AGENDA: 4

Bay Air Center: Technical Assistance for Community Air Quality Projects

Community and Public Health Committee Meeting
March 5, 2020

Michael Flagg
Meteorology and Measurement

Presentation Outline

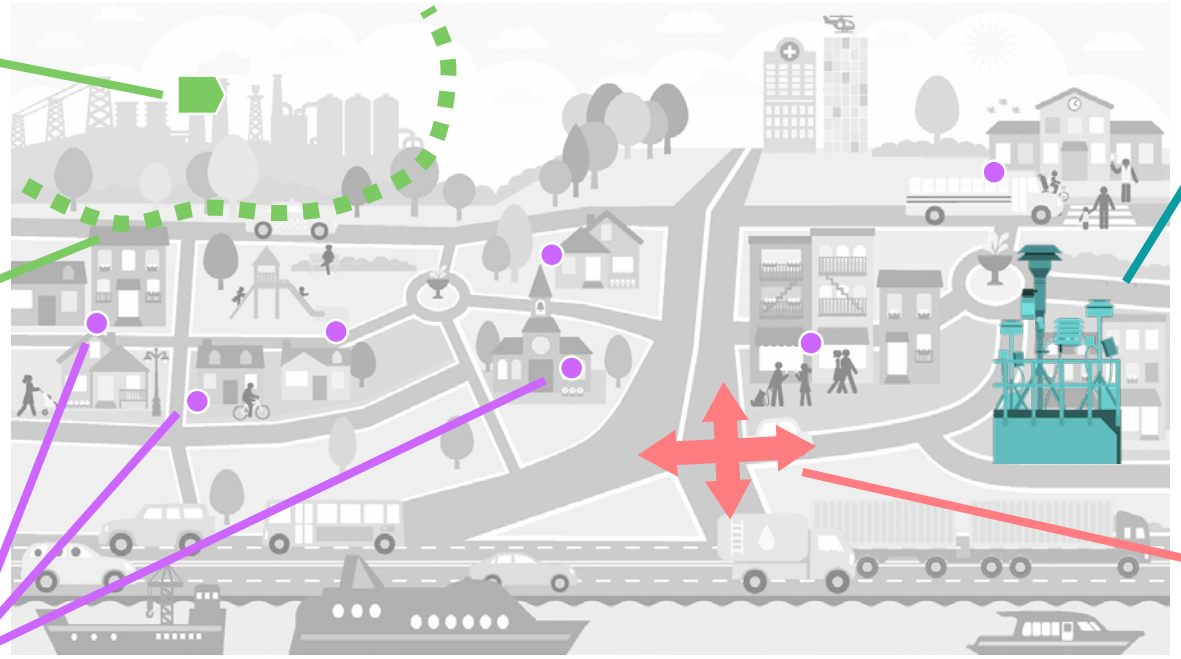
- Continued need for an **independent third-party** technical resource center
- Types of engagement and technical support
- Pilot project examples
- Next steps

Types of Air Quality Monitoring

Source Testing
Emissions from facilities (e.g., stack)

Fence Line Monitoring
Facility emissions that may impact communities

Sensor Networks
Low cost sensors for high density networks, community-led



Regional Network
High accuracy equipment located throughout the Bay Area

Portable & Mobile Monitoring
Equipment moving in a vehicle or temporarily sited

Many Needs for Technical Assistance

BAY AIR CENTER

Working Together for Clean Air

Purpose and Guiding Principles

Support communities with technical guidance, training, and relevant resources.
Ensure guidance and support are technically and scientifically sound and are responsive to community specific needs.
Work closely with communities to ensure the Bay Air Center provides valued services.
Use clear and transparent processes and criteria to prioritize projects to maximize benefit to community groups and ensure the Center provides valued services.
Operate efficiently and adapt to changing needs of Bay Area communities and the Air District.
Track new technologies and methods, share updates, and promote knowledge sharing across communities.

Types of Expertise Offered

Design & Planning	Implementation	Analysis & Interpretation
Air Quality/Air Monitoring 101	Quality Assurance	Identifying Pollution Sources
Defining the Question or Objective	Measurement Technology Selection	Data Management
Study Project Design	Sensor Deployment and Maintenance	Data Analysis and Interpretation

Types of Support

Flash	▪ Phone/email consultation	▪ 0.5 – 2 hours
Knowledge Transfer	▪ Individual/small group training or demonstrations	▪ 2 – 8 hours
Specialized	▪ Onsite support ▪ Project scoping & study design	▪ 8 – 24 hours
Comprehensive	▪ Capacity building, advanced training, and mentoring ▪ Onsite project implementation ▪ Advanced data analysis & interpretation	▪ 40 – 160 hours

