

November 2017 Meeting of the Scientific Guidance Panel for Biomonitoring California

Summary of Panel Input and Recommendations

The Scientific Guidance Panel (SGP) for the California Environmental Contaminant Biomonitoring Program (also known as Biomonitoring California) met on November 9, 2017 in Richmond. This document briefly summarizes the Panel's input and recommendations on each agenda item and related public comments. Visit the [November 2017 SGP meeting page](#) to access the presentations, other meeting materials, and the meeting transcript.

Panel Business

[Dr. José Suárez](#) was sworn in as a new SGP member, appointed by Governor Jerry Brown.

Program Update and Overview of Environmental Justice Activities

[Presentation](#): Nerissa Wu, Ph.D., Chief, Chemical Exposure Investigations Unit, Environmental Health Investigations Branch, California Department of Public Health (CDPH)

The Panel discussed various aspects of the [California Regional Exposure \(CARE\) Study](#), including:

- The planned recruitment strategy and whether it will be sufficient to adequately represent the ethnic makeup of Los Angeles County.
- Importance of providing both online and paper options for signing up and participating in the study.
- Potential concerns about the self-administered exposure survey, a necessary approach given the size of the study, versus an in-person interview.
- Tension between carrying out a representative study in LA County, while also working with community partners.
- Using the CARE Study to generate opportunities for community-based targeted biomonitoring studies in the future.

Public comment: Nancy Buermeyer of Breast Cancer Prevention Partners asked about the community meeting for the [Asian/Pacific Islander Community Exposures \(ACE\) Project](#): whether it included participants and other community members; what types of actions to reduce exposures were discussed; and if attendees expressed interest in taking those actions. Program staff responded that the meeting was open to the broader community. The focus was primarily on individual actions to reduce exposures, but

there were also discussions with APA Family Support Services, the ACE Project partner, about how the larger community could use the information.

East Bay Diesel Exposure Project

[Presentation](#): Duyen Kauffman, Health Program Specialist, OEHHA

The Panel:

- Asked about the specificity of 1-nitropyrene (1-NP) as a diesel exhaust biomarker.
 - Program staff indicated that while there are other possible sources of 1-NP, if diesel exhaust is present the 1-NP measured is likely correlated with that exposure.
- Discussed various aspects of the study design:
 - Suggested adding outdoor air monitoring to pair with the indoor measurements.
 - Noted that potential participants may not have vacuums, and suggested Program staff think about other options for a dust sample.
 - Noted the large amount of GPS data that will be gathered under the study design, and recommended planning ways to organize and filter that data.
- Recommended doing modeling based on ambient air data to generate individual exposure estimates, and compare those to what is measured via biomonitoring.
- Asked about possible ways to reduce high exposures to diesel exhaust that would be more immediate than larger policy changes.
 - Program staff discussed options like use of indoor and outdoor plantings and air purifiers.
- Suggested the Program coordinate with other similar studies in the Bay Area, such as for recruiting.
- Brought up the new requirement for community air monitoring under [Assembly Bill 617](#), and noted that the [East Bay Diesel Exposure Project](#) is a banner example of addressing community exposures in an environmental justice context. Recommended the Program investigate other ways to link up with work under AB 617.

Public comment: Nancy Buermeyer suggested collecting and analyzing dust samples from a representative school in each of the communities being studied.

Report Back on Listening Sessions with Environmental Justice Organizations in California

Presentation: Deanna Rossi, M.P.H., Impact Assessment

The Panel:

- Noted areas of significant diesel exhaust exposures in Southern California, including Long Beach and Riverside, consistent with findings in this presentation.
- Raised the issue of barriers to collecting blood and urine samples in communities of certain ethnicities, and asked about how those challenges could be addressed.
 - Possible approaches could include working with trusted community organizations for study design and recruitment, and using biomonitoring study results to support exposure reduction in the community, with regulatory agencies as partners.
- Discussed the trade-off between measuring more chemicals in a single region or a smaller set of chemicals in more regions, and asked about community input on that point.
 - Communities generally expressed interest in having more chemicals measured in their region, versus seeing comparisons across regions.
- Praised the Program's effort to reach out to community organizations across the state.

Morning Session Discussion

The Panel, three morning speakers, and the audience discussed a range of topics, including:

- Smoking status of ACE Project participants, of interest because some metals that were measured in the study are found in tobacco smoke.
- Elevated levels of arsenic in ACE Project participants, follow-up done by Program staff, challenges in identifying practical interventions for the individual to reduce exposures, and larger reasons for elevated arsenic (such as legacy pollution from arsenical pesticides used in the past).
- Effectiveness of air filtration devices to address diesel exhaust exposures, and the need to change the filter more frequently than recommended when in close proximity to railyards or diesel truck traffic.
- Reaching out to local air quality management districts to obtain their data on air filtration devices, and possibly seek funding from the local air districts to purchase such devices.
- Connecting with community organizations, like the West Oakland Environmental Indicators Project for their mapping of pollution sources, including auto body

shops and idling trucks.

- Sampling soot that collects on windowsills and blinds.
- Being respectful with home walkthroughs that examine private areas.
- Ensuring that resources are offered to diesel exposure study participants, such as arranging support from community programs that target asthma or cancer.
- Interpret data from existing air monitors, such as those run by Chevron, with caution and be aware of limited data collection times.
- Extend outreach for the diesel study to target additional community organizations doing relevant work.
- Be cautious about relying on CalEnviroScreen to select high and low diesel exhaust exposure areas, since some areas may be impacted differently than indicated by that tool.
 - The EBDEP is designed to measure a number of different exposure indicators, as well as localized variation in exposures; those results will be compared to the CalEnviroScreen diesel indicator estimates for the relevant locations.

