy (part 1)

Table 3 shows urine cotinine and finger nicotine levels, and reported measures of involuntary exposure to tobacco smoke among the target children in smoker and non-smoker homes. Data are reported for participants in all non-smoker and smoker homes, and also separately for the subset of participants in homes for which part 1 and part 2 data were available.

Children living in homes with active smokers were reportedly exposed to an average of 14 cigarettes/week at home. No exposure was reported for children living in non-smoker homes. Geometric mean urine cotinine levels among children in smoker homes were 5.42 ng/ml, compared to 0.15 ng/ml among children in non-smoker homes. Finger nicotine levels were, on average, 660.21 ng/wipe among smokers in smoker homes, compared to 0.47 ng/wipe among non-smokers in non-smoker homes. Part 1 smoker and non-smoker homes differed significantly on urine cotinine (p=0.002) and finger nicotine (p<0.001).

Table 3 Exposure to tobacco smoke pollution in smoker and non-smoker homes before (part 1) and after (part 2) occupants move

	Part 1: original occupants, N mean (95% CI)	Part 2: new non-smoker occupants, N mean (95% CI)
Urine cotinine, ng/ml		
All non-smoker homes	50 0.15 (0.09 to 0.21)	13 0.13* (0.00 to 0.27)
All smoker homes	31 5.42 (3.88 to 7.46)	20 0.45* (0.13 to 0.86)
Same non-smoker homes	13 0.14 (0.00 to 0.29)	13 0.13† (0.00 to 0.27)
Same smoker homes	5 3.66 (1.49 to 7.70)	5 0.61† (0.00 to 2.26)
Finger nicotine, ng/wipe		
All non-smoker homes	50 0.47 (0.04 to 1.08)	11 0.75‡ (0.00 to 3.06)
All smoker homes	91 660.21 (441.58 to 986.84)	19 5.19‡ (0.81 to 20.12)
Same non-smoker homes	11 1.35 (0.00 to 8.02)	11 0.75§ (0.00 to 3.06)
Same smoker homes	18 803.85 (387.84 to 1664.96)	18 5.85§ (0.90 to 23.72)
Reported exposure, cigarettes/week		
All non-smoker homes	50 0	12 0
All smoker homes	31 14.19 (7.16 to 27.28)	20 0.40 (0.00 to 1.15)
Same non-smoker homes	12 0	12 0
Same smoker homes	5 18.49 (0.10 to 343.13)	5 1.52 (0.00 to 20.01)

*p=0.0344 (one sided) part 2 smoker versus part 2 non-smoker homes.
†p=0.1176 (one sided) part 2 smoker versus part 2 non-smoker homes.
‡p=0.0402 (one sided) part 2 smoker versus part 2 non-smoker homes.
§p=0.0339 (one sided) part 2 smoker versus part 2 non-smoker homes.

Residents' exposure to tobacco smoke pollutants after the change of occupancy (part 1 vs part 2)

Table 3 shows that the geometric mean urine cotinine concentrations of new non-smoking youngest residents in former smoker homes (part 2) were lower than the levels exhibited by the children who previously resided in these same homes (p<0.05 all homes). New residents' finger nicotine levels were also lower in part 2 smoker homes (p<0.001). In non-smoker homes, there were no differences in mean urine cotinine levels (p>0.20) or finger nicotine levels (p>0.20) between part 1 and part 2.

THS exposure among non-smokers occupying former smoker and non-smoker homes (part 2)

Table 3 shows urine cotinine and finger nicotine levels among non-smokers who moved into homes formerly occupied by smokers and non-smokers. Nicotine levels found on the index fingers of non-smokers residing in former smoker homes were 7–8 times higher than for those residing in former non-smoker homes (same homes: 5.85 vs 0.75 ng/wipe, p=0.0339; all homes: 5.19 vs 0.75 ng/wipe, p=0.0402). Urine cotinine levels were 3–5 times higher among the youngest occupants of former smoker homes compared to former non-smoker homes (same homes: 0.61 vs 0.13 ng/ml, p=0.1176; all homes: 0.13 vs 0.45 ng/ml, p=0.0344).

Reported tobacco odour and discolouration

The new residents of four former smoker homes reported tobacco odour in their homes, and the new residents of one additional former smoker home reported tobacco discolouration (yellow spots on the living room and dining room ceilings). No residents of former non-smoker homes reported tobacco odour or discolouration.

Exploring the contribution of dust, surface and air contamination to overall thirdhand smoke exposure

To explore how THS in dust, air and on surfaces may contribute to non-smokers' overall exposure to THS, we first examined the associations between finger nicotine levels and THS on surfaces and in dust. Tobit regression models of finger nicotine levels showed statistically significant associations with surface nicotine levels (pseudo R^2=0.08, p=0.037) and dust nicotine levels (pseudo R^2=0.11, p=0.009). When entered jointly, surface and dust nicotine yielded a statistically significant model fit (pseudo R^2=0.13, p=0.025).

We then examined the associations between urine cotinine levels and THS, as measured by dust and surface nicotine levels. Using Tobit regression models, urine cotinine showed statistically significant associations with dust nicotine (pseudo R^2=0.18, p=0.035) and surface nicotine (pseudo R^2=0.21, p=0.027). In a Tobit regression model, dust and surface nicotine levels jointly produced a statistically significant model fit (pseudo R^2=0.29, p=0.031).

Lastly, we examined the association between urine cotinine and finger nicotine. Tobit (pseudo R^2=0.69, p<0.001) and quantile regression (pseudo R^2=0.28, p<0.001) models, as well as Pearson (r=0.70, p<0.001) and Spearman (r=0.67, p<0.001) correlations showed a strong association between nicotine on part 2 residents' fingers and their urine cotinine levels.

When urine cotinine was regressed on finger nicotine, surface nicotine and dust nicotine as explanatory variables, only finger nicotine level was statistically significant (p=0.001; dust and surface nicotine, both p>0.20). This suggests that finger nicotine in non-smokers may be a robust measure of THS on polluted surfaces and dust.

In part 2 homes, air nicotine levels were not associated with urine cotinine or finger nicotine levels. Models that included reported SHS exposure and reported number of days participants smelled smoke drifting inside the home were not statistically significant, nor were bivariate correlations of these variables with urine cotinine.

Cut-off levels discriminating between smoker and non-smoker homes

Table 4 shows the percentages of smoker and non-smoker homes with above threshold levels of air, surface and dust nicotine, urine cotinine and finger nicotine. These findings indicate that dust nicotine best discriminates between smoker and non-smoker homes. Specifically, 84% of smoker homes' living rooms still exhibited above threshold levels of nicotine in dust when non-smokers moved in (part 2), compared to 90% when smokers still lived there (part 1) and 19% of part 2 non-smoker homes. Similarly, 54% of the former smoker homes' living rooms (part 2) had surfaces above threshold levels, compared to 19% of former non-smoker homes. Among the part 2 occupants of smoker homes (all non-smokers), 40% had above threshold levels of THS exposure (urine cotinine) and 35% had above threshold levels of finger nicotine. This compares to 8% and 0%, respectively, among occupants of part 2 non-smoker homes.

Table 4 Percentage of homes with detectable levels of cotinine in non-smoker's urine, nicotine on non-smoker's fingers and nicotine in house household dust, air and surfaces

	Cut-off*	Part 1: original occupants, percentage ≥ cut-off value	Part 2: new non-smoker occupants, percentage ≥ cut-off value
Urine cotinine	0.30 ng/ml		
Non-smoker homes		10	8
Smoker homes		97	40
Finger nicotine	50.0 ng/wipe†		
Non-smoker homes		2	0
Smoker homes		93	35
Air nicotine living room	0.10 $\mu g/m^3$		
Non-smoker homes		6	25
Smoker homes		90	44
Air nicotine bedroom	0.10 $\mu g/m^3$		
Non-smoker homes		NA	NA
Smoker homes		78	39
Surface nicotine living room	5.0 $\mu g/m^2$		
Non-smoker homes		16	19
Smoker homes		86	54
Surface nicotine bedroom	5.0 $\mu g/m^2$		
Non-smoker homes		NA	NA
Smoker homes		75	44
Dust nicotine living room	5.0 $\mu g/g$		
Non-smoker homes		28	19
Smoker homes		90	84
Dust nicotine bedroom	5.0 $\mu g/g$		
Non-smoker homes		NA	NA
Smoker homes		84	70
Dust nicotine living room	5.0 $\mu g/m^2$		
Non-smoker homes		31	25
Smoker homes		91	60
Dust nicotine bedroom	5.0 $\mu g/m^2$		
Non-smoker homes		NA	NA
Smoker homes		64	52

*Cut-offs were established to discriminate between smoker and non-smoker homes.
†Wipes were 0.1 m × 0.1 m; 50 ng/wipe is equivalent to 5.0 $\mu g/m^2$.

DISCUSSION

This was the first study to examine residential THS pollution and exposure after smokers moved out and non-smokers moved in. Findings replicate those from an earlier study of smoking mothers with infants,[9] showing that smoker homes have become significant reservoirs of THS pollutants at the time smokers prepare to move out.

Even 2 months after smokers moved out and non-smokers moved in, nicotine in dust and on surfaces still exceeded threshold levels in 84% and 54% of homes, respectively. Even though mean levels of nicotine significantly declined when non-smokers moved into former smoker homes, dust and surface nicotine levels were still significantly higher than in non-smoker homes that underwent a similar change of occupancy. This is particularly notable because these homes were vacant for an average of 2 months during the change of occupancy, and because all of these homes underwent cleaning and many were repainted and had carpets replaced before new occupants moved in (especially smoker homes). In summary, these findings demonstrate that smokers leave behind a legacy of THS in the dust and on the surfaces of their homes that persists over weeks and months.

Non-smokers moving into former smoker homes are exposed to the THS left in dust and on surfaces by the former smoker occupants. This is shown by increased finger nicotine and urine cotinine levels among non-smokers living in former smoker homes. This exposure pathway is further supported by significant correlations of dust and surface nicotine levels with finger nicotine levels, and between finger nicotine and urine cotinine levels. Air nicotine levels were not associated with biological exposure measures. This suggests that the main reservoirs of exposure to THS are in dust and surfaces. Air concentrations of THS may remain low relative to dust and surfaces because airborne THS is more rapidly transported outside the home through passive air exchanges and active ventilation.

It should be noted that smoker homes in this study were more expensive to prepare for new occupants than non-smoker homes. Smoker homes remained vacant for on average an extra month, and they were more likely to get new flooring in the bedroom, kitchen and living room and to have the kitchen painted. These findings parallel results from our study of the resale value of used cars sold by smokers, showing that their cars lost 7% to 9% in value relative to non-smoker cars of equivalent age, make, model and condition.[20] These results suggest economic consequences for owners, sellers and renters of cars and homes. Theoretically, such economic penalties, if communicated to the community, create incentives to reduce smoking as well as THS contamination of cars and homes.[21]

Limitations

Markers of THS have not been comprehensively studied, and there remain important questions regarding the extent to which nicotine represents other chemical compounds known and suspected in THS. Similarly, it is unclear how well cotinine represents biological exposure to THS compounds beyond nicotine, such as tobacco-specific nitrosamines.[7 8] This study was not designed to investigate health outcomes of exposure to THS. Future research on surface chemistry and biological mechanisms, as well as behavioural studies of exposure

pathways are needed to better understand the nature of THS, associated health outcomes, and the behavioural and economic factors influencing THS pollution and exposure in the field.

The subject matter of this field study precluded a randomised trial, creating some ambiguity about the causal origins of the THS pollutants detected in part 1 homes. The fact that the THS marker is tobacco specific (ie, nicotine) and strongly associated with reported smoking behaviour of part 1 occupants makes this validity concern implausible. The voluntary nature of participation in this study, typical vacancy rates in the housing market, participation refusals and our efforts to exclude from part 2 participants who were exposed to SHS decreased sample sizes for part 2 analyses. This lowered the statistical power of our hypothesis tests and could have contributed to differential attrition. To address these issues, we report findings based on data collected from all eligible homes and from homes for which part 1 and part 2 data were available. We also report geometric means with 95% CIs and exact p values of hypothesis tests to allow the reader to evaluate their statistical and practical significance, given the relatively small sample sizes. We examined and found no plausible evidence for differential attrition.

Conclusions

Homes remain reservoirs of tobacco smoke pollutants after smokers move out, creating a source for involuntary exposure to non-smokers moving into these homes. Infants and young children are likely most at risk for exposure to THS in dust and surfaces and its health consequences because of age-specific behaviours (eg, crawling, sucking, ingesting non-food items, hand-to-mouth contact). Known susceptibility of infants due to immature respiratory and immune systems, lower metabolic capacity and the many years of life remaining make exposure to the potent carcinogens reported in THS a concern. It has been previously demonstrated that house dust can be a major route of exposure to lead for young children.[22 23]

What this paper adds

- Thirdhand smoke (THS) consists of tobacco smoke pollutants that remain on surfaces and in dust after tobacco has been smoked, are re-emitted and resuspended back into the air, or react with oxidants and other compounds in the environment to yield secondary pollutants.
- Evidence collected in field and controlled laboratory studies shows that indoor environments in which tobacco is regularly smoked become reservoirs of THS, potentially leading to the involuntary exposure of non-smokers to THS in the absence of concurrent smoking and long after smoking has taken place.
- This study is the first to examine whether private homes of smokers remain contaminated with THS after the smokers move out and non-smokers move in, and whether non-smokers who move into homes formerly occupied by smokers are exposed to THS through contaminated dust, surfaces and air in these homes.
- Findings indicate that THS accumulates in smokers' homes and persists when smokers move out even after homes remain vacant for 2 months and are cleaned and prepared for new residents. When non-smokers moved into homes formerly occupied by smokers, they encountered indoor environments with measurable THS polluted surfaces and dust. Results suggest that non-smokers living in former smoker homes are exposed to THS in dust and on surfaces.