Example: Sustainable Silicon Valley (SSV)

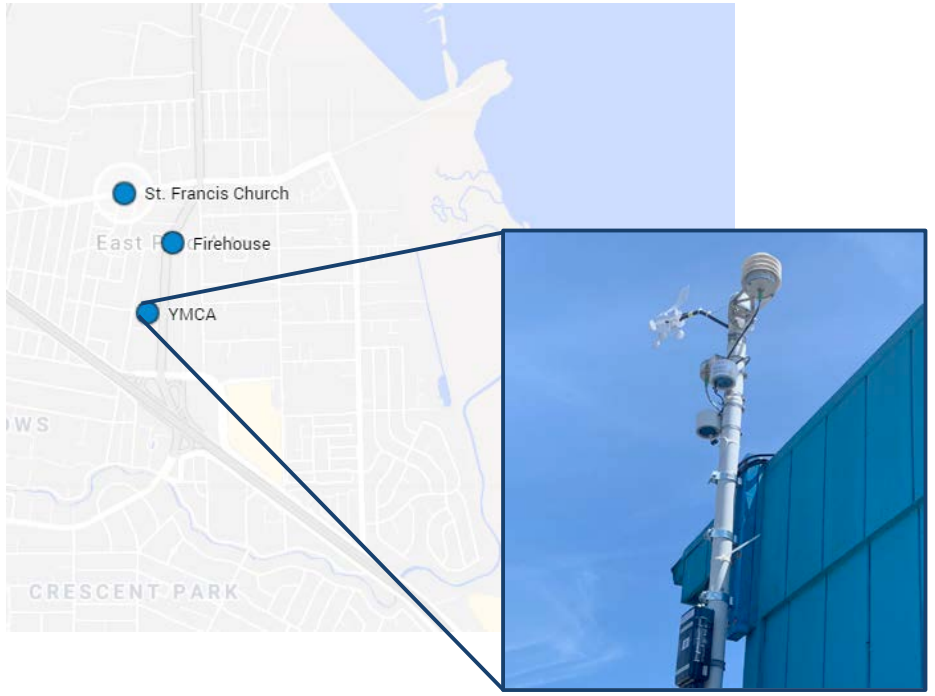
Project Summary: Deployed sensors in East Palo Alto to characterize $PM_{2.5}$, NO_2, CO, SO_2, & O_3 concentrations near major traffic arteries

Project supports James Cary Smith Grantee

Technical Support:

- Study Project Design
- Identifying Pollution Sources
- Quality Assurance
- Data Analysis and Interpretation

Type of Assistance: Specialized



"The support that SSV received from the Bay Air Center on the SmartTA project was invaluable… [and] the Air District is smart to get ahead of the curve and provide assistance to communities with the Bay Air Center."
- Tony Strawa, Ph.D.

Example: Vallejo Citizen Air Monitoring Network

Project Summary: Deploy additional sensors in Vallejo to characterize $PM_{2.5}$ concentrations and identify hotspots and opportunities to expand the existing sensor network in Vallejo

Project supports James Cary Smith Grantee

Technical Support:

- Study Project Design
- Identifying Pollution Sources
- Data Management
- Data Analysis and Interpretation

