

# Results Communication Activities

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Biomonitoring Pilot Projects within the  
CA Environmental Health Tracking Program (CEHTP)

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# Tracking Pilot Projects Overview

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## Tulare County

- Pesticide drift
- 34 participants
  - ◆ 7 Children
- 1 week – July 6<sup>th</sup>
- Analytes in urine
  - ◆ Chlorpyrifos-specific metabolite (TCP)

## Imperial County

- Perchlorate in Colorado River
- 31 participants
- 24 hrs – May 30<sup>th</sup>
- Analytes in urine
  - ◆ Perchlorate
  - ◆ Selected metals
    - Cd, Pb, Hg, As, U,
    - Al, Ca, Cu, Fe, Mg, Mn, Ni, Zn, K, Na

# Tracking Pilot Projects Overview

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## Tulare County

### ● Partners

- ◆ PANNA (lead)
- ◆ Cal Pest Reform
- ◆ Commonweal
- ◆ El Quinto Sol & CRPE
- ◆ Local Providers

### ● Labs

- ◆ EHLB – Biomonitoring and Outdoor Air Lab
- ◆ Tulare Health Dept.

## Imperial County

### ● Partners

- ◆ Comite Civico del Valle
- ◆ Commonweal
- ◆ Local Providers

### ● Labs

- ◆ CDC, NCEH
- ◆ DTSC, ECL
- ◆ Imperial Health Dept.
- ◆ U of Ariz. Yuma
- ◆ CDPH, FDL and EHLB

# Tracking Pilot Projects Overview

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## Tulare County

- Environmental Monitoring - Chlorpyrifos
  - ◆ Air via PANNA's Drift Catcher
  - ◆ Validation of Air results via EHLB Canisters
- Questionnaire
- Communication of Results in Fall/Winter 2009

## Imperial County

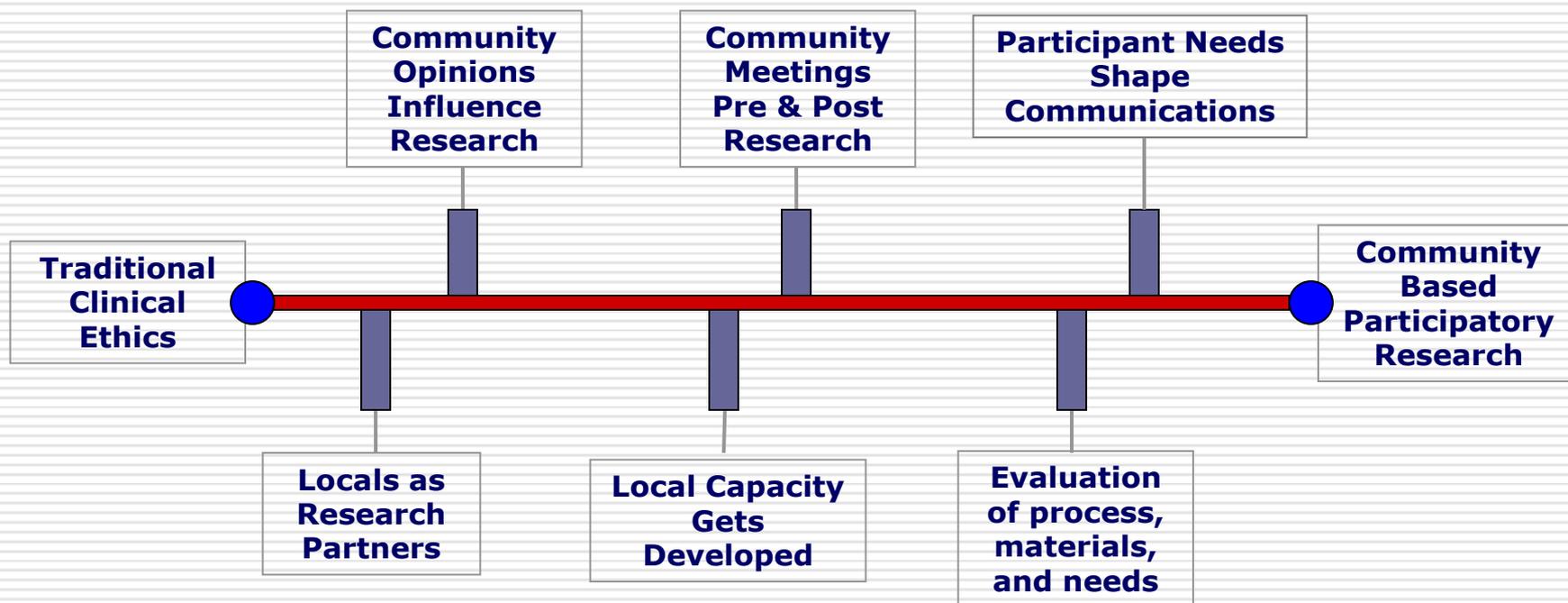
- Environmental Monitoring - Perchlorate
  - ◆ Drinking water (all sources)
  - ◆ Locally Grown Produce
- Questionnaire
- Food & Urine Diary
- Communication of Results in Fall 2009