Based on the current limited evidence on the chemistry, biology and behavioural science of THS, it is premature to rule on its significance as a cause, moderator, mediator, or contributor to health outcomes. This and other studies suggest caution in trivialising the relatively low levels of pollutants found 2 months after the last cigarette was smoked. The limited existing research warrants rigorous further investigations into the chemical, physical, biological, environmental, behavioural and economic aspects of THS to more comprehensively understand its impact on human health in the social and policy contexts in which smoking occurs throughout the world.

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REFERENCES

1. **US Environmental Protection Agency.** *Respiratory health effects of passive smoking: lung cancer and other disorders*. Washington, DC: U.S. Dept. of Health and Human Services, U.S. Environmental Protection Agency, 1993.
2. **National Cancer Institute (NCI).** *Health Effects of Exposure to Environmental Tobacco Smoke: The Report of the California Environmental Protection Agency. Smoking and Tobacco Control Monograph No. 10, National Institutes of Health (NIH) Publication No. 99-4645*. Bethesda, MD: NCI, NIH, U.S. Department of Health and Human Services (USDHHS), 1999.
3. **State of California Air Resources Board.** *Technical support document for the "Proposed Identification of Environmental Tobacco Smoke as a Toxic Air Contaminant", Part A-Exposure Assessment*. State of California Air Resources Board, 2005.
4. **International Agency for Research on Cancer.** *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Tobacco Smoke and Involuntary Smoking*. Lyon (France): International Agency for Research on Cancer, 2004.
5. **New York Times.** *The 9th Annual Year in Ideas. Thirdhand Smoke*. New York: The New York Times Magazine, 2009:66–7.
6. **Szabo L.** *Babies may absorb smoke residue in home*. USA Today, 2006.
7. **Destaillats H,** Singer BC, Lee SK, *et al*. Effect of ozone on nicotine desorption from model surfaces: evidence for heterogeneous chemistry. *Environ Sci Technol* 2006;**40**:1799–805.
8. **Sleiman M,** Gundel LA, Pankow JF, *et al*. Formation of carcinogens indoors by surface-mediated reactions of nicotine with nitrous acid, leading to potential thirdhand smoke hazards. *Proc Natl Acad Sci* 2010;**107**:6576–81.
9. **Matt GE,** Quintana PJ, Hovell MF, *et al*. Households contaminated by environmental tobacco smoke: sources of infant exposures. *Tob Control* 2004;**13**:29–37.
10. **Matt GE,** Quintana PJE, Hovell MF, *et al*. Residual tobacco smoke pollution in used cars for sale: air, dust, and surfaces. *Nicotine Tob Res* 2008;**10**:1467–75.
11. **Van Loy MD,** Lee VC, Gundekl LA, *et al*. Dynamic behavior of semi-volatile organic comounds in indoor aoir. 1: nicotine in stainless steel chamber. *Envir Sci Technol* 1997;**31**:2554–61.
12. **Singer BC,** Hodgson AT, Guevarra KS, *et al*. Gas-phase organics in environmental tobacco smoke: 1. Effects of smoking rate, ventilation, and furnishing level on emission factors. *Environ Sci Technol* 2002;**36**:846–53.
13. **Singer BC,** Hodgson AT, Nazaroff WW. Gas-phase organics in environmental tobacco smoke: 2. Exposure-relevant emission factors and indirect exposures from habitual smoking. *Atmos Environ* 2003;**37**:5551–61.
14. **Emerson JA,** Hovell MF, Meltzer SB, *et al*. The accuracy of environmental tobacco smoke exposure measures among asthmatic children. *J Clin Epidemiol* 1995;**48**:1251–9.
15. **Matt GE,** Hovell MF, Zakarian JM, *et al*. Measuring secondhand smoke exposure in babies: the reliability and validity of mother reports in a sample of low-income families. *Health Psychol* 2000;**19**:232–41.
16. **Hovell MF,** Zakarian JM, Matt GE, *et al*. Counseling to reduce children's secondhand smoke exposure and help parents quit smoking: a controlled trial. *Nicotine Tob Res* 2009;**11**:1395–406.
17. **Kuusimaki L,** Pfaffli P, Froshaug M, *et al*. Determination of nicotine as an indicator of environmental tobacco smoke in restaurants. *Am J Ind Med* 1999;(Suppl 1):152–4.
18. **STATA Corp.** *Stata statistical sortware. Release 10.0*. College Station, TX: Stata Corporation, 2007.

19. **SPSS Inc.** *SPSS for Windows. Release 15.0*. Chicago, IL: SPSS Inc, 2006.
20. **Matt GE,** Romero R, Ma DS, *et al*. Tobacco use and asking prices of used cars: prevalence, costs, and new opportunities for changing smoking behavior. *Tob Induc Dis* 2008;**4**:2.
21. **Hovell MF,** Hughes SC. The behavioral ecology of secondhand smoke exposure: a pathway to complete tobacco control. *Nicotine Tob Res* 2009;**11**:1254–64.
22. **Lanphear BP,** Matte TD, Rogers J, *et al*. The contribution of lead-contaminated house dust and residential soil to children's blood lead levels: a pooled analysis of 12 epidemiologic studies. *Environ Res* 1998;**79**:51–68.
23. Childhood lead poisoning associated with lead dust contamination of family vehicles and child safety seats—Maine, 2008. *MMWR: Morb Mortal Wkly Rep* 2009;**58**:890–3.

How Landlords Can Prohibit Smoking in Rental Housing

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Illustrations by Janet Cleland

Although Californians have extensive protections from exposure to secondhand tobacco smoke where they work, eat, and play, some are still exposed to secondhand smoke where they live. Landlords and property managers can protect tenants from exposure to secondhand smoke by prohibiting smoking in common areas and in individual rental units.

This fact sheet describes how a landlord can make common areas nonsmoking and outlines the steps a landlord must follow to change a lease to make an individual unit smokefree. This information does not apply to rental housing governed by a local rent control ordinance[1] or to a condominium complex that is seeking to adopt a no-smoking policy.[2] Also note that if rental housing is subsidized by a government agency, such as the U.S. Department of Housing and Urban Development (HUD), additional procedures might be required to adopt a no-smoking policy.

Why would a landlord want to prohibit smoking?

In addition to the important health benefits of reducing exposure to secondhand smoke, restricting smoking can decrease the risk of accidental fires and may even reduce fire insurance premiums. Landlords also may see a significant reduction in maintenance and turnover costs. Cleaning and refurbishing a smoker's unit can require additional time and effort to repaint and to replace carpets and drapes. By prohibiting smoking in a unit, landlords can minimize or eliminate these expenses altogether.

Important
A landlord is not unlawfully discriminating against smoking tenants or violating a smoker's fundamental right to privacy when banning smoking in common areas or individual units. Claims to the contrary have no legal basis.[3]

Is it legal for a landlord to prohibit smoking?

Yes. A ban on smoking in common areas is similar to other rules tenants typically must follow regarding the use of common areas, such as the hours for using the laundry facility or the requirement that children be accompanied by an adult when using the pool.

It is also legal for a landlord to ban smoking in individual units. Landlords have the legal right to set limits on how a tenant may use rental property—for instance, by restricting guests, noise, and pets. A "no-smoking" term is similar to a "no pets" restriction in the lease—another way for a landlord to protect his or her property.

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How would a landlord restrict smoking in the common areas?

A landlord may prohibit smoking in indoor and outdoor common areas and designate a specific outdoor smoking area by changing the rules for those areas. For existing month-to-month rental agreements, a landlord should provide reasonable notice of the new no-smoking policy, usually 30 days before it becomes effective. For existing fixed-term leases (leases that last for a set time period, for example, 12 months), the rules may be modified with reasonable notice if the lease agreement and/or the rules allow for such changes during the lease period. Otherwise, fixed-term leases should be amended in writing to include the no-smoking provision, either during the term of the lease with the tenant's consent or when the lease renews or converts to month-to-month.

Note that state law may already prohibit smoking in indoor common areas if the facility has employees, such as property managers or others, who work on site.[4]

How would a landlord prohibit smoking in an individual unit?

A landlord would amend the lease with the tenant to add a no-smoking provision.[5] The process the landlord uses depends on the type of lease involved.

New lease

The easiest time for a landlord to establish a no-smoking policy is when a new lease is created, either when a new tenant moves in or when an expired lease is replaced. Once the landlord and the tenant sign the new agreement, the smoking restriction becomes a requirement like any other provision in the lease. Note that such a provision does not prevent a smoker from renting the unit; instead, it prohibits smoking by anyone in the unit—whether tenants or guests.

Existing lease—with consent of the tenant

If a current tenant and landlord both agree to change an existing lease to include a no-smoking provision, the landlord should either:

(a) add an amendment to the existing lease specifying the no-smoking provision;[6] or

(b) create a new lease that includes the no-smoking provision.

Existing lease—without the consent of the tenant

If a landlord wants to include a no-smoking clause in an existing lease but the current tenant does not, the landlord may still change the lease to prohibit smoking in the unit. The process depends on the type of rental agreement:

Month-to-month rental agreement

A landlord may add a smoking prohibition to a month-to-month rental agreement by giving written notice to the tenant of the new condition[7] and by making the no-smoking restriction effective at least 30 days after giving notice to the tenant.[8] A tenant who does not accept this new lease term is, in effect, ending the tenancy by refusing to renew the month-to-month rental agreement.

Fixed-term lease

When a lease is for a fixed term (typically a six- or 12-month period), the landlord cannot change the lease during that time period without the tenant's consent. This type of lease fixes all the conditions in the lease, and the landlord cannot make any changes to the lease during that time. However, when a fixed-term lease ends, it may convert to a month-to-month agreement. If so, the landlord may then add a no-smoking provision to this new month-to-month agreement by following the same steps outlined for the month-to-month rental agreement, above. Otherwise, at the end of the fixed term, the landlord and tenant may need to create a new lease, which can include the no-smoking clause.

Can a landlord prohibit smoking on the balcony or patio?

Yes, a landlord may use the lease to restrict smoking both inside and outside the unit. A no-smoking provision in the rental agreement should clearly state whether smoking is prohibited only inside the unit or on any outdoor space that only the tenant can use, such as the balcony or patio of that unit.

What effect does a no-smoking lease term have?

The smoking prohibition becomes part of the lease. This new term will be like any other condition of the lease: if the tenant or the tenant's guests fail to comply with the provision, the tenant is in breach of the agreement, which could be grounds to end the tenancy.

Additional materials for creating smokefree housing are available from PHLP's website at *www.phlpnet.org*, including a Sample California Ordinance Regulating Smoking in Multi-Unit Housing.

This material was made possible by funds received from the California Department of Public Health, under contract #04-35336. The Technical Assistance Legal Center is a project of Public Health Law & Policy (PHLP). PHLP is a nonprofit organization that provides legal information on matters relating to public health. The legal information provided in this document does not constitute legal advice or legal representation. For legal advice, readers should consult a lawyer in their state.

Sample Lease Provision

A sample lease addendum is available from the Smokefree Apartment House Registry:[9]

www.smokefreeapartments.org/Registry_Pix/caa_smoking_addendum.pdf

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[1] Such ordinances generally prohibit landlords from changing lease agreements without the tenant's consent. Contact your local rent control board for specific information regarding your rent control ordinance.

[2] The scope of smoking restrictions and the process to adopt such a policy for a condominium complex is very different from that in the rental housing context, because of condominiums' ownership structure and covenants, conditions, and restrictions (CC&Rs). Note, however, that this fact sheet applies if a condominium owner is renting the unit to a tenant.

[3] For a more detailed discussion of this topic *see* PHLP's publication *There Is No Constitutional Right to Smoke.* Available at: www.phlpnet.org/tobacco-control/products/there-no-constitutional-right-smoke-national-version.

[4] Cal. Labor Code § 6404.5.

[5] The terms lease and rental agreement are legally interchangeable and are used in this manner throughout this fact sheet. In practice, a lease provides for a fixed term tenancy (usually six or 12 months), and a rental agreement is used for a month-to-month tenancy.

[6] A lease amendment must refer to the agreement that is changed and must be signed by the same two people who signed the original agreement.

[7] A landlord must follow the notice requirements set forth in Cal. Code of Civil Procedure § 1162, which authorizes a landlord to serve notice of a changed lease term in three ways: the landlord must attempt to give written notice to the tenant personally; if that fails, she may leave a copy with someone of suitable age and discretion at either the tenant's residence or place of business; and if that fails, the landlord may fasten a copy in a conspicuous place on the property, and mail a copy to the tenant.