Type of Assistance: Specialized

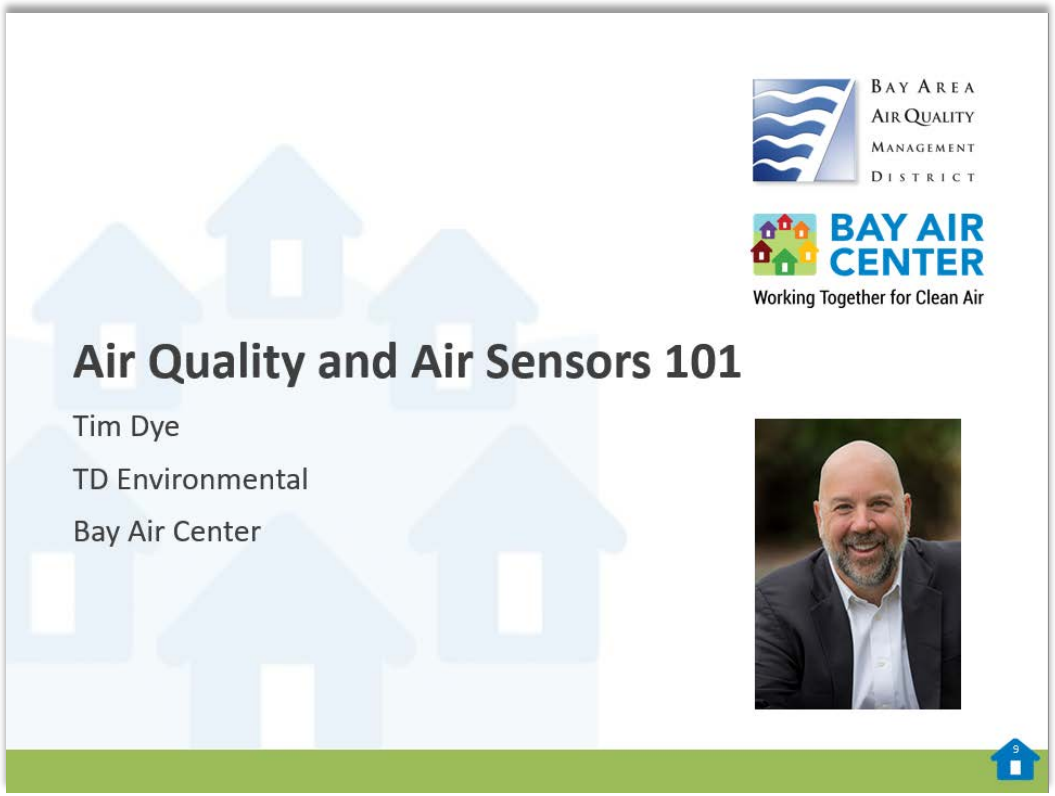
Example: Community School Grantees

Summary: Provide Air Quality 101 training and technical support to Community School Grantees

Technical Support:

- Study Project Design
- Measurement Technology Selection
- Sensor Deployment & Maintenance

Type of Assistance: Knowledge Transfer



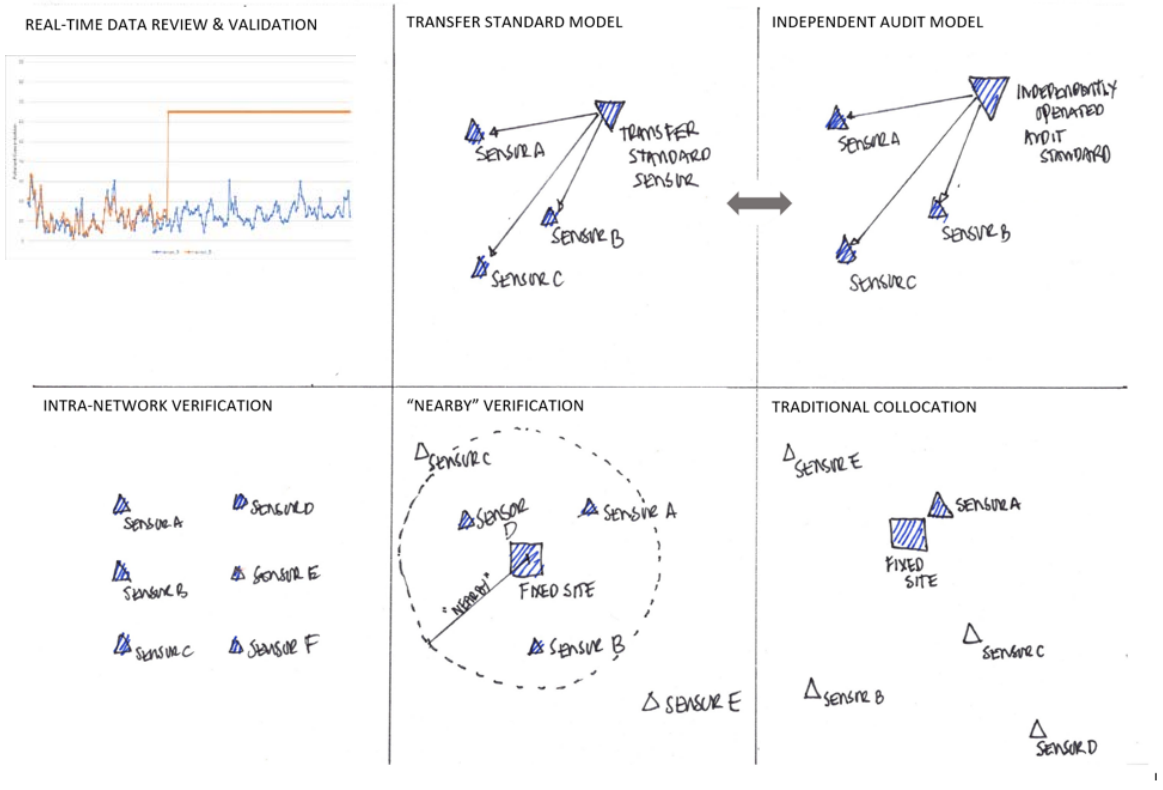
Example: Quality Assurance Support

Ongoing Support to California Air Resources Board (CARB) Community Grantees:

- Groundwork Richmond
- Physicians, Scientists, and Engineers for Healthy Energy (PSE)
- Greenaction for Health and Environmental Justice

Quality Assurance for Sensor Networks:

- Options for various types of networks and objectives
- Scalable approaches for appropriate level of resources
- Developing external guidance materials
- Focus on appropriate level of data quality needed to meet network objectives



Options for Sensor Network Quality Assurance

Bay Air Center Phases and Next Steps

Planning (2018)

Pilot (2019-2020)

- Materials development
- Pilot technical support
- Refine service types
- Test and finalize intake process and prioritization criteria

Scaling Up (2020)

- Website, resource library, 1-800 number, etc.