# Opportunities for CECBP within Tracking Pilot Projects

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- Resources and samples for development of laboratory capacity
- Develop and test methods for results communication with participants and providers
- Evaluate communication models and procedures
- Create important partnerships between State Programs, NGOs and CBOs
- Evaluate and improve multiple approaches
- Investigate community exposures
- Explore how community capacity building contributes to biomonitoring projects

# Pathways to Meaningful Participation



**Goal >>>**

**Community Uses Research Findings & Partnerships to Promote Desired Change**

# Process for Learning about Results Communication

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- Formative focus groups with participants – Pre-biomonitoring & Pre-Results Communication
- Post-biomonitoring focus groups with participants
- Community Meetings
- Evaluation of the meetings, study process, procedures, and materials.
- Interviews with providers

# Research Questions

## Study Participants

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1. Why do participants want to be involved in biomonitoring studies?
2. What do study participants want to know about contaminants?
3. What concerns and needs do study participants have in response to learning about contaminants in their bodies?
4. How do biomonitoring results affect the lives and behaviors of participants?
5. How much and what type of written information is appropriate?
6. What visual tools best aide in the understanding of personal results?

# Pre-Study Focus Group

## Tulare

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- Current knowledge of Study
- Reasons for participating
- Expected Results
- Concerns
- Desired Actions
- Insight into Health Communications
  - ◆ Desired information
  - ◆ Optimal results communication visit
  - ◆ Graphic information
- Impact of focus group findings on the Study

# Current Knowledge of Study

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- Good general study knowledge expressed by all participants
- Misconception that study would answer questions about causal relationship with pesticides and health problems

**If you were asked by a neighbor to describe this study, what would you tell him/her?**

“That they (the pesticides) affect the health of many people, like children, and later they get asthma or cancer and that pesticides in the air affect the health of children and that’s why it’s important to do these tests.”

# Reasons for Participating

- Respect for organizer and her contribution to community
- Recognize health problems in community
- Proximity to orange groves
- Learn how to protect themselves
- Support scientists and the organizations doing this work for “us”



# Expected Results

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## Air

- Study population lives near orange groves
- Everyone expected **high** levels of chlorpyrifos in air
- Stories of pesticide residue on cars, foul smells, and illness from direct contact

## Urine

- Everyone felt that they would have high levels due to living close to orange and olive groves.
- Everyone wanted to get results back

# Expressed Concerns

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- Levels in children
- How to lower levels

## Health

- Blame self for children's illness (field work)
- Asthma
- Allergies
- Visual impairments
- Sore bones
- Diabetes
- Exodus from Valley

“Well some doctors are not capable of diagnosing these things; most of them don't even know about pesticides.”

# Desired Actions

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- More control over pesticides
- Call attention to the problem by helping researchers
- Policy changes so growers have to change practices
- Want to learn more about how to reduce other types of exposures

**How do you think the results of the study might be helpful to you and your family?**

“For me, as I said before, taking these tests, and knowing what I have (the pesticides) and if the ones I have are illegal, I’m going to start to make noise in Sacramento. And this is what attracted me to the study and why I want to do this test.”

# Health Communications

What participants want to know

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- Strong desire to link current illness or illness in family and pesticide
- “Consequences” of pesticides
- How to reduce levels
- How can provider use results to call attention to the local problem
- How results can be used to get growers to change practices
- Make changes in the law

# Health Communications

## How to communicate results

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- Sit together, look at me, show concern;
- Explain take-home information;
- Be thorough;
- Take problems seriously
- Teach me how to reduce levels;

**What advice do you have for us to make the visit to the doctor (to learn about your results) good for you?**

“A lot of people need help understanding information. Even though they can read it, some people need that extra help with information that is written out.”