[8] Cal. Civil Code § 827(a).

[9] TALC does not endorse any of the cited provisions and is providing the information for illustrative purposes only. Landlords should seek the advice of their own legal counsel before adding language to their rental agreements.

Smokefree Housing

Because the negative health effects of secondhand smoke exposure are well documented, one of the most important steps a community can take to improve the health of its residents is to create more smokefree spaces—especially where people live.

Increasingly, many California communities are interested in limiting secondhand smoke exposure in multi-unit housing. An ordinance prohibiting smoking in multi-unit housing also helps decrease the risk of accidental fires and reduce maintenance and turnover costs.

TALC's *Model California Ordinance Regulating Smoking in Multi-Unit Residences* provides a number of policy options to consider when designing a local ordinance prohibiting smoking in multi-unit housing. The ordinance language you select should be part of a larger strategy to have the ordinance adopted in your community.

To guide your planning, the Center for Tobacco Policy and Organizing has developed the five phase model below.

Campaign Trail START

Contact "The Center" for help planning your campaign steps and working through the phases.

The Center for Tobacco Policy & Organizing
American Lung Association of California

The Center for Tobacco Policy and Organizing (The Center) helps local coalitions wage effective tobacco control policy campaigns. The Center can assist you with resources, tools, and effective strategies to help you narrow down your issue, do a political assessment, complete a strategy chart, recruit new members, and re-energize your coalition.

The Center for Tobacco Policy & Organizing
(916) 554-5864
www.center4tobaccopolicy.org

Investigation & Assessment

PHASE 1

Identify local issues and resources to build an understanding of what might influence decision makers. Determine your issue, a location (city or county), and a goal.

Strategy & Planning

PHASE 2

Assess the political environment and decision makers. Develop a preliminary strategy and establish a rough timeline.

This phase includes the development of the ordinance – this is the time to call on TALC.

Recruitment

PHASE 3

Now that you've prepared the groundwork, it's time to involve more people. Train campaign members in outreach and recruitment strategies. Meet with key opinion leaders. Plan a campaign "kick-off" event.

The Campaign

PHASE 4

Finalize and then implement the timeline, strategy, and tactics with your newly recruited members. Form action teams: e.g., ordinance-drafting, media, action, speakers' bureau. A key tactic will be meeting with decision makers.

WIN!

Evaluation

PHASE 5

Determine effectiveness of the campaign and tactics.

phlp public health law & policy technical assistance legal center

The Technical Assistance Legal Center (TALC) helps advocates, city and county attorneys, and elected officials by providing and reviewing ordinance language, researching and analyzing state and federal legal issues, and providing training and consulting on legal strategies for tobacco control.

Technical Assistance Legal Center
(510) 302-3380
www.phlpnet.org/tobacco-control

Made possible with funds received from the California Department of Public Health, under contract #09-11182. TALC is a project of Public Health Law & Policy.

Smokefree Housing Ordinance Checklist

Your community has a range of policy choices to consider when designing a local ordinance regulating smoking in multi-unit housing. Those policy provisions that TALC highly recommends are checked (☑); those that are listed but are not checked are options a community may want to consider, depending on political will and community conditions. All the options listed below are part of TALC's *Model California Ordinance Regulating Smoking in Multi-Unit Residences*, available at **www.phlpnet.org/tobacco-control**. Contact TALC for help drafting an ordinance based on your community's choices.

TYPE OF MULTI-UNIT HOUSING REGULATED

☑ *All types* of property containing 2 or more units (including condominiums unless excluded here)
- ☑ Except hotels and motels
- ☐ Except mobile home parks
- ☐ Except single-family homes with an in-law or second unit
- ☐ Except condominiums
- ☐ Except _____

WHERE SMOKING IS PROHIBITED

☑ **Common Areas** of *all types* of regulated multi-unit housing
- ☑ Indoor common areas
- ☑ Outdoor common areas
  - ☑ Except for designated "smoking areas" that meet certain criteria

☑ **Outdoor Smokefree Buffer Zones** for *all types* of regulated multi-unit housing
- ☑ Anywhere on the property of the multi-unit housing complex, including balconies, patios, and decks, that are within 25 feet of any doorway, window, or opening into an enclosed area where smoking is prohibited (such as common areas and nonsmoking units)
- ☐ On adjacent property (a neighboring lot) that is within 25 feet of any doorway, window, or opening into an enclosed area where smoking is prohibited
- ☐ On the balcony, patio, or deck of any unit, including smoking-allowed units

☑ **New Units**
- ☑ 100% of all *new* units in *all types* of regulated multi-unit housing
  - ☐ Allow a builder to designate up to 10% of units as smoking-allowed (if selected, include requirement that nonsmoking units be grouped together and physically separated from smoking-allowed units)

☑ **Existing Units**
- ☐ 100% of *existing* units in a *condominium complex* (ordinance must designate all condominium units as nonsmoking because of practical and potential legal issues in local government selecting which units may be smoking-allowed)
  - ☐ Allow a homeowners' association to vote to designate up to 20% of units as smoking-allowed
- ☑ 100% of *existing* units in a *rental complex*
  - ☑ Allow a landlord to designate up to 20% of units as smoking-allowed
- ☑ Require nonsmoking units be grouped together vertically and horizontally and physically separated from units where smoking may be allowed
- ☑ Phase-in period: smoking restrictions are added to existing leases during a 12-month phase-in period after the smokefree housing ordinance becomes effective and smoking in a designated nonsmoking unit becomes a violation of the *law* at the end of the period (e.g., one year after the ordinance takes effect)

ADDITIONAL PROVISIONS

☑ Require no-smoking lease terms in rental agreements
☑ Require landlord to disclose where smoking is allowed
☐ Require landlords to submit a diagram of smoking and nonsmoking units to _____ (insert name of city/county department or office)
☑ Declare secondhand smoke a nuisance
- ☐ Only in a residential setting

☐ Exclude medical marijuana from regulation by the ordinance

ENFORCEMENT

☑ Designate that the ordinance will be enforced by _____ but also enforceable by a peace officer or code enforcement officer
☑ Declare violations based on *illegal smoking* to be infractions with a fixed fine amount of $ ___ (cannot be more than $100)
☑ Declare *other* violations of the ordinance to be an infraction or a misdemeanor, based on the discretion of the prosecuting attorney
☐ Declare that violation of the ordinance constitutes a nuisance
☐ Allow private citizens to seek an injunction (an order to stop violations) and/or money damages against individuals who violate the ordinance

December 2009

SUCCESS IN POLICY CAMPAIGNS:
Five Phases to Victory

The Center for Tobacco Policy & Organizing
AMERICAN LUNG ASSOCIATION. IN CALIFORNIA

The Center for Tobacco Policy & Organizing has developed this description of the five phases in a policy campaign to help you develop a strong and successful campaign. By following these phases, your campaign will not neglect essential early activities which set the stage for a successful campaign during Phase 4. The phases describe distinct periods in the campaign process and are generally to be completed in order. However, the phases presented in this document are guidelines, not unbendable rules. In fact, once you have completed a phase you should continue those activities throughout the remainder of the campaign – assessing the environment, refining your strategy, and recruiting new supporters.

PHASE 1– PRELIMINARY INVESTIGATION AND ASSESSMENT (4-8 WEEKS)

The purpose of the preliminary investigation is to solidify your policy goal and the specific city or county which will be the target of your efforts. You will need to assess the political environment, to identify local problems, issues, and resources which might impact your campaign, gather public health data, and understand other factors which could influence decision makers.

Conduct informal interviews with a number of people; talk to people within your office, your coalition, and your community about past experiences with this issue or similar and related ones. This has the added benefit of being a low key way to gain support for your effort.

Several tools you and your coalition can use to assess your political environment in a way which will contribute to developing a winning strategy include the Political Environment Checklist and the Elected Official Profile Form. You can also enhance your assessment of your political environment through key opinion leader interviews and a public opinion survey.

Stick to the phases if you can, but remember, creativity in the campaign process and sensitivity to the needs of your local group are important qualities of successful campaigns.

The Center for Tobacco Policy & Organizing • American Lung Association in California
1029 J Street, Suite 450 • Sacramento, CA 95814 • Phone: (916) 554.5864 • Fax: (916) 442.8585 • www.Center4TobaccoPolicy.org

PHASE 2 – STRATEGY AND PLANNING (8-16 WEEKS)

The public health and political environment information collected during Phase 1 informs the development of a campaign strategy during this phase.

The primary activity of this phase is to develop a preliminary strategy using the Midwest Academy Strategy Chart. Along with the Strategy Chart you will establish a rough timeline for the campaign. Involve people in developing the strategy chart who you think will be core members of your campaign coalition, but don't forget to include others who may have critically needed knowledge and experience such as political consultants, former elected officials, and key community leaders.

Several tools you and your coalition can use to enhance your strategy discussion include the Decision Maker Matrix and the Circles of Influence.

Because developing the ordinance language is a strategic as well as legal decision, this phase also includes the development of the ordinance with the Technical Assistance Legal Center (TALC).

PHASE 3 – RECRUITMENT (8-12 WEEKS)

Before contacting elected officials or the media, it is time to reach out beyond your core supporters and involve more people in your effort both as core supporters, and as-needed, down-the-road supporters.

In this phase, you and your coalition will need to: conduct activities aimed specifically at recruiting new supporters, train your core group to conduct one-on-one recruiting meetings with key opinion leaders, make presentations to organizations, have one-on-one meetings with prospective new coalition activists, and attend community social events.

All of these recruitment efforts won't automatically lead to new members at your coalition meetings and this phase takes more time than you might expect. But you may identify people with special skills and contacts who can help on specific tasks later in the campaign.

At the end of this phase the campaign team will plan and facilitate a campaign "kick-off" event to begin the more high profile part of the campaign.

PHASE 4 – THE CAMPAIGN (4-8 MONTHS)

This phase takes the plan developed in the strategy chart and implements it.

But before moving forward, revisit the strategy chart and timeline with the newly recruited campaign team members. In particular, review campaign tactics since they need to be compatible with the coalition or campaign committee including the new members.

Now you are in full campaign mode. We recommend creating four action teams to efficiently implement the strategy chart: 1. Drafting the ordinance (to work with TALC), 2. Media (to write letters or articles), 3. Action (to collect organizational support, or letters of support, conduct surveys of youth or adults), and 4. Speakers bureau (to give many presentations to community groups to get their support).

PHASE 5 – IMPLEMENTATION & EVALUATION

After the ordinance has been adopted, the next challenge is making sure that responsible agencies implement and enforce it. Start by researching how the policy should be implemented in order to be effective.

It is critical to renew relationships with elected officials and staff developed during the campaign to pass the policy and to develop new relationships with staff involved in implementing the policy.

Many tobacco control policies are self-enforcing or complaint driven, so enlist the public as an ally in the implementation and enforcement effort by increasing public awareness of the policy.

Evaluate the effectiveness of the implementation and enforcement effort. Work with the Tobacco Control Evaluation Center for more direction. Use the evaluation results to leverage greater enforcement if necessary, or as the basis for publicizing the policy's success.

Once you have completed a phase continue those activities throughout the remainder of the campaign - assessing the environment, refining your strategy, and recruiting new supporters.

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Useful Tools for Your Campaign Phases

The Center for Tobacco Policy & Organizing
AMERICAN LUNG ASSOCIATION IN CALIFORNIA

For each phase of your campaign, the Center for Tobacco Policy & Organizing recommends using specific tools and exercises to help your coalition or campaign team be more effective and strategic in its efforts. However, many of these tools are really guides for the entire campaign and their usage should not be limited to a single phase. Essential documents such as the Circles of Influence and the Assessing the Political Environment Checklist should be referred back to and utilized throughout the campaign. Below is a matrix of tools that you can use in your campaign throughout each of the five phases.

As a reminder, here are the five phases of a campaign:

PHASE 1—PRELIMINARY INVESTIGATION AND ASSESSMENT

You will need to assess the political environment to identify local problems, issues and resources which might impact your campaign, gather public health data, and understand other factors which could influence decision makers.

PHASE 2—STRATEGY AND PLANNING

The public health and political environment information collected during Phase 1 informs the development of your campaign strategy during this phase. The primary activity of this phase is to develop a preliminary strategy using the Midwest Academy Strategy Chart.

PHASE 3—RECRUITMENT

Before contacting elected officials or the media, it is time to reach out beyond your core supporters and involve more people in your effort both as core supporters, and as allies or endorsing organizations.

PHASE 4—THE CAMPAIGN

This phase takes the plan developed in the strategy chart and implements it. Don't forget to review campaign tactics with all of your new allies.

PHASE 5—IMPLEMENTATION & EVALUATION

Once the policy campaign outcome has been achieved, it is critical to have a strategic plan to ensure that the provisions of the policy are implemented and enforced.