Questions?

AGENDA: 5

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Public Participation Plan Status Update

Community and Public Health Committee Meeting
March 5, 2020

Aneesh Rana
Kristen Law
Community Engagement

The Air District's Mission

The Air District aims to create a **healthy breathing environment** for every Bay Area resident while protecting and improving public health, air quality, and the global climate.

What Do We Mean by Public Participation?

Civic Engagement

People involve themselves in the civic and political life of their community.

Ex. Little League coach, community garden, PTA, etc.

Public Information/Outreach

This kind of public engagement is characterized by one-way local government communication to people to inform them about a public problem, issue, or policy matter.

Public Engagement

This is a general term used for a broad range of methods through which members of the public become more informed about and/or influence public decisions.

Why Do We Engage the Public?

Better identification of the public's values, ideas, and recommendations

More informed public - about issues and local agencies

Improved local agency decision-making and actions, with better impacts and outcomes

More community buy-in and support, with less contentiousness

Can lead to faster project implementation with less need to revisit

More trust in each other and in local government

Institute for Local Government

Public Participation Plan (Plan) Overview: Background

✓2011: Formal decision to develop Plan to:

- Provide a set of strategies
- Ensure consistency across programs
- Outline our commitment to public engagement
- Comply with federal and state guidelines

✓An advisory task force and internal working group developed the Plan

✓2013: Board adopted the Plan

Plan Overview: Implementation

The Plan called for 45 actions to be completed over three (3) phases

	PHASE			
CATEGORY	Phase 1 2013-2014	Phase 2 2015-2016	Phase 3 2017-2018	**TOTAL**
Communication	10	8	2	**20**
Website Improvements	11	4	–	**15**
Air Quality Complaint System	3	1	–	**4**
Community Outreach	3	–	–	**3**
Multilingual Accessibility	3	–	–	**3**
TOTAL	**30**	**13**	**2**	**45**

Plan Overview: Status

	In Plan	Complete	In Progress On-Going	Not Started
Total	45	29	13	3

Phase	In Plan	Complete	In Progress	Not Started
Phase 1 2013-14	30	21	7	2
Phase 2 2015-16	13	7	5	1
Phase 3 2017-18	2	1	1	0

Category	In Plan	Complete	In Progress	Not Started
Communications	20	14	6	0
Website Improvement	15	10	3	2
Complaint System	4	3	1	0
Community Outreach	3	1	1	1
Multilingual Accessibility	3	1	2	0

2013 Spectrum of Participation

What's Next?

- Release The Path to Successful Community Engagement: Where We've Been and Navigating the Road Ahead by spring/summer 2020 to:
  - ✓ Highlight 2013-2018 accomplishments
  - ✓ Share success stories
  - ✓ Commit to shared leadership
- Lead internal community engagement training for Air District staff
- Develop a new community engagement guide in Fiscal Year 2020/2021