Roundtable Discussion: Perspectives from Community Organizations on Biomonitoring California's Activities

[Discussion Questions](#)

Guest Discussants:

Colin Bailey, Executive Director, [Environmental Justice Coalition for Water](#)

Jean Kayano, Associate Director, [Center for Community Action and Environmental Justice](#)

Esther Bejarano, Community Health Educator, [Comite Civico del Valle](#)

Laura Gracia-Santiago, Climate Adaptation and Resiliency Enhancement Coordinator, [Communities for a Better Environment](#)

The Panel, guest discussants, and the audience provided a range of perspectives on community biomonitoring, including:

- EBDEP is a valuable study in tackling a major environmental issue, which is also a significant problem in San Bernardino and Riverside heavily impacted by diesel truck traffic.
- Biomonitoring California's listening sessions with community organizations across the state were conducted respectfully and responsively.
- The ACE Project was a model of community participation, in which Biomonitoring California worked closely with APA Family Support Services to ensure the project benefited the community and was responsive to a wide range of community

needs, including:

- Taking into account language, including specific dialects.
 - Keeping participants informed through every step of the process.
 - Ensuring participants always had access to Project staff.
 - Increasing participants' awareness of chemical exposure issues and the value of biomonitoring.
- The ACE Project also highlighted the challenge of working with community members who have low incomes or are newly arrived immigrants, and face limitations in taking action to address the elevated exposures and potential health concerns identified in the study. Looking for ways to develop and implement action plans for these communities is an important next step.
 - Taking action to reduce exposures in communities where there is a known problem, rather than only planning more studies, is essential.
 - If a biomonitoring study is contemplated, be sensitive to concerns of residents who have already been studied, and use the results to work for mitigation measures.
 - Be sure to include communities that have not been adequately studied, and be aware of the nature of exposure sources, including cross-border sources.
 - Be aware of the study results and resources that are already available in many communities, such as [IVAN Air Monitoring](#) in Imperial County.
 - Connect with community members and organizations aware of specific sources of chemical hazards, such as pesticide spraying and field burning.
 - Work with the community to build trust and respect when designing and conducting a biomonitoring study; provide and discuss the study results when they become available; stay connected with the community after the study is completed; and support action to reduce exposures.
 - Engage the community from the beginning of the study, and follow the advice of community members on where to sample.
 - Set expectations about the nature of a scientific research study, and that the results may not be what is anticipated by the community. Carrying out research under a community-based participatory model helps address this issue effectively.
 - Ensure a diversity of input in planning research.
 - Empower community members to be scientists - IVAN Air and the school flag program (which directly alerts the community to air quality issues) are successful examples.
 - Ensure that any new studies have clear goals, and that the data generated will support efforts to reduce exposures.
 - In relaying biomonitoring results to participants, be sure to provide adequate explanation and the support of a doctor if needed.

- Be aware of the consequences of measuring toxic contaminants in communities, including possible impacts on house values.
- Consider including a biomonitoring component early in the process of investigating a contaminated site.
- Account for the potential synergistic effects of multiple contaminant exposures, the multiple routes of exposures for many contaminants, and the cumulative impacts of exposures.
- Look for ways to make Biomonitoring California more nimble, and able to respond to acute environmental hazards.
- If funds from AB 32 or AB 617 are directed to biomonitoring studies, then there should be clear and immediate community benefits coming out of the studies.
- Go into communities with open minds and without pre-set agendas; adapt study plans to the individual community and do not apply a cookie cutter approach.
- Ensure that you offer adequate stipends and other resources, such as childcare, to support biomonitoring study participants and community members who carry out valuable efforts like air monitoring.
 - State funds cannot be used for this sort of compensation, which is a continuing hurdle facing Biomonitoring California. The Program has found creative funding sources to offer adequate incentives.
- Using biomonitoring to directly document exposures from heavy truck traffic, such as that associated with expansion of the warehouse industry, would be valuable to support regulation.
- Be aware of the many and widely varying environmental problems in communities across California, from refineries, coal transport and a crematorium in Richmond; to foundry emissions in East Oakland; to freeway expansion in Huntington Park; and more.
- Look for ways to amplify the impact and reach of Program efforts even in the face of limited resources by applying strategic thinking and developing community partnerships.
- As part of environmental justice best practices:
 - Be aware of the impact of race as a determining factor in health, housing, schooling and other outcomes.
 - Embrace the precautionary principle.
 - Look at how to examine blood and urine in a way that gives rise to new policies that are currently not being contemplated for addressing issues in impacted communities.
- Ensure biomonitoring data are made public, to help support enforcement and litigation efforts.
- Consider a broad range of issues to target with biomonitoring, including:
 - Lead in drinking water in schools.

- Toxic impacts of climate change.
- Widespread plastics pollution.
- Nanoparticles, such as nanosilver particles.
- Nitrate co-occurring with uranium, increasing the bioavailability of uranium.
- Radioactive water pollutants.
- Involve student researchers in biomonitoring studies in their communities, and respect their input and work. Check in with them along the way to ensure their needs are being met.
- Biomonitoring California's ongoing struggle for adequate and sustainable funding, along with the competing needs for funding to address other community priorities, was acknowledged. Temporary funding was found to support the Program's recent environmental justice activities, but this may serve only to open a crucial conversation with communities that then has to be shut down.

Possible Topics for 2018 SGP Meetings - *Propose possible future SGP topics by sending an email to: biomonitoring@oehha.ca.gov*