Matrix of Useful Tools for Your Campaign Phases

Tools/Phases	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Success in Policy Campaigns- Five Phases to Victory	X				
Assessing the Political Environment Checklist	X	X		X	
Circles of Influence	X	X	X	X	
Elected Official Profile Form	X	X		X	
Decision Maker Matrix	X	X		X	
Midwest Academy Strategy Chart	X	X	X	X	
Policy Wonk Materials and Center Matrices	X	X		X	
List of Education and Pressure Tactics		X		X	
From the Outside in or the Inside Out: Insider vs. Outsider Strategies		X	X	X	
Guidelines for Recruitment			X	X	
Tips: How to Make a Pitch			X		
3 People I Want to Recruit			X		
Preparing for a City Council or Board Presentation: A Checklist				X	
Meeting with Elected Officials: Pre-Meeting Checklist				X	
TALC/Center Policy Ordinance Checklist		X		X	X
TALC Model Ordinance		X		X	X
After Passing the Policy: What's Next? Policy Implementation & Enforcement					X

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 Funded under contract #09-11173.

Sample Strategy Chart

The Center for Tobacco Policy & Organizing
AMERICAN LUNG ASSOCIATION of California

Goals	Organizational Considerations	Constituents, Allies and Opponents	Targets	Tactics
1. List the long-term objectives of your campaign. 2. State the intermediate goals for this issue campaign. What constitutes victory? How will the campaign: • Win concrete improvement in people's lives? • Give people a sense of their own power? • Alter the relations of power? 3. What short-term or partial victories can you win as steps toward your long-term goal?	1. List the resources that your organization brings to the campaign. Include money, number of staff, facilities, reputation, canvass, etc. 2. List the resources that the campaign does not currently have, but will need in order to succeed. 3. List the specific ways in which you want your organization to be strengthened by this campaign. Fill in numbers for each. Some examples: • Expand leadership group • Increase experience of existing leadership • Build membership base • Expand into new constituencies • Raise more money 4. List internal problems that have to be considered if this campaign is to succeed.	1. Who cares about this issue enough to join in or help the organization? • Whose problem is it? • What do they gain if they win? • What risks are they taking? • What power do they have over the target? • Into what groups are they organized? 2. Who are your opponents? • What will your victory cost them? • What will they do/spend to oppose you? • How strong are they?	A target is always a person. It is never an institution or elected body. 1. Primary Targets • Who has the power to give you what you want? • What power do you have over them? 2. Secondary Targets • Who has power over the people with the power to give you what you want? • What power do you have over them?	For each target, list the tactics that each constituent group can best use to make its power felt. Tactics must be: • In context • Flexible and creative • Directed at a specific target • Make sense to the membership • Be backed up by a specific form of power Tactics include: • Media events • Actions for information and demands • Public hearings • Strikes • Voter registration and voter education • Lawsuits • Accountability sessions • Elections • Negotiations

The Center for Tobacco Policy & Organizing • 1029 J Street, Suite 450 • Sacramento, CA 95814
Phone: (916) 554.5864 • Fax: (916) 442.8585

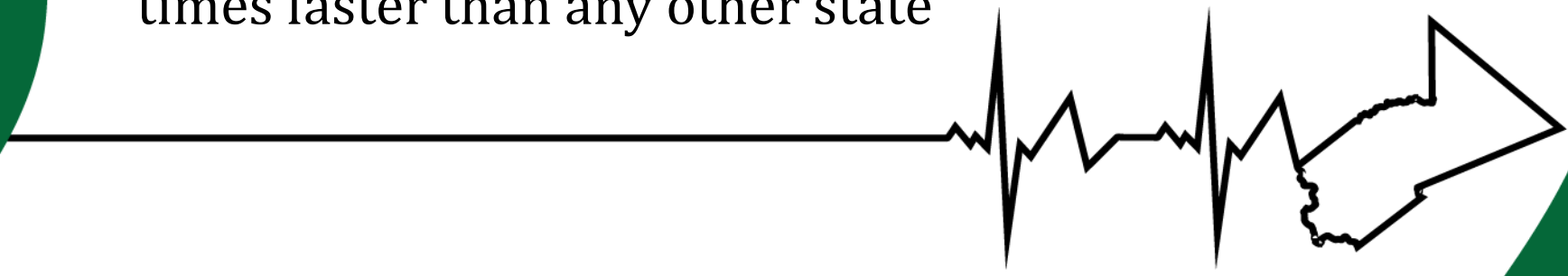
StAAT
Stanislaus Advocacy Action Team

Local Policy Strategies

HEART/CTG Coalition
September 21, 2012

Public Health Policy Success in California

- In 1988, the people of California passed Prop 99, a 25-cent per pack tobacco tax
  - 5-cents/pack for tobacco control
- In 1990, California launched its tobacco control program
- Since then, lung cancer rates in California have declined three times faster than any other state



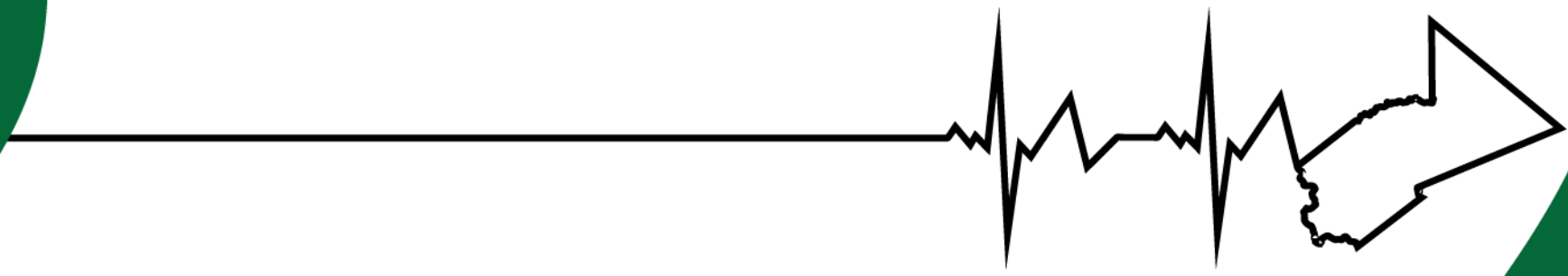
Tobacco Control…
From Grassroots to Great

- The first law prohibiting <u>all</u> smoking in restaurants was adopted in 1990…
  What city was it?
- Stanislaus County (and most cities within) adopt smoke-free restaurants in…
- Thanks to local efforts across the state, California became the first state in the nation to institute a statewide law on smoke-free workplaces

"Never doubt that a small group of thoughtful, committed citizens can change the world.

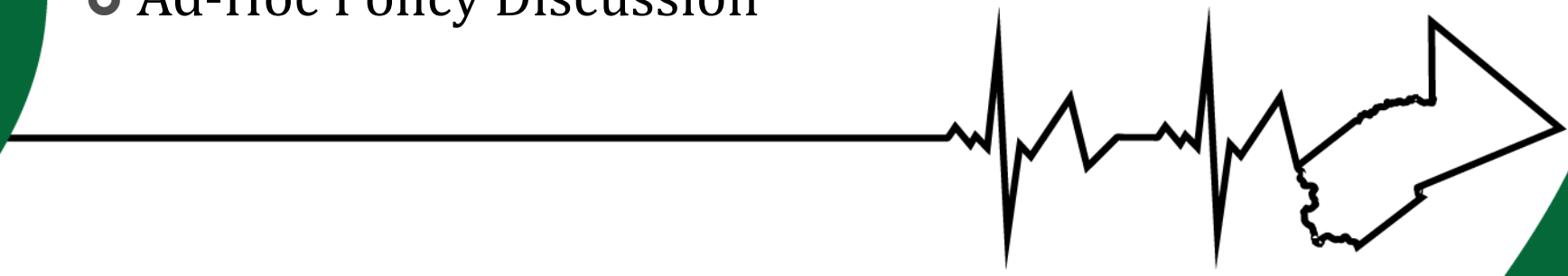
Indeed, it is the only thing that ever has."

Margaret Mead
U.S. Anthropologist



Training Agenda

- Quick Review: Policy Types
- Strategies for Community Change
- Healthy Community Policies
  - Approach Strategies and Local Government
- Five Phases for Successful Campaigns
- Midwest Academy Strategy Chart = Success!
- Ad-Hoc Policy Discussion



Quick Review...

Policy Types

- Voluntary Policies
  - Adopted and enforced by an individual property or business owner
- Local Ordinance
  - Adopted by City Council or County Board of Supervisors
- Resolutions
  - Adopted by elected boards to show support for property owners who implement voluntary smoke-free housing policies
  - Adopted by community organizations or coalitions to advocate for voluntary policies or ordinance adoption

Quick Review…

Policy Strengths Comparison

Voluntary

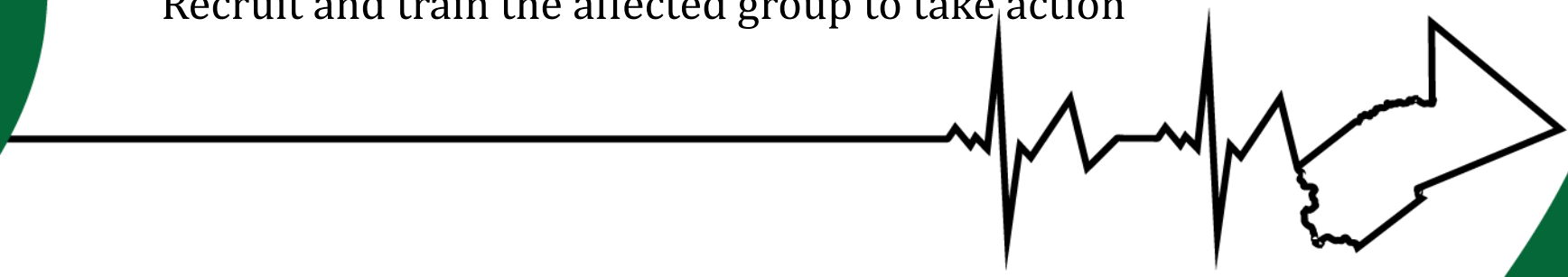
- Easier and quicker adoption process
- Adaptive to individual businesses and properties
- Successful policies require the support of the business or property owner

Ordinance

- Stronger long-term change
- More enforceable with mandated policies
- More consistent across business and properties within the jurisdiction
- Requires support from key stakeholders and decision makers

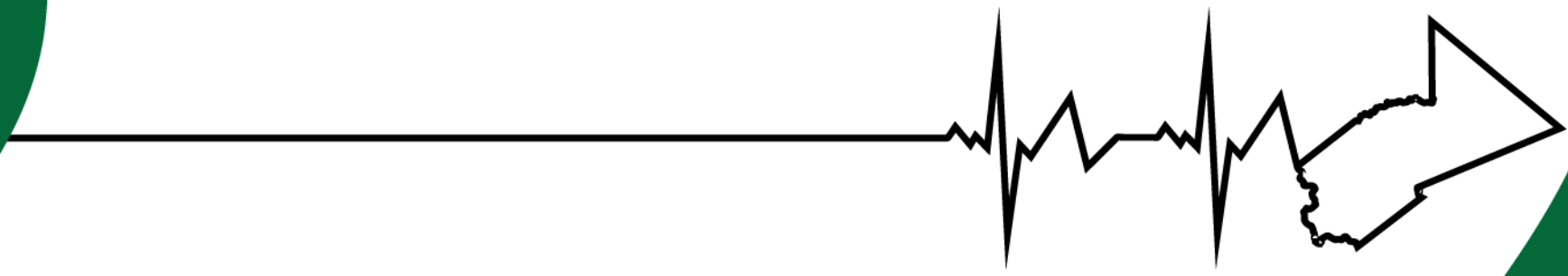
Strategies for Community Change

- Direct Service
  Serve a group affected by a problem
- Self-Help
  Show the group how to address the problem
- Education
  Inform the community about the problem
- Advocacy (indirect)
  Solutions proposed without the affected group
- Direct Action
  Recruit and train the affected group to take action



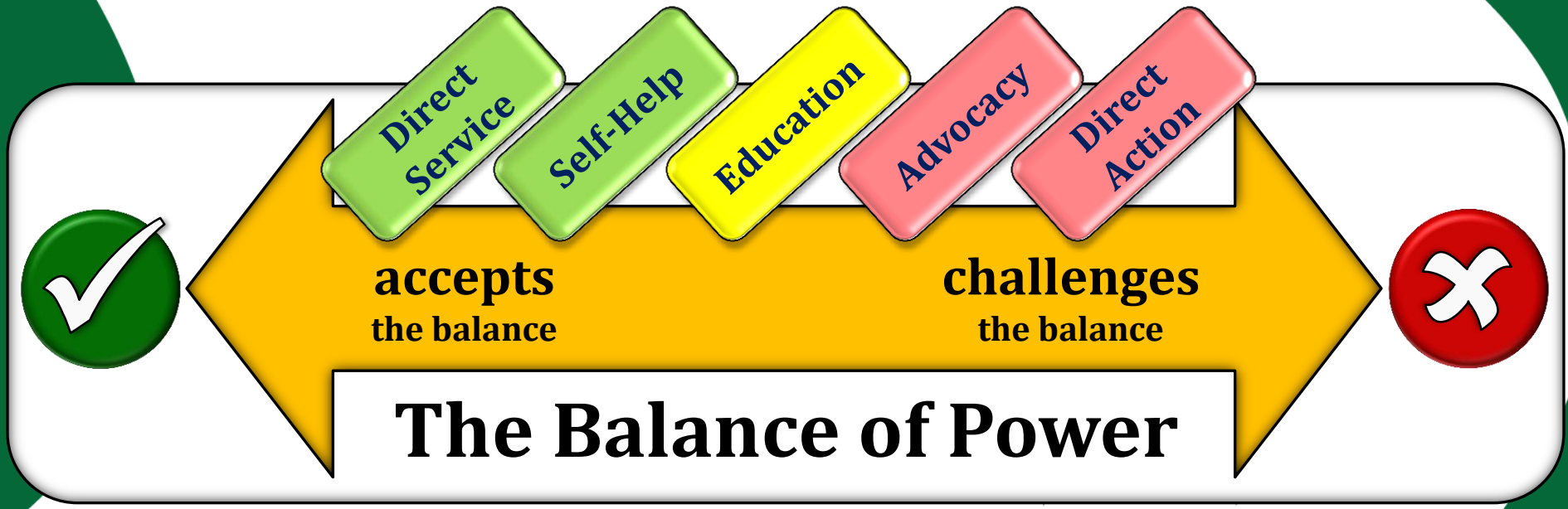
Community Powers

- Do “regular” people have a voice?
- Do the people impacted by the issue have a voice?
- Is the power among all stakeholders fair?
  - If not, what causes that?
  - Are intentional actions creating the imbalance?
- How can the balance of power change?