Thank
You

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

AGENDA: 6

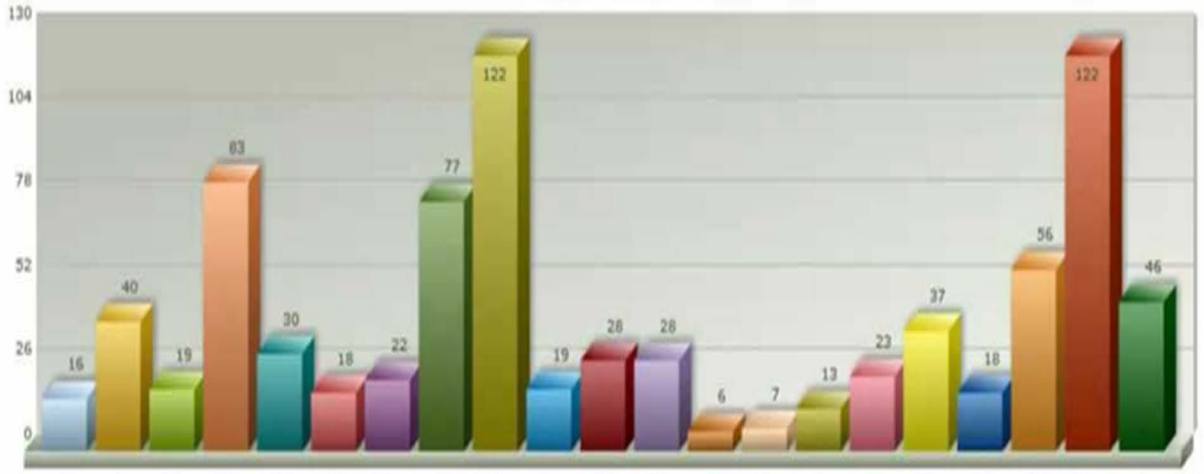
Challenges of Health Data Analysis

Community and Public Health Committee Meeting
March 5, 2020

Judith Cutino, DO, PE
Health Officer

Overview

- Why the Interest in Collecting Health Data?
- Who Collects Health Data and What Data are Collected?
- Health Data Analysis is Complex
- Multiple Factors Contribute to Good Health
- Example of Challenges in Health Data Analysis
- Next Steps for Community Action Plans



Why the Interest in Collecting Health Data?

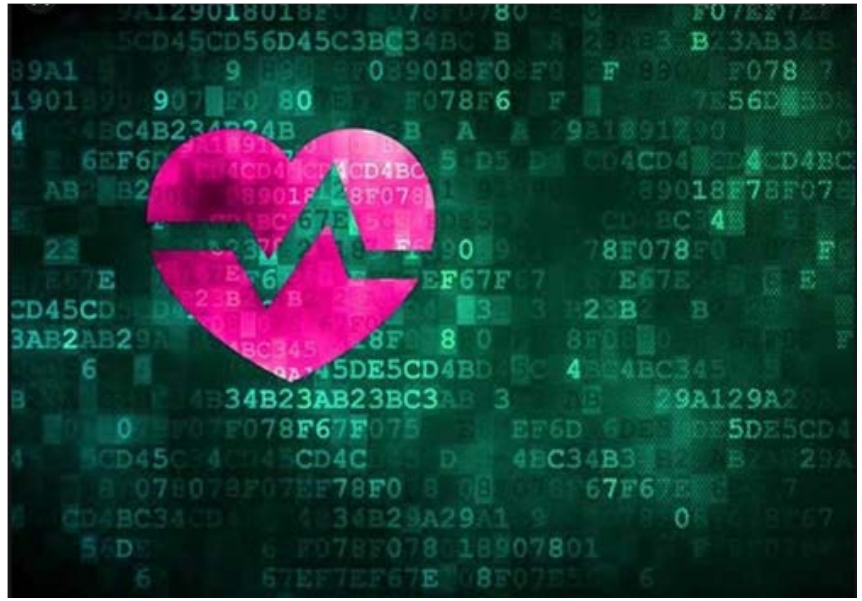
- Assembly Bill (AB) 617 - Increased interest in tracking health data
- Desire to demonstrate effectiveness of emission reduction strategies
- Question: Have health outcomes improved as a result of implemented strategies?
- Will discuss the challenge of using health data to answer this question

Who Collects Health Data and What Data are Collected?