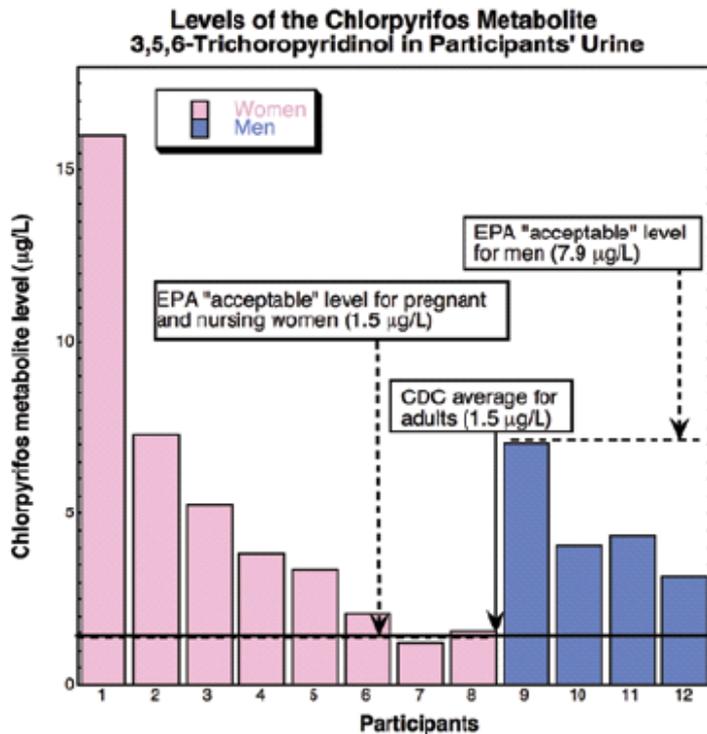
# Health Literacy

## Graphic information

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- Which graphs are easy to comprehend and could stand-alone?
  - ◆ Present Challenge – best practices small scale, single contaminants
  - ◆ Future Challenges – best practices large scale, multiple contaminants
- Much more testing is needed in this area
- Will discover more in the post-biomonitoring focus groups.

# Graphic Depictions of Results



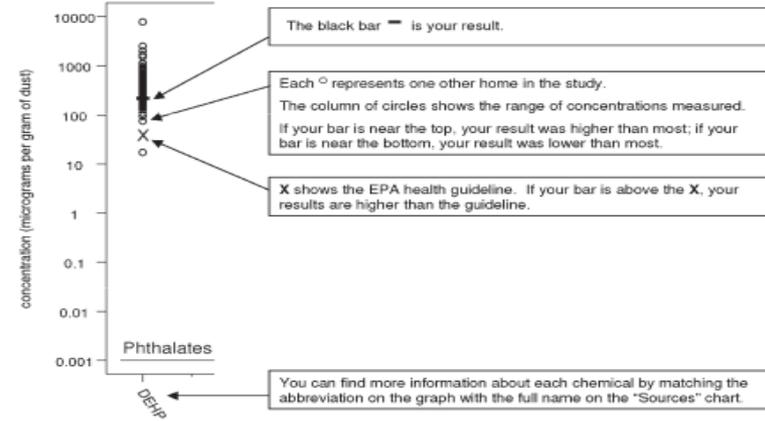
## METALS

2 of 5 found

### Lead

Neurotoxic heavy metal linked to IQ deficits and behavioral problems. Found in dust from chipping lead paint in older homes, and in some tap water.

- level found: 2.09 ug/dL (wet weight) in whole blood
- **Moderate** vs 54 tested in EWG/Commonweal studies (47th %ile)
- **Moderate** vs 6,621 tested in CDC biomonitoring [1] (70th %ile) (comparison based on congeners tested by CDC)



# Impact of FG findings on Results Communication

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- Resulted in a more explicit consent process
- Emphasis on what exposure assessment is
- Need to identify resources that address health issues of participants outside of present research
- Identify format for personalized results information
- Help identify graphic options to eliminate
- Emphasize importance of partnerships

# Research Questions

## for Health Care Providers (HCP)

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1. What information do HCP deem important in discussing contaminants with patients?
2. What challenges do HCP face in providing this information?
3. What recommendations do HCP have for models to effectively inform about test results?
4. What is the potential impact of biomonitoring on medical practitioners.

# Provider Teams

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## ● Local Communities

### Imperial County

- ◆ Lucie Gamboa, MD
- ◆ Aide Fulton, RN

### Tulare County

- ◆ Mario Celaya, PA
- ◆ Ana Rosa Celaya, PA

## ● State Programs

- ◆ Rupali Das, MD,MPH  
– CECBP,CDPH
- ◆ Rachel Roisman, MD  
– CECBP,OEHHA
- ◆ Eric Roberts, MD,  
Ph.D. – CEHTP,CDPH
- ◆ Health Educators  
from Tracking and  
Biomonitoring

# Process – Provider Capacity Building

## State Team

- Receive all results
- Develop results interpretation protocol
- Develop individually- tailored educational material
- Develop letter to participants



## Community Team

- Engage in conversations & relevant reading
- Provide feedback & guidance on protocols
- Communicate results

**Evaluate Experience**

# Emerging Issues

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- **Consent Form**
  - ◆ Clearly define study limitations
  - ◆ Reading level
  - ◆ Decision points
- **Community Collaborations**
  - ◆ Working with partners to communicate study purpose and limitations during recruitment
  - ◆ Preparing post-study networks