Community Powers:
changing the balance

- The balance of power is a key factor in deciding the most effective approach
- Is the balance of power acceptable or should it be changed?

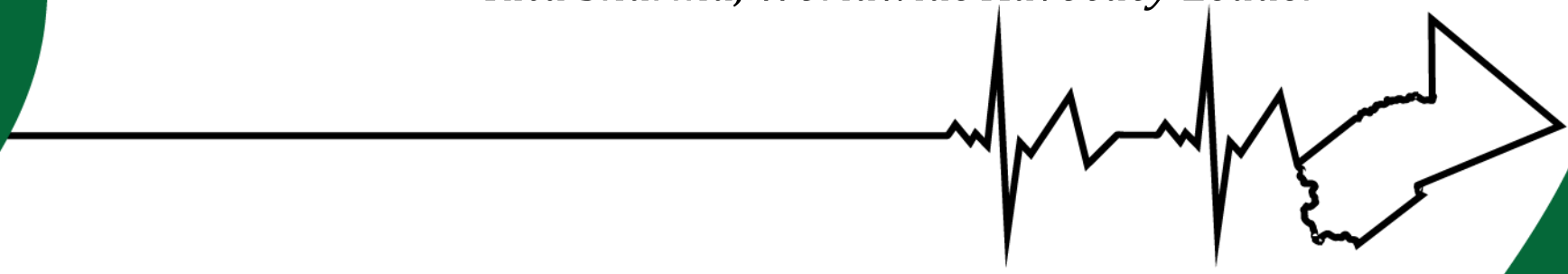


Advocacy

Advocacy is a set of targeted actions directed at decision makers in support of a specific policy issue... but the process is rarely that simple.

"Advocacy is putting a problem on the agenda, providing a solution to that problem and building support for acting on both the problem and solution."

Ritu Sharma, Worldwide Advocacy Leader



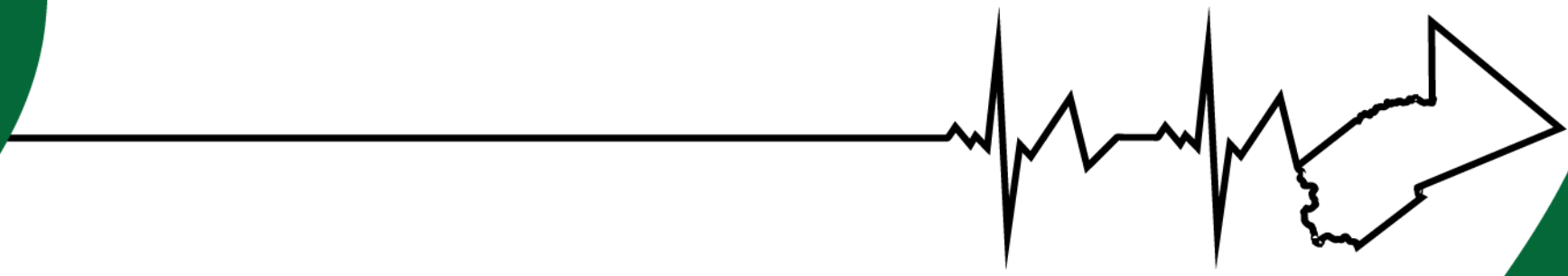
Birth of an Advocacy Initiative

- Identify the problem
- Establish the scope
  - Narrow or general?
- Target a solution
- Turn the problem into an issue
- Plan your strategy

Target: Policy Solutions

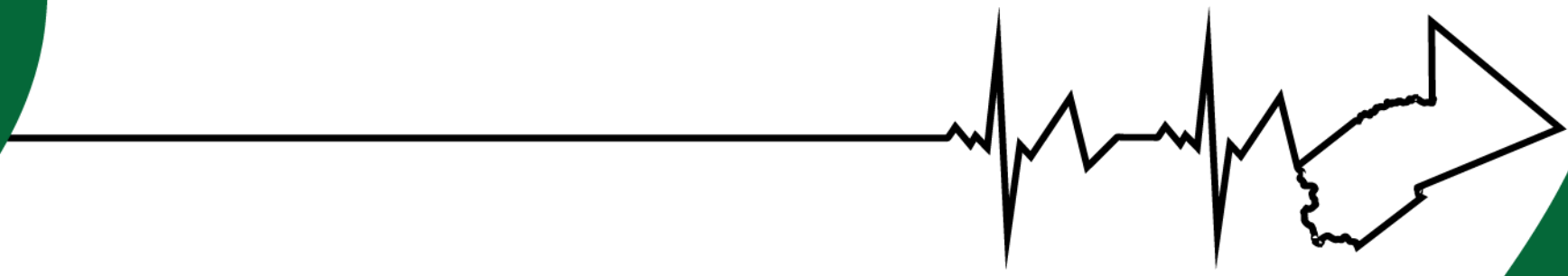
Healthy Community Policies

- Policies that govern personal behavior
  - Health and safety codes
  - Public nuisance
- Retail and business licensing
  - Sponsorship and marketing
- Land Use and Zoning Laws



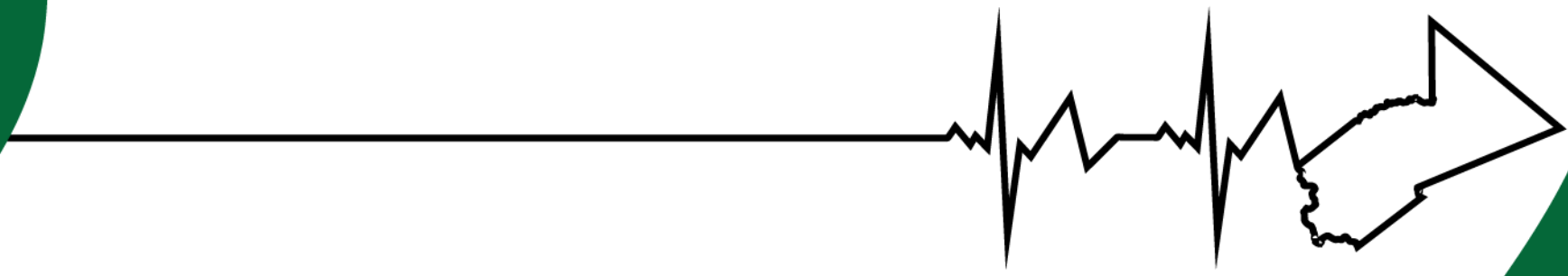
Considerations in State vs. Local Policy

- Preemption
  - Is there a state law that preempts local law?
    (i.e. tobacco tax and smoking regulations)
- Overlap
  - Confusion and burden on business and individuals
  - Enforcement
  - Campaign hang-ups
    (i.e. "There's already a state law that…")



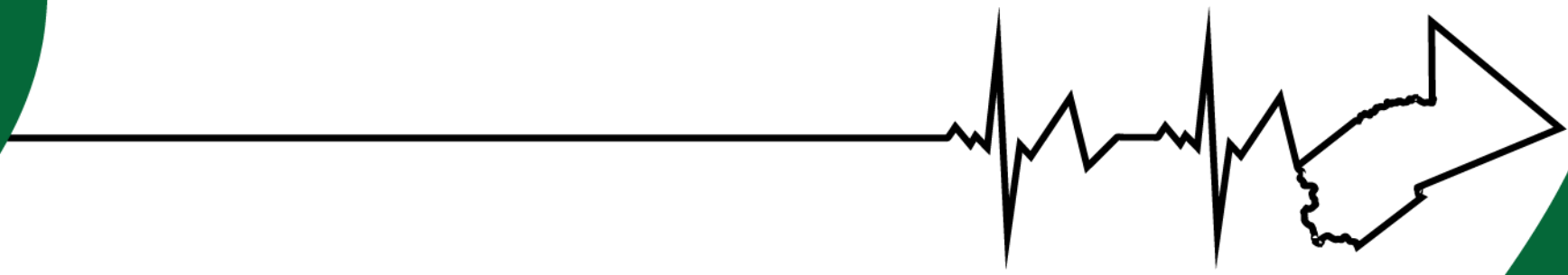
Policies that Govern Personal Behavior

- Effective for addiction recovery by removing triggers
- Protects the public and the environment from secondary harm
  - i.e. secondhand smoke, public intoxication
  - Litter
- Sometimes can reduce economic burden



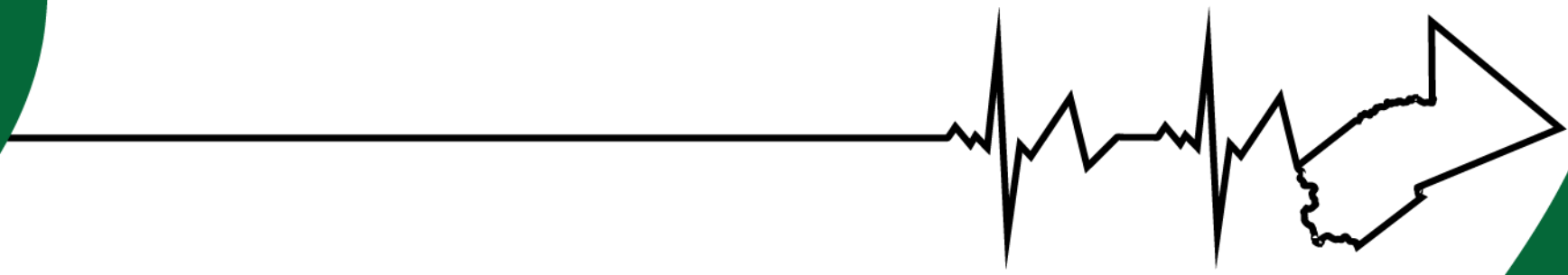
Retail and Business Licensing

- Helps to collect and maintain a current listing of targeted businesses
- Can provide funding for compliance checks and enforcement activities
- Specific licensing can be tied to other activities that are more difficult to enforce
  (i.e. head shops that sell drug paraphernalia marketed as tobacco supplies)



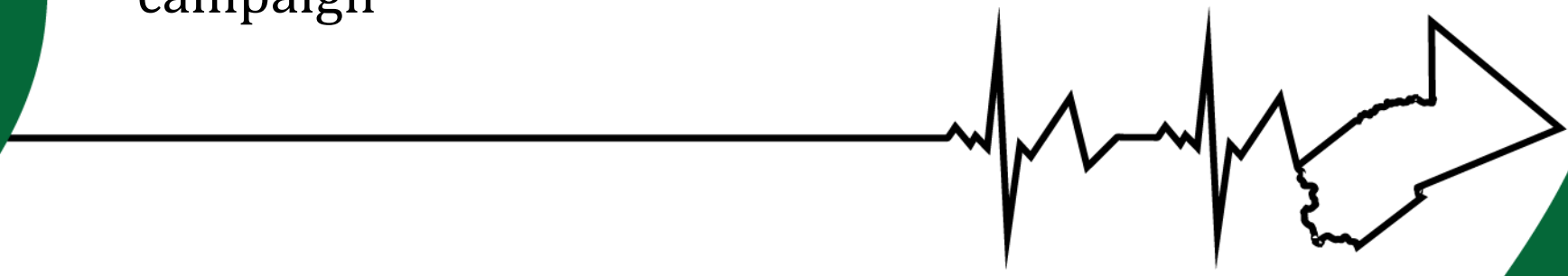
Zoning and Land Use

- Type of retailers and business practices including signage and marketing
- Density of retailers in designated areas
- Proximity of retailers near specialized facilities