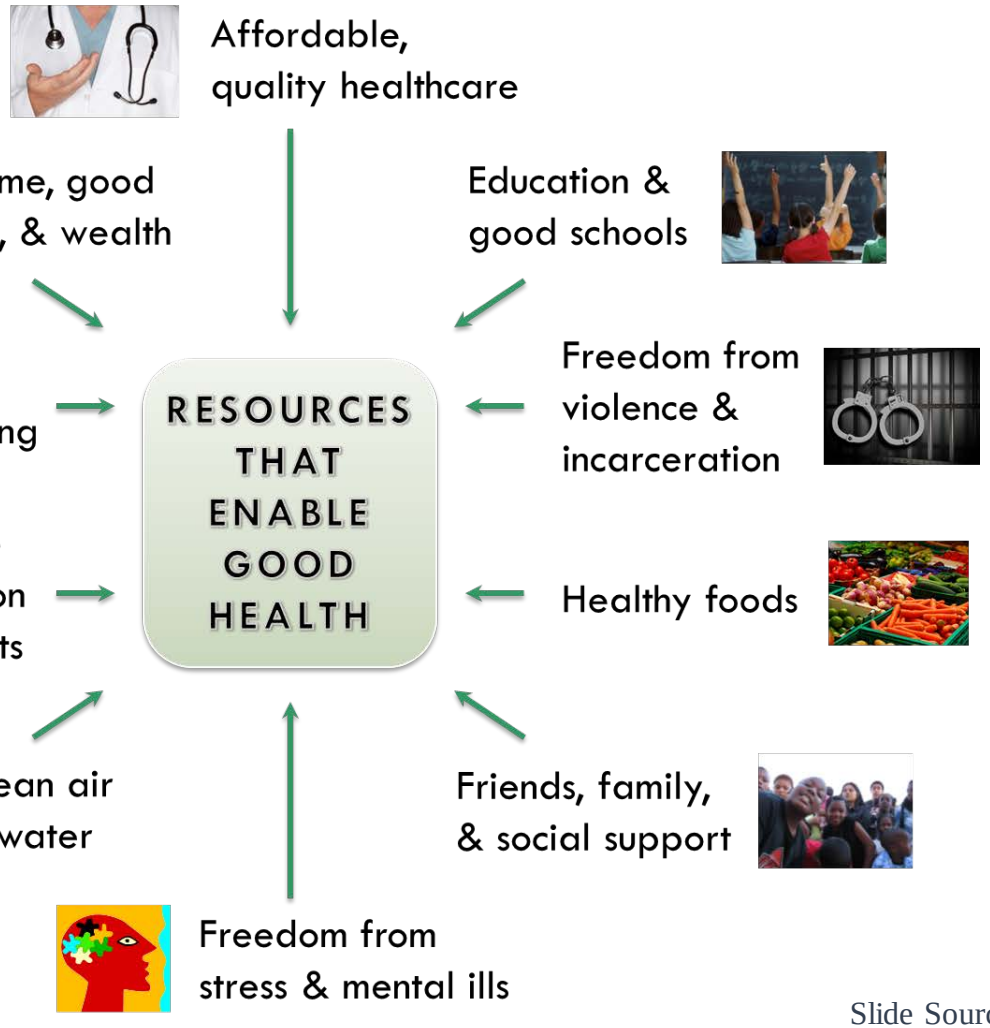
- OSHPD (Office of Statewide Health Planning and Development)
  - Hospitalization rates and emergency room visits by hospital and zip code
- County Health Departments
  - Vital statistics – birth and death data
  - Mortality rates by census tract
- U.S. Census Bureau
  - Demographic data
  - Surveys – American Community Survey

Health Data Analysis is Complex

- Difficult to attribute specific health outcomes with emission reduction strategies
- Multiple factors may contribute to health trends
- Plan strategies may take years to implement
- May take years to see evidence of changes in health outcomes
- Often need very large data sets and long duration of study to draw clear conclusions

