

Program Update

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Presentation to the Scientific Guidance Panel Meeting
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California Regional Exposure (CARE) Study

- Eight regions, based on geography and population
- Conduct sampling in approximately one region/year, with 300-500 participants per region
- Biomonitoring for metals and perfluoroalkyl and polyfluoroalkyl substances (PFASs) and collection of exposure data
- Potential to include additional panels, such as 1-nitropyrene or environmental phenols

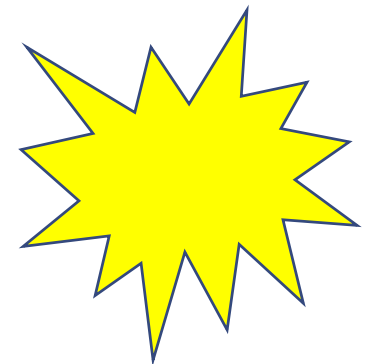


California Regional Exposure (CARE) Study Updates



CARE Study – Los Angeles County

CARE Study 2 – Riverside, San Bernardino, Imperial, Mono, and Inyo counties



CARE LA: Results Return

- 430 participants
 - 428 provided a urine sample
 - 425 provided a blood sample
- 160 participants selected for 1-nitropyrene analysis
- 60 female participants selected for phenols analysis



CARE LA: Results Return

- Individual results return
 - 428 participants requested results
 - Results for metals, PFASs, and 1-nitropyrene returned to participants
 - Results for phenols will be returned in Spring 2019
- Public meeting planned for Spring 2019

CARE LA: Preliminary Results

- Metals

- Measured 10 metals, including 3 metals measured in both urine and blood
- Most metals detected in 100% of participants
- 48 participants (11%) had a metal level above established Levels of Concern

- PFASs

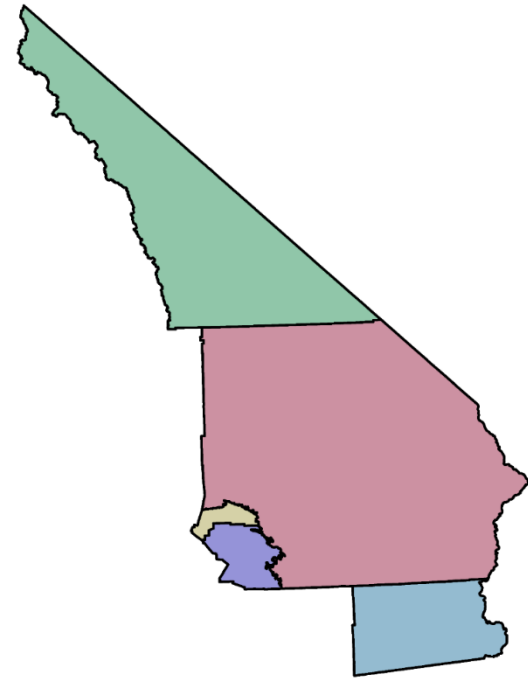
- Measured 12 PFASs
- At least 1 PFAS detected in every participant who had blood tested

- 1-nitropyrene

- Measured two metabolites of 1-nitropyrene
 - 6-OHNP (Detection Frequency = 91%)
 - 8-OHNP (Detection Frequency = 87%)
- Neither metabolite detected in 2 participants
- Seasonal trends in air pollutant levels may impact analysis

Region 2: Zones and Sampling Goals

Zone	Zone Description	Number of Participants
A	San Bernardino County urban	104
B	Riverside County urban	118
C	Riverside and San Bernardino counties suburban and rural areas	78
D	Imperial County	30
E	Inyo and Mono counties	20
Total Sampling Goal in Region 2:		350



CARE Study: Improved!

- Shorter field presence
 - More efficient recruitment
 - Higher utilization of internet tools
- Field office/mobile team
- Improvements to Participant Management System
- Increased participant incentive
- Automation of the results return process
 - Lower risk of human error
 - More efficient assembly

CARE 2: Field office and staff



CARE 2: Participant Recruitment

- January 2019 - Postcards mailed to 79,000 households in randomly selected mail codes
- Continued outreach via Craigslist and community organizations

CALIFORNIA REGIONAL EXPOSURE (CARE) STUDY ESTUDIO DE EXPOSICIÓN REGIONAL EN CALIFORNIA

What is the CARE Study? The CARE Study is measuring chemicals in people across the state. This information will support efforts to reduce chemical exposures for Californians and improve public health. Biomonitoring California is currently looking for 350 people from Riverside, San Bernardino, Imperial, Inyo and Mono counties to join the study.