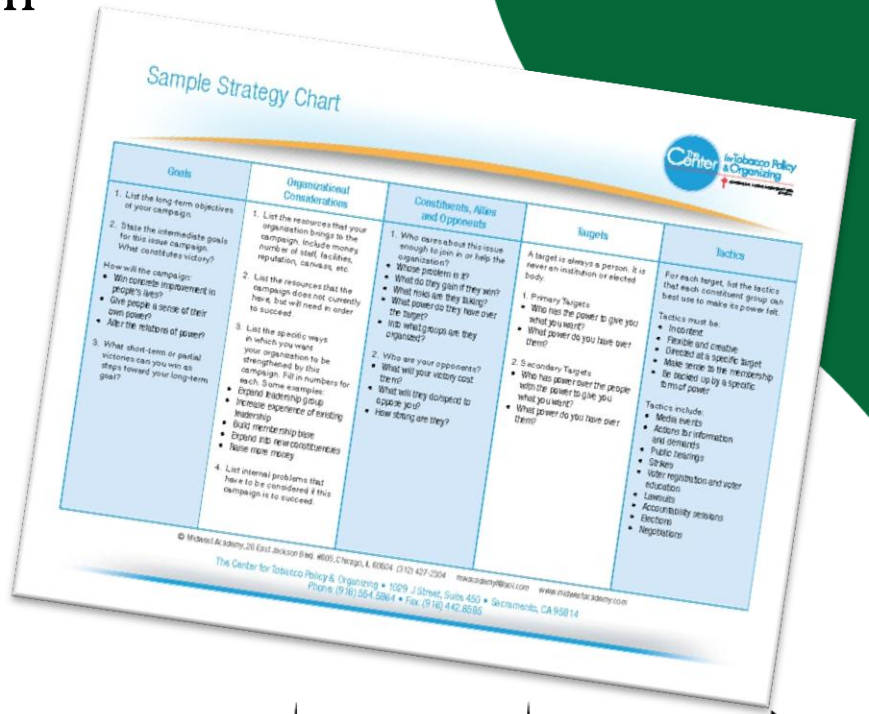
Local Policy Approach Strategies

- Outside in >
  - Organize community members, especially those affected by the issue
  - Necessary when no internal support is available
- Inside out >
  - Strong support from elected officials and/or staff
  - Sometimes can be tempting due to perceived fast-track
- Both must be used to have a successful policy campaign



Policy Advocacy Process

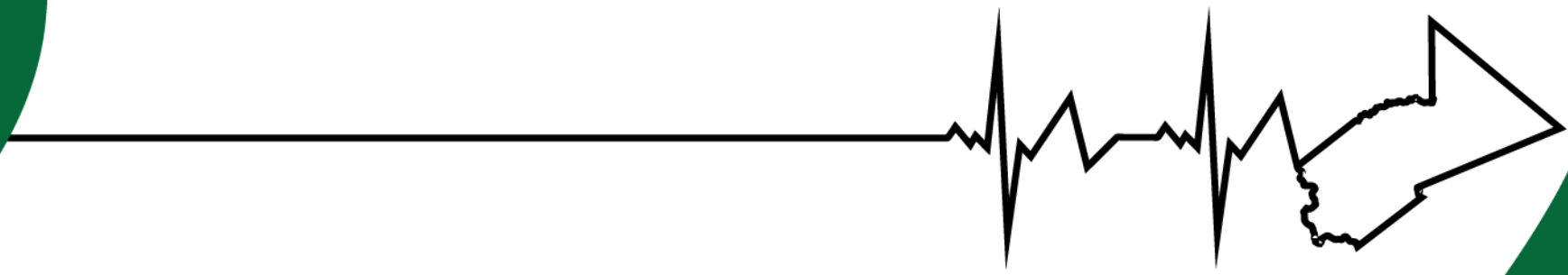
- Preliminary Investigation and Assessment
- Strategy and Planning
- Recruitment
- The Campaign
- Implementation and Evaluation



1 Preliminary Investigation and Assessment

Purpose: solidify your policy goal

- Assess the scope/size of the problem
- Assess the political environment (including your community leaders)
- Gather input from others
  - Coffee to Key Informant Interviews



Little Butts, Big Litter

Local Litter in Stanislaus County

- The StAAT project has partnered with PHAST to conduct litter collection events (Butt Hunts)
  - Held: 14 in the past two years
  - Counted: Litter from 8 events…
- Over 15,000 butts were counted
  - Ceres – 3,254 (1 hunt)
  - Modesto – 6,388 (3 hunts)
  - Newman – 4,405 (3 hunts)
  - Turlock – 1,041 (1 hunt)

Tobacco Control…
From Grassroots to Great

Assessment Matters!

In 1993, Stanislaus County (and most cities within) adopted smoke-free restaurants policies.


ELECTED OFFICIAL & GOVERNMENT STAFF PROFILE FORM

The Center for Tobacco Policy & Organizing

An investigation of the political environment tells us how easy or difficult a campaign will be to win. This worksheet helps you develop a profile of your local key decision makers. These decision makers are anyone who can influence your policy outcome, including city council members, county supervisors, as well as the city attorney, county counsel, police chief, and members of appointed community boards such as a parks and recreation or health committee. Complete one form per person.

RESERVED PARKING

MAYOR

NAME: _____

POSITION: _____

DISTRICT #: _____

DATE CURRENT TERM BEGAN: _____

TERM EXPIRES: _____

ARE THEY APPOINTED TO THEIR POSITION OR ELECTED? _____

IF APPOINTED, WHO APPOINTED THEM? _____

IF ELECTED, BY WHOM AND ARE THEY ELIGIBLE FOR RE-ELECTION?

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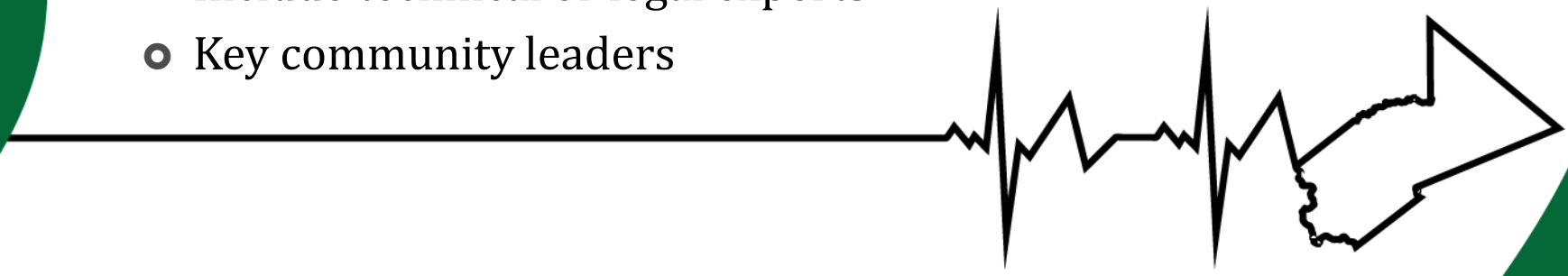
Interesting Fact: In 1993, the Project Director for the Stanislaus County tobacco control program was Jill Chiesa, spouse of now County Supervisor Vito Chiesa

2 Strategy and Planning

Purpose: plan the strategy using the Midwest Academy Strategy Chart

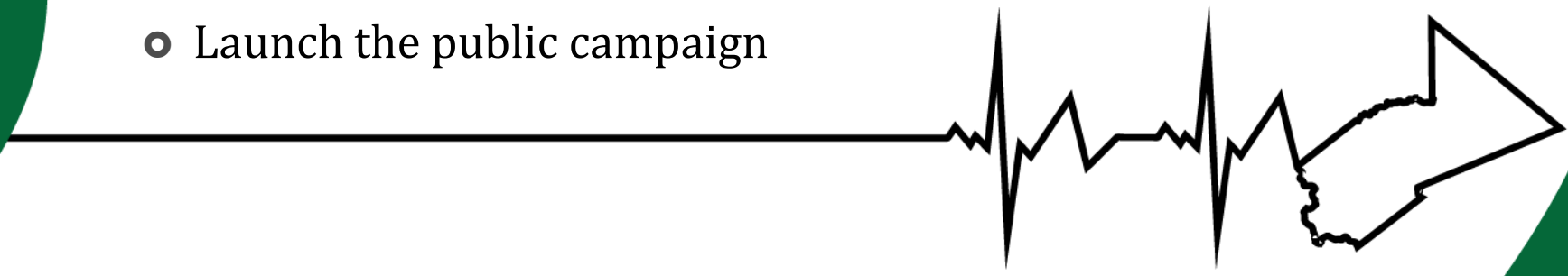
- Use the information gathered during the investigation phase
- Establish a rough timeline for activities
- Involve others
  - Core members of the campaign team
  - Include technical or legal experts
  - Key community leaders



3 Recruitment

Purpose: reach beyond the core people to build your campaign team

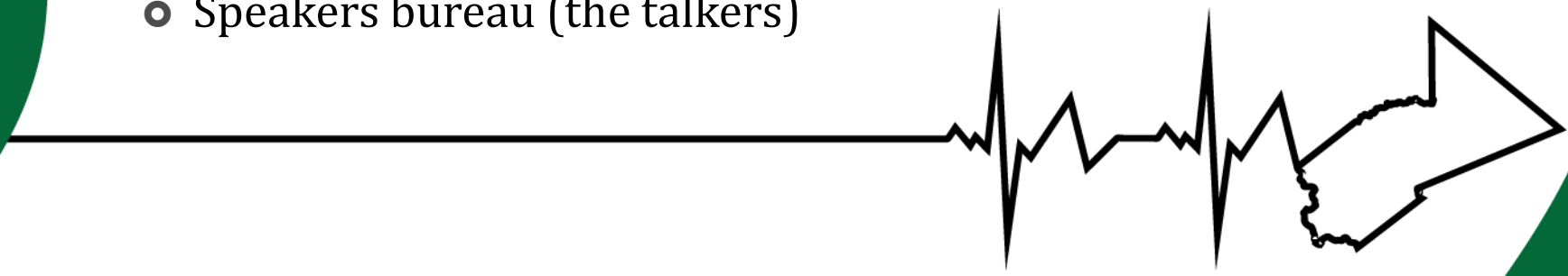
- Conduct activities specifically to recruit
  - There will be a variety of roles to fill, recruit strategically to fill any gaps in resources
- Train all recruited volunteers
- Hold a campaign kick-off event
  - Energize your campaign team
  - Launch the public campaign



4 The Campaign

Purpose: carry out the strategy!

- Begin by reviewing the strategy chart
  - Inform newly added team members
  - Review tactics to ensure buy-in
- Develop four key action groups:
  - Policy and Planning (the thinkers)
  - Media Outreach (the writers)
  - Action (the doers)
  - Speakers bureau (the talkers)



Serving Data in Bite Sizes

- Turlock Butt Hunt
  - Volunteers: 10
  - Hours: 1
  - Butts: 1,041
  - How many butts per hour?
    - 104
- Modesto Butt Hunts
  - Volunteers: 41
  - Hours: 1.5
  - Butts: 6,388
  - How many butts per hour?
    - 104

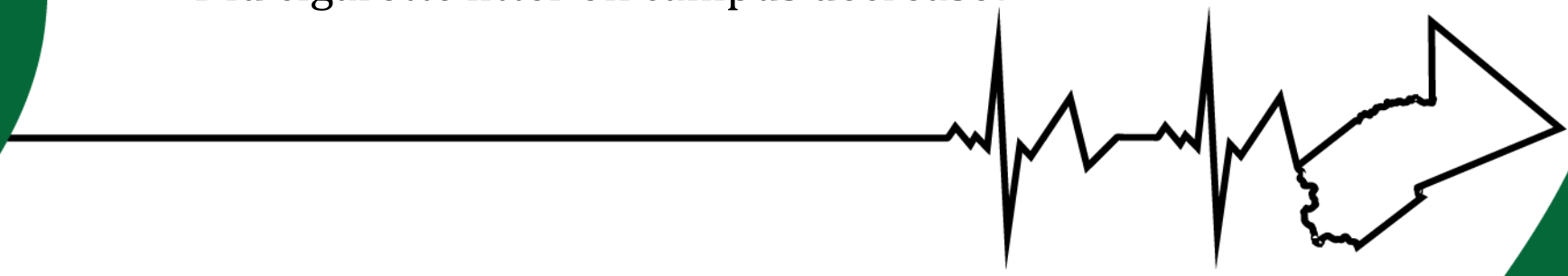
Why does this matter?

Use your data to tell your story!