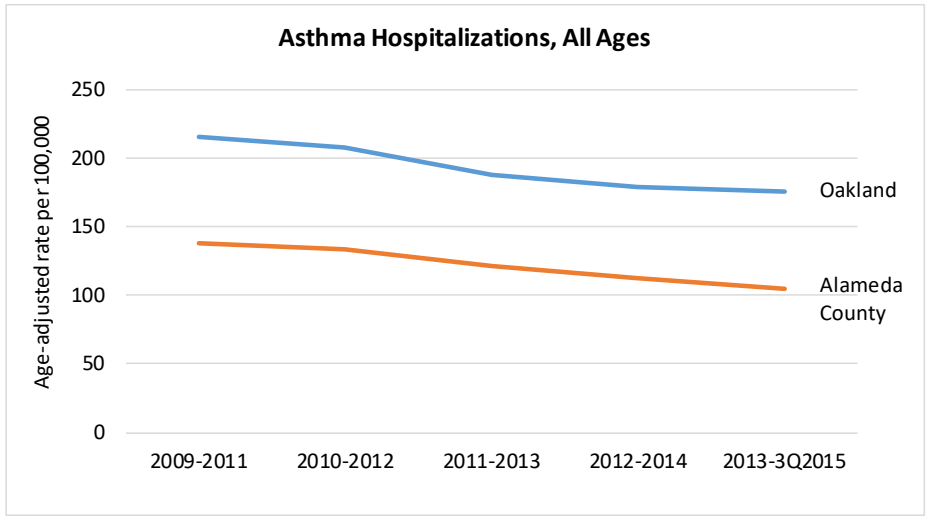


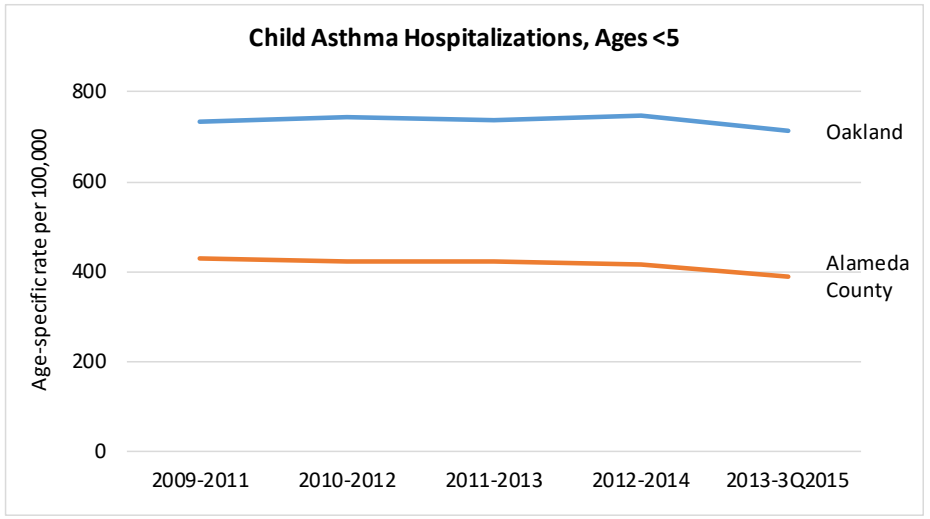
Air Pollution Exposure is Not the Sole Risk Factor Contributing to Health Outcomes

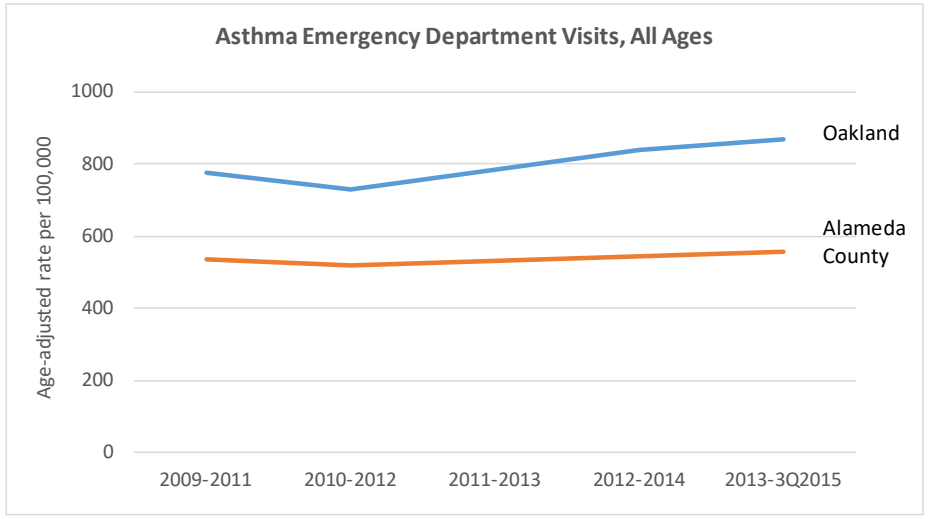


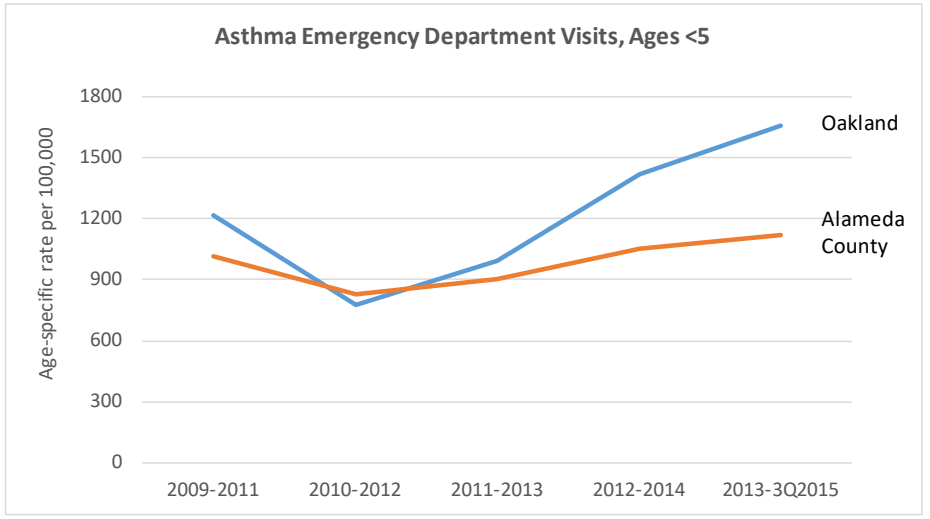
Slide Source: Alameda County Public Health Department

Asthma Hospitalizations Have Gone Down, but Asthma Emergency Department Visits Went Up