Who can participate? You must be 18 years of age or older, and be able and willing to give a small blood and urine sample.

How will the CARE Study benefit me? You will receive your results, information on how to reduce your contact with chemicals, and a **\$50 gift card**.

How do I get started? Visit www.cdph.ca.gov/CARE or call us at **510-367-4166** to find out more.

The CARE Study is a project of Biomonitoring California, a collaboration of the California Department of Public Health and the California Environmental Protection Agency.

¿Qué es el estudio CARE? El estudio CARE está midiendo los niveles de sustancias químicas en personas en todo el estado. Esta información apoyará los esfuerzos para reducir la exposición a sustancias químicas de la californianos y mejorar la salud pública. Biomonitoring California está buscando 350 personas de los condados de Riverside, San Bernardino, Imperial, Inyo y Mono para unirse al estudio.

¿Quién puede participar? Debe tener 18 años de edad o más, y poder realizar una encuesta, y dar una pequeña muestra de sangre y orina.

¿Cómo me beneficia? Los participantes recibirán sus resultados, orientación sobre cómo reducir los sustancias químicas y una **tarjeta de regalo de \$50**.

¿Cómo empiezo? Visite www.cdph.ca.gov/CARE o llámenos al **510-367-4166** para obtener más información.

El Estudio CARE es un proyecto de Biomonitoring California, una colaboración del Departamento de Salud Pública de California y la Agencia de Protección Ambiental de California.



www.cdph.ca.gov/CARE • 510-367-4166 • CAREStudy@cdph.ca.gov

CARE 2: Prescreening pool

- 692 people have filled out the prescreening form
 - Prescreening pool skewed female and older
 - Participation across race and sampling zones
- Selection takes race/ethnicity, gender, and sampling zone into account
- Prescreening closed on March 3

CARE 2 – Enrollment status*

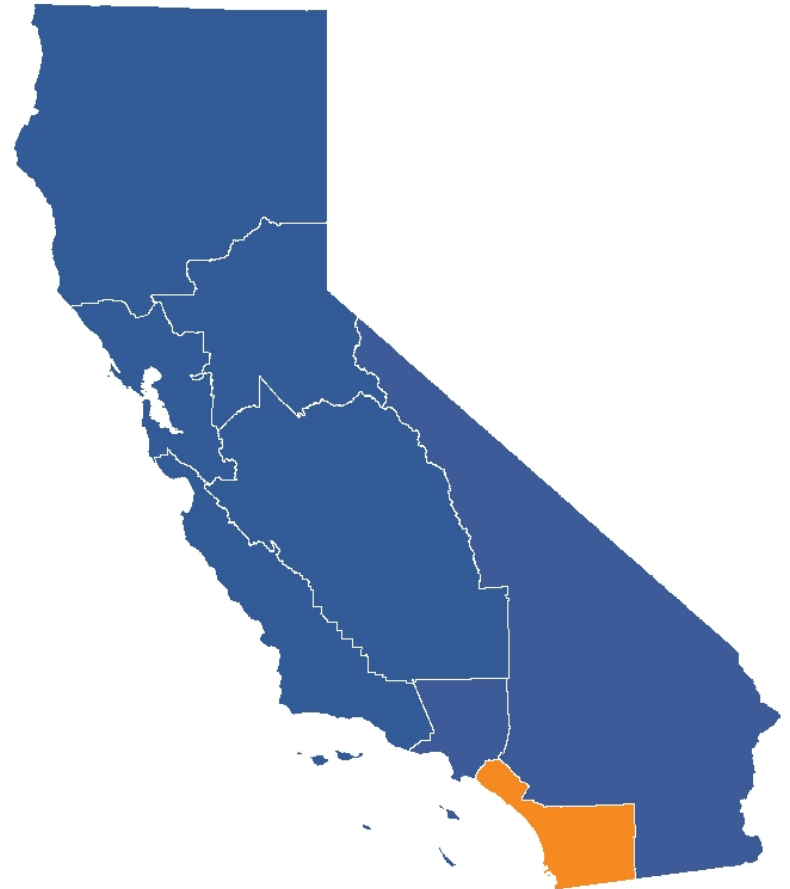
Tracking Status	Internet Participants	Paper Participants
Invited to enroll	336	78
Invitation sent	34	45
Activated account	5	7
Completed informed consent	9	-----
Completed exposure survey	16	-----
Scheduled for sample collection	173	17
Missed/cancelled appointment	10	
Completed study	86	8