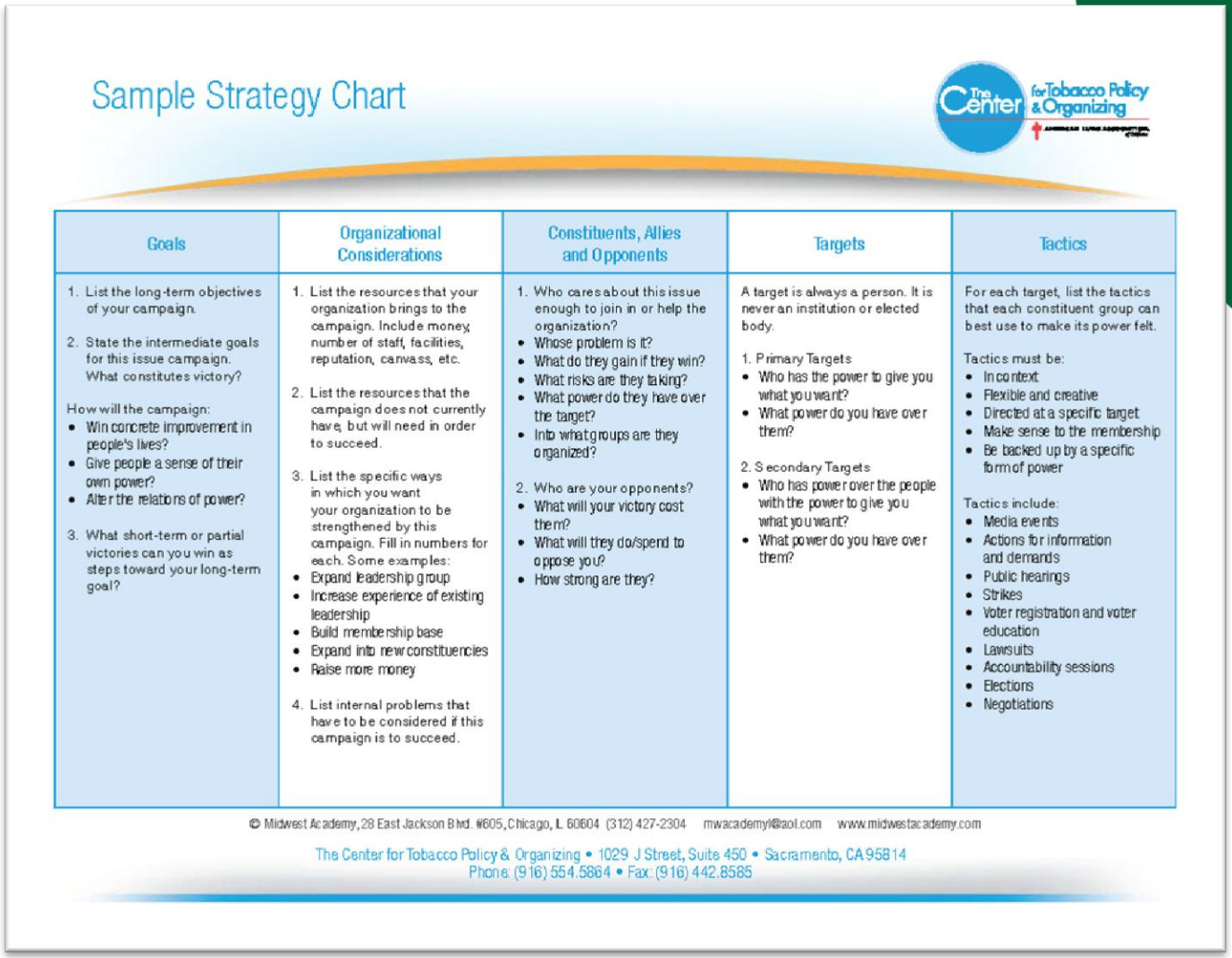
5 Implementation and Evaluation

Purpose: make sure the policy is properly announced and enforced

- Renew existing and forge new relationships with key public officials
- Publicize the policy to enlist public support
- Evaluate the effectiveness of the policy
  - Did smoking in parks decrease?
  - Did cigarette litter on campus decrease?



Midwest Academy Strategy Chart



Sample Strategy Chart

The Center for Tobacco Policy & Organizing

Goals	Organizational Considerations	Constituents, Allies and Opponents	Targets	Tactics
1. List the long-term objectives of your campaign. 2. State the intermediate goals for this issue campaign. What constitutes victory? How will the campaign: • Win concrete improvement in people's lives? • Give people a sense of their own power? • Alter the relations of power? 3. What short-term or partial victories can you win as steps toward your long-term goal?	1. List the resources that your organization brings to the campaign. Include money, number of staff, facilities, reputation, canvass, etc. 2. List the resources that the campaign does not currently have, but will need in order to succeed. 3. List the specific ways in which you want your organization to be strengthened by this campaign. Fill in numbers for each. Some examples: • Expand leadership group • Increase experience of existing leadership • Build membership base • Expand into new constituencies • Raise more money 4. List internal problems that have to be considered if this campaign is to succeed.	1. Who cares about this issue enough to join in or help the organization? • Whose problem is it? • What do they gain if they win? • What risks are they taking? • What power do they have over the target? • Into what groups are they organized? 2. Who are your opponents? • What will your victory cost them? • What will they do/spend to oppose you? • How strong are they?	A target is always a person. It is never an institution or elected body. 1. Primary Targets • Who has the power to give you what you want? • What power do you have over them? 2. Secondary Targets • Who has power over the people with the power to give you what you want? • What power do you have over them?	For each target, list the tactics that each constituent group can best use to make its power felt. Tactics must be: • In context • Flexible and creative • Directed at a specific target • Make sense to the membership • Be backed up by a specific form of power Tactics include: • Media events • Actions for information and demands • Public hearings • Strikes • Voter registration and voter education • Lawsuits • Accountability sessions • Elections • Negotiations

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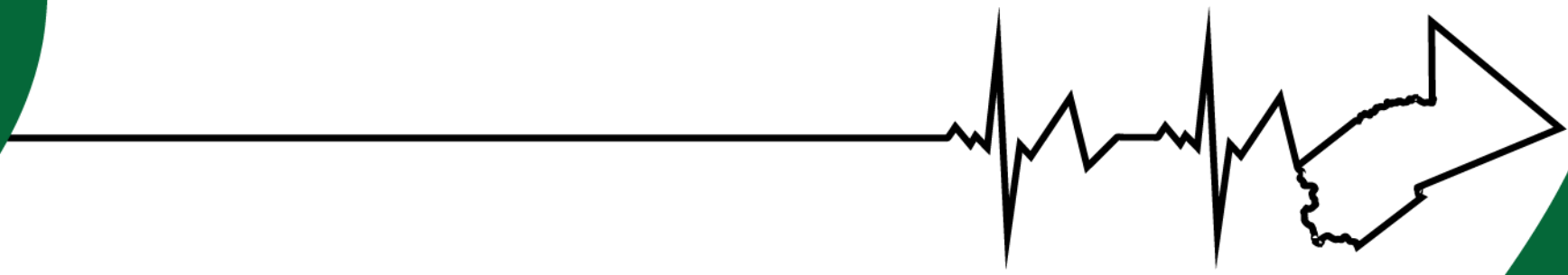
Ad-Hoc Committee Discussion Points

- Use the Midwest Academy Strategy Chart to discuss the policy goals for your ad-hoc committee
  - **Goals**
  - **Organizational Considerations**
  - **Constituents, Allies and Opponents**
  - Targets
  - Tactics



StAAT
Stanislaus Advocacy Action Team

Thank you!

- **Ken Fitzgerald**
  Project Director
  office: 238-1381
  kfitzgerald@stancoe.org

- **Erikka Perry**
  Project Coordinator
  office: 238-1367
  eperry@stancoe.org

- Website:
  stancoe.org/go/StAAT

Assessing the Political Environment Checklist

The Center for Tobacco Policy & Organizing
AMERICAN LUNG ASSOCIATION. IN CALIFORNIA

During the first phase of your campaign you will need to make a decision about in which city or county you will conduct your public health campaign. Before making the final decision, apply this checklist to assess the political environment. Because you may discover things in your research which suggest that you make a different choice, this is done before you make your final decision.

In addition, the assessment will provide you the information you need to develop an accurate and successful strategy in phase two of your campaign. This data will dramatically increase your self-confidence and sophistication in dealing with the political world during your later phases of the campaign. Ultimately it will significantly increase your chances for winning your public health campaign.

A thorough assessment will require several people taking responsibility and spending the time necessary to collect the information. The assessment process is a good opportunity to involve active members of the coalition in preparation for determining the campaign's strategy and tactics during the strategy chart. Some research can be done online, but much of it will require meeting and discussing this with influential community members.

The political environment and political will of a community are likely to be different depending on which policy area you are working on. Therefore, the first two sections of this assessment checklist are focused on the general political environment, while the third section is specific for your policy issue.

PART 1: GENERAL INFORMATION

A. Collect background data on target city/county.

- ☐ What is the population? _____
- ☐ What is the demographic profile of the residents? _____
- ☐ What is the profile of the different districts and neighborhoods in the community? _____
- ☐ What local media outlets serve the community? _____
- ☐ What are the most powerful organizations/associations in the community? _____ (business groups, unions, neighborhood associations, etc.)
- ☐ What is the current hot topic being debated in the community? _____

B. How does the local government work?

- ☐ Are elections for council/board by district or at large? _____
- ☐ Is the Mayor elected or rotating? _____
- ☐ Is the City Attorney on contract or a city employee? _____
- ☐ What is the role/power of City Manager/County Executive Officer? Are they a leader or a follower? _____
- ☐ What council committees or commissions have responsibility for our issue? _____
- ☐ How does a proposal become an ordinance? _____
- ☐ Is law enforcement handled by city police or county sheriffs? _____
- ☐ What are the terms of elected officials? _____
- ☐ When is the next local election (including primaries) for elected officials and election dates? _____
- ☐ What are the election results for the last two election cycles? _____
- ☐ How has the community voted in state and national issues in the last two election cycles? _____

C. What do you know about your local decision makers?

- ☐ What are the names of the key decision makers, both elected and appointed? _____
- ☐ Complete the Elected Official Profile form for all key local decision makers (council members, county supervisors, as well as members of key commissions or committees).
- ☐ What are the dynamics between the elected officials? Any alliances or divisions? Is anyone the natural leader? _____
- ☐ Which elected officials sit on committees or commissions that may consider our issue.? _____

PART 2: INFORMATION ON TOBACCO: PUBLIC HEALTH AND POLITICS

D. Gather the available local public health and tobacco use data.

You need data specific for the jurisdiction in which you are working.

- ☐ What is the current adult smoking rate in your community? What is the cost of smoking for your county? _____
- ☐ What is the youth smoking prevalence in school districts in the target community? _____ (This information can be found by school district from the California Healthy Kids Survey)
- ☐ What are the top public health challenges facing the target community? _____
- ☐ What are the asthma rates for target community? _____

E. What local tobacco control policies and resolutions have been discussed, voted on and adopted/defeated?

- ☐ What tobacco control policies are currently in the city or county code? What are the specific requirements of the ordinance(s)? _____
- ☐ How has the city council or board voted regarding local tobacco control policies in the last five years (e.g. smoke free parks and beaches, tobacco retail licensing, voluntary resolutions)? _____
- ☐ What were the votes of each council/board member? What were reasons given for the votes? _____
- ☐ Have any city council or board members publicly voiced support for tobacco control issues in the past three years? Who? Which issue? _____

F. How strong are pro-tobacco influences in your community and government?

- ☐ Has the city or county taken an official position on tobacco-related state or federal legislation and/or state initiatives (e.g. Prop 86) in the last five years? _____
- ☐ Have any city council or board members accepted contributions from the tobacco industry in the last five years? How much? _____
- ☐ Has the Chamber(s) of Commerce taken a stance on tobacco-related state or federal legislation and/or state initiatives (e.g. Prop 86)? _____
- ☐ Are any city council/board members active in a Chamber or married to a Chamber leader? _____

G. How strong are pro-health influences in your community?

- ☐ How have voters in the target community voted on tobacco-related initiatives in the past, (e.g. Prop 99, No on 188, Prop 10, Prop 86)? _____
- ☐ How much community and political influence do local health, youth or voluntary associations (American Lung Association in California, American Cancer Society, American Heart Association, YMCA, Boys and Girls Club) have in your city/county? Who is on the boards of these organizations, and do they have connections with decision makers? _____
- ☐ Do any of the voluntary health associations (Heart, Lung, Cancer) have active advocacy volunteers living in the target community? _____
- ☐ Are youth organizations like CYAN, Friday Night Live, or local youth coalitions involved in tobacco control activities in the community? _____
- ☐ Which community based organizations are likely to be allies of a campaign to pass tobacco control policies? _____
  Where are these organizations located in the city/county, e.g. which council or supervisorial district? _____
  (If council/board members are not elected by district, locate organizational allies with reference to where the elected officials live in the community.)

PART 3: POLITICAL ENVIRONMENT FOR YOUR ISSUE

H. What is current public opinion about the tobacco problem you are addressing and the appropriate policy solution?

- ☐ How do community members feel about the problem and the solution? _____
  (Conduct surveys on the street to assess this, and review polling data from the Center's website and other sources.)
- ☐ How do community leaders feel about this issue? _____ (Conduct interviews with key opinion leaders.)
- ☐ What is the nearest city or county that has addressed the problem and how did they do it? _____
- ☐ Are there any cities or counties that have addressed your public health issue, but are facing problems with their adopted policies? _____

I. How will the pro-tobacco and pro-health sides in your community and government feel about your proposed policy change? And how strong are they?