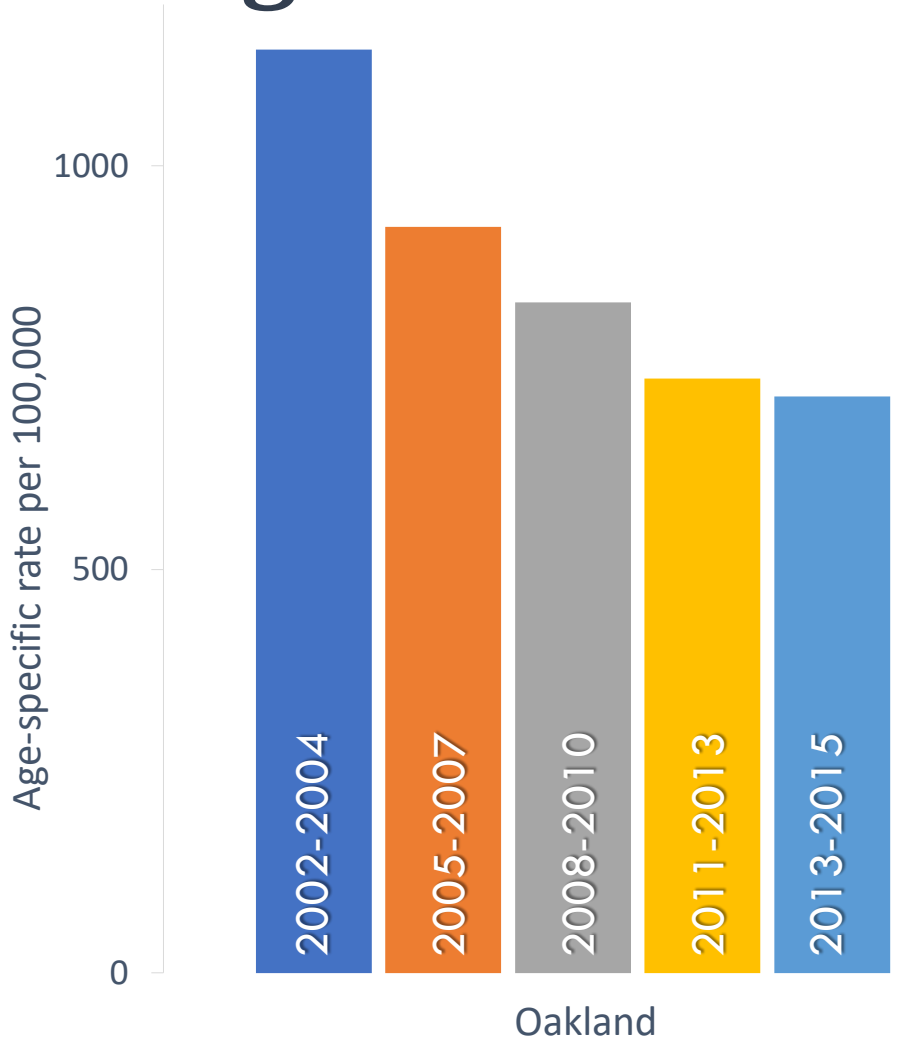


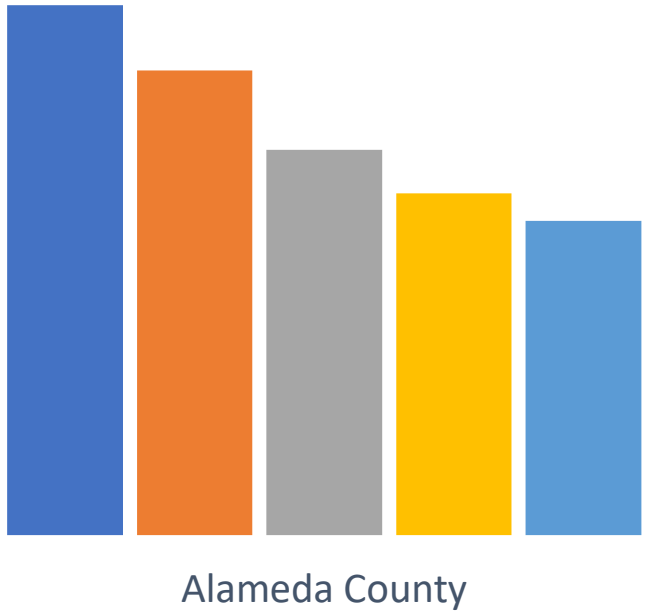


Slide Source: Alameda County Public Health Department

Source: CAPE with data from OSHPD, 2009-3Q2015

Multiple Factors May be Contributing to the Declining Trend in Asthma Hospitalizations





- Improvements in asthma management
- Better access to healthcare
- Built environment improvements
- Reduced air pollution emissions

Slide Source: Alameda County Public Health Department

Next Steps for Community Action Plans

- Partner with county health departments, who will track and report data
- Establish a baseline health data set
- Track health data to observe trends over time
- Report results