* Current as of March 3

Projected Timeline – 2019

CARE Activities	CARE LA	CARE 2
Results return	February	
Field work		February – May
Results return for phenols	March	
Public meeting	May/June	
Laboratory analysis		April – August
Early notifications		April – August
Results return		December

CARE 3: San Diego/Orange County



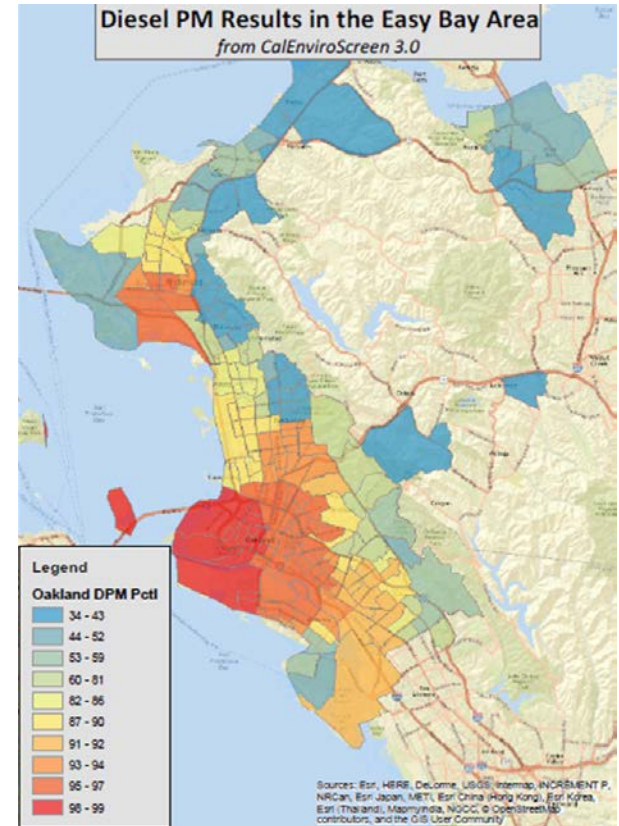
East Bay Diesel Exposure Project (EBDEP) Major Goals

- Directly assess exposures to diesel exhaust in child-parent pairs living in the San Francisco East Bay
- Compare levels of diesel biomarkers:
 - Within households, across age groups
 - In repeated samples over a four-day period
 - Across communities
 - During different seasons



EBDEP updates and status

- Field work completed on February 1, 2019
 - 40 child-parent pairs enrolled, including 15 “daily samplers” (urine samples collected over 4 days)
- Samples currently being analyzed at the University of Washington
- Individual results return and community meetings planned for spring/summer 2019



Asian/Pacific Islander Community Exposures (ACE) Project

- Follow-up to Scientific Guidance Panel presentation in August 2018
- Reported results to San Francisco Department of Public Health (SFDPH)
- Met with APA Family Services and SFDPH to discuss follow-up
- Potential for future projects and community outreach



Additional studies in progress

- Foam Replacement Environmental Exposure Study (FREES)
Intervention study to look at changes in flame retardant levels after replacing home furnishings
- Measuring Analytes in Maternal Archived Samples (MAMAS)
Using Biobank samples from the California Prenatal Screening Program to look at trends in POPs and PFASs over time
- Northern California Firefighter Study (NCFF)
Biomonitoring of 180 firefighters deployed to fight the Tubbs Fire in Sonoma County

Program Priorities/Timeline

- CDC cooperative agreement ending August 2019
- Proposals in response to the new Notice of Funding Opportunity (NOFO) due April 26
 - Approximately six proposals will be awarded funding
 - Up to \$1 million annually
- Proposals can focus on:
 - Statewide surveillance
 - Targeted biomonitoring/rapid response

California-specific issues

- Vulnerable communities specific to California
 - Immigrant populations
 - Occupational cohorts
- Issues that are particular to California
 - Agriculture and other industries
 - Population diversity
 - Air pollution
 - Wildfires
- Which lab panels are priorities to maintain/expand?

Questions/Discussion

Biomonitoring California Staff

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Paramjit Behniwal

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