- ☐ Which organizations/individuals may oppose the proposed policy? Why?
  What will the new policy cost them? _____
- ☐ How powerful are the opposing organizations/individuals? Who do they know and influence? _____
- ☐ Which organizations/individuals may support the proposed policy? Why? Who do they know and influence? _____

J. Assess the support and environment for your specific policy issue.
Below are suggestions for thinking about your specific policy issue.

Policy Issue	Assess the Political Environment
Tobacco retailer licensing	☐ How many tobacco retailers in your area are licensed with the Board of Equalization? _____ ☐ What are some recent rates of tobacco Youth Purchase Surveys (YPS) conducted in the target city and in bordering communities? _____ (CA STAKE Act Program, Food and Drug Branch, CA Dept. of Public Health) ☐ Are any tobacco retailers active in the Chamber of Commerce? _____ ☐ Does the city/county have a commission or committee that this ordinance would need to go through on the way to the city council/board of supervisors, such as a Licensing Commission or Safety Committee? Is there a city or countywide Youth Board that could vote on this ordinance? _____ ☐ Does the city collect a business license fee? _____
Smokefree beaches and parks	☐ What are the results from recent park or beach cleanups? _____ ☐ How many parks/beaches are there and where are they located? Where are these parks located with respect to council/Board districts? If the city doesn't have districts, then which parks and beaches are close to where each of the elected officials live? _____ ☐ What events are held at the parks? Which organized groups use the parks and might be an ally? _____ ☐ Does the community have a Parks & Recreation Commission (an appointed board versus just staff) that this ordinance will have to go through before coming before the city council/board of supervisors? _____ ☐ Does your city have a history of fires in parks, beach piers or elsewhere which originated with discarded cigarettes? _____
Smokefree outdoor areas	☐ What specific areas are being considered for smoke free restrictions, e.g. entryways, outdoor dining, parks, beaches, service lines, outdoor work areas, sidewalks, etc.? _____ ☐ What are the butt collection results from recent cleanups of these areas? _____ ☐ Is there a known area in your community that would be impacted? An "old town" or "downtown?" Are the businesses in this area organized? _____ ☐ What events are held in the outdoor areas of the community? Which organized groups use the outdoor areas and might be an ally? Opponent? _____
Smokefree housing	☐ What is the percentage of renters in population? _____ ☐ What is the percentage of condos in the community? _____ ☐ Is there a rent control or rent stabilization ordinance? _____ ☐ Are there strong affordable housing advocates groups? _____ ☐ What apartment owner/manager associations are in the community? _____ ☐ Do you have records of people who have called to complain about drifting tobacco smoke? _____ ☐ Do you have apartment managers who are voluntarily smokefree in your community? _____ What about in nearby communities? _____
Smokefree outdoor dining	☐ How many restaurants are voluntarily smokefree on their dining patios? _____ ☐ How many restaurants have outdoor seating? _____ ☐ Are any restaurateurs active in the Chamber of Commerce? _____ ☐ Which major restaurants hold charity events on their patios which might be used to ask for an exemption? _____

Policy Issue	Assess the Political Environment
Tobacco free pharmacies	☐ Which pharmacies are located in your city? Which are corporate and which are independent? Who owns the pharmacies or who is the manager? _____ ☐ Have any pharmacies in your community already stopped selling tobacco products voluntarily? _____ ☐ Are any pharmacy owners active in the Chamber of Commerce? _____
MSA money	☐ Where does the MSA money currently go in your county? _____ ☐ What percentage if any goes to public health? Tobacco control? _____ ☐ How often does the county take up MSA allocation questions? _____
Sampling	☐ What types of rodeos, fairs, festivals does the community have? _____ ☐ Are any of them tobacco free? _____ ☐ Are youth the primary audience for any of the events? _____ ☐ Do any bars in the community host tobacco industry sponsored events? _____ ☐ What types of sampling of tobacco products occur at these events (free samples, coupons, low cost samples)? _____ ☐ Are the owners of any of these bars or the organizers of any of these events active in the Chamber of Commerce or local government? _____
Point of Purchase	☐ Is there a tobacco retailer licensing ordinance in your community? _____ ☐ Are there any local cessation programs in your community? _____ ☐ What is the density of tobacco industry signs in tobacco outlets in your community? Is this any higher near schools or in certain communities? _____
Cigarette Litter Fee	☐ Are there any community litter clean up programs? _____ ☐ What are the butt collection results from recent cleanups of outdoor areas? _____ ☐ Are any tobacco retailers active in the Chamber of Commerce? _____ ☐ Does your city have a history of fires in parks, beach piers or elsewhere which originated with discarded cigarettes? _____

As in all of our work supported by Proposition 99 or other government funding, lobbying is prohibited.

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ELECTED OFFICIAL & GOVERNMENT STAFF PROFILE FORM

The Center for Tobacco Policy & Organizing
AMERICAN LUNG ASSOCIATION of California

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NAME: _____

POSITION: _____

DISTRICT #: _____

DATE CURRENT TERM BEGAN: _____

TERM EXPIRES: _____

ARE THEY APPOINTED TO THEIR POSITION OR ELECTED? _____

IF APPOINTED, WHO APPOINTED THEM? _____

IF ELECTED, BY WHOM AND ARE THEY ELIGIBLE FOR RE-ELECTION? _____

DID THEY COME TO THEIR POSITION EASILY? WAS THE ELECTION CLOSE? WAS THE APPOINTMENT CONTRO VERSIAL? DESCRIBE: _____

_____

DO THEY HOLD ANY SPECIAL POSITION ON BOARD / COUNCIL (PRESIDENT, E.G.)? _____

COMMITTEE MEMBERSHIPS WITHIN BOARD / COUNCIL: _____

BECAUSE OF THEIR POSITION HAVE THEY MADE ANY DECISION ON ANOTHER TOBACCO OR HEALTH RELATED ISSUE? DESCRIBE: _____

_____

IF THEIR DECISION MAKING POSITION IS NOT THEIR PRIMARY JOB, WHAT DO THEY DO? _____

_____

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ELECTED OFFICIAL & GOVERNMENT STAFF PROFILE FORM CONT.

The Center for Tobacco Policy & Organizing
AMERICAN LUNG ASSOCIATION of California

OFFICE INFORMATION

ADDRESS _____

CITY: _____ (CA) ZIP CODE: _____

PHONE: _____ FAX: _____ E-MAIL: _____

CHIEF OF STAFF: _____

PHONE: _____ FAX: _____ E-MAIL: _____

PERSONAL INFORMATION / BACKGROUND

DATE OF BIRTH: _____ PLACE OF BIRTH: _____

HOW LONG LIVED IN CITY: _____

COLLEGE ATTENDED, DATE GRADUATED, DEGREE: _____

RELIGIOUS AFFILIATION: _____ PLACE OF WORSHIP: _____

SPOUSE: _____

CHILDREN: _____ AGE: _____ SCHOOL: _____

_____ AGE: _____ SCHOOL: _____

PROFESSIONAL INFORMATION:

PREVIOUS POSITIONS OR JOBS HELD: _____

PROFESSIONAL ORGANIZATIONS: _____

SERVICE ORGANIZATIONS: _____

SUPPORTERS / DONORS / INFLUENTIAL INDIVIDUALS & ORGANIZATIONS

NAME: _____
COMMENTS: _____

NAME: _____
COMMENTS: _____

NAME: _____
COMMENTS: _____

NAME: _____
COMMENTS: _____

OTHER NOTES / COMMENTS: _____

Sample Strategy Chart

The Center for Tobacco Policy & Organizing
AMERICAN LUNG ASSOCIATION of California

Goals	Organizational Considerations	Constituents, Allies and Opponents	Targets	Tactics
1. List the long-term objectives of your campaign. 2. State the intermediate goals for this issue campaign. What constitutes victory? How will the campaign: • Win concrete improvement in people's lives? • Give people a sense of their own power? • Alter the relations of power? 3. What short-term or partial victories can you win as steps toward your long-term goal?	1. List the resources that your organization brings to the campaign. Include money, number of staff, facilities, reputation, canvass, etc. 2. List the resources that the campaign does not currently have, but will need in order to succeed. 3. List the specific ways in which you want your organization to be strengthened by this campaign. Fill in numbers for each. Some examples: • Expand leadership group • Increase experience of existing leadership • Build membership base • Expand into new constituencies • Raise more money 4. List internal problems that have to be considered if this campaign is to succeed.	1. Who cares about this issue enough to join in or help the organization? • Whose problem is it? • What do they gain if they win? • What risks are they taking? • What power do they have over the target? • Into what groups are they organized? 2. Who are your opponents? • What will your victory cost them? • What will they do/spend to oppose you? • How strong are they?	A target is always a person. It is never an institution or elected body. 1. Primary Targets • Who has the power to give you what you want? • What power do you have over them? 2. Secondary Targets • Who has power over the people with the power to give you what you want? • What power do you have over them?	For each target, list the tactics that each constituent group can best use to make its power felt. Tactics must be: • In context • Flexible and creative • Directed at a specific target • Make sense to the membership • Be backed up by a specific form of power Tactics include: • Media events • Actions for information and demands • Public hearings • Strikes • Voter registration and voter education • Lawsuits • Accountability sessions • Elections • Negotiations

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Strategy Chart

Goals	Organizational Considerations	Constituents, Allies and Opponents	Targets	Tactics
	.			

Date	Park Location	PHAST School(s)	Volunteers	Litter Collected and Counted*				
				Butts	Wrap.	Boxes	Spit T.	Light.
3/30/11	Davis Park in Modesto	Davis HS	7	2,176	288	17	0	8
4/2/11	South Park, North Park and 1-block into downtown area	Patterson HS	12					
5/7/11	Graceada/Enslen Park in Modesto	Elliott HS Johansen HS Enochs HS	11					
4/16/11	Smyrna Park in Ceres	Ceres HS Central Valley HS	16					
12/20/11	Lyons Park in Newman	Orestimba HS	10	1,013	64	1	0	4
12/21/11	Beyer Park in Modesto	Beyer HS	4	884	55	2	3	6
1/28/12	Columbia Park in Turlock	Roselawn HS, Turlock HS	17					
2/9/12	Pioneer (Town) Park in Newman	Orestimba HS	15	1,151	59	6	0	8
3/29/12	Broadway Park in Turlock	Denair Charter Keyes to Learning Charter	10	1,041	0	0	0	0
4/28/12	Dry Creek Park in Modesto *(with Love Modesto)*	Elliott HS Gregori HS Davis HS	30	3,328	119	12	0	5
4/28/12	Smyrna Park in Ceres *(with Love Ceres)*	Ceres HS Central Valley HS	17	3,254	112	12	0	5
7/21/12	Salida Park in Salida	Gregori HS	4					
9/3/12	Pioneer Park in Newman	Orestimba HS	10	2,241	10	1	0	4
14 events		**Total:**	**153**	***15,088***	***533***	***51***	***3***	***40***

***Tobacco litter counts include the following items:**

- Butts from any cigarette, cigar or similar item
- Wrappers for individually wrapped cigarettes, cigars, cigarillo or similar item
- Boxes or other materials used for packaging multiple cigarettes, cigars, cigarillo or similar item
- Spit tobacco cases, cans or pouches, including individual pouches made for use in the mouth
- Lighters, including matches or other devices

Litter from some events has not yet been counted, and those columns are blank.

Stanislaus County "Butt Hunts"
Litter Collection Data Sheet

StAAT
Stanislaus Advocacy Action Team

Date	Park	City/ Jurisdiction	Vols.	Hours	Vol. Hrs	Butts	Butts/hr	Wrappers	Wrap/hr	Boxes	Box/hr	Spit	Spit/hr	Light	Light/hr
3/30/2011	Davis Park	Modesto	7	1.5	10.5	2176	207	114	11	17	2	0	0	8	1
12/20/2011	Lyons Park	Newman	10	1	10	1,013	101	64	6	1	0	0	0	4	0
12/21/2011	Beyer Park	Modesto	4	1.5	6	884	147	55	9	2	0	3	1	6	1
2/9/2012	Pioneer Park	Newman	15	1.5	22.5	1,151	51	59	3	6	0	0	0	8	0
3/29/2012	Broadway Park	Turlock	10	1	10	1,041	104	0	0	0	0	0	0	0	0
4/28/2012	Dry Creek Park	Modesto	30	1.5	45	3,328	74	119	3	12	0	0	0	5	0
4/28/2012	Smyrna Park	Ceres	17	2	34	3,254	96	112	3	12	0	0	0	5	0
9/3/2012	Pioneer Park	Newman	10	2	20	2,241	112	10	1	1	0	0	0	4	0
8			**103**	**12**	**158**	**15,088**	**95.5**	**533**	**3.4**	**51**	**0.3**	**3**	**0.0**	**40**	**0.3**

Tobacco litter counts include the following items:

Butts from any cigarette, cigar or similar item

Wrappers for individually wrapped cigarettes, cigars, cigarillo or similar item

Boxes or other materials used for packaging multiple cigarettes, cigars, cigarillo or similar item

Spit tobacco cases, cans or pouches, including individual pouches made for use in the mouth

Lighters , including matches or other devices