

November 18, 2015 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 18, 2015 in Richmond. This document briefly summarizes the Panel's input and recommendations on each agenda item and related public comments. Visit the [November 2015 SGP meeting page](#) to access the presentations, other meeting materials, and the meeting transcript.

Prior to beginning the meeting, SGP members, State staff, and attendees took a few moments to pay tribute to the memory of past SGP member Dr. Julia Quint.

Highlights from State Biomonitoring Programs – CDC Awardees

Moderators: Lovisa Romanoff, M.S., M.P.H., Deputy Director and Amy Mowbray, Ph.D., Associate Director for Policy, Division of Laboratory Sciences, National Center for Environmental Health, Centers for Disease Control and Prevention (CDC)

Background information: [State Biomonitoring Program Profiles \(November 2015\)](#)

Presentations from CDC and CDC State Biomonitoring Grant Awardees:

[CDC National Biomonitoring Program](#)

[Biomonitoring California](#)

[Massachusetts](#)

[New Jersey](#)

[Four Corners States Biomonitoring Consortium](#)

[Virginia](#)

[New Hampshire](#)

The Panel, CDC staff, state program representatives, and audience members discussed issues important to state biomonitoring, including:

- Approaches for communication and integration across state biomonitoring programs.
 - CDC facilitates regular communication among funded states using approaches such as conference calls and in-person meetings to discuss analytical and programmatic issues.
 - CDC and the Association of Public Health Laboratories (APHL) are collaborating on developing the National Biomonitoring Network, as a further means for sharing and integrating across state programs.

- Unique priorities of each state program and studies being conducted under their respective CDC Cooperative Agreements (see the state program profiles and presentations above for more details).
- Importance of biomonitoring programs for establishing state-specific baseline levels to evaluate exposure trends, help identify high-risk communities, and inform state policy decisions and public health recommendations.
- Potential for state level biomonitoring data to support analysis of regional variability, which is not currently feasible with existing national data because regional data are not released by the national program.
 - CDC is exploring options to facilitate comparison of biomonitoring data across states.
- Choice of comparison levels, including health-based levels and efforts to develop those for chemicals without established clinical levels of concern.
- Importance of obtaining accurate questionnaire data on exposure to tobacco smoke, including secondhand smoke, and/or measurement of tobacco-specific biomarkers.
- Challenges faced by the Four Corners States Biomonitoring Consortium in pursuing biomonitoring studies with tribal populations, such as the Navajo Nation, which spans across US state borders.
- Approaches for biomonitoring children and experiences of Massachusetts and New Hampshire programs.
 - For example, Massachusetts has used coloring books to describe the biomonitoring process to children as part of obtaining assent from children.

Afternoon Session on Results Return

Moderator: Sara Hoover, M.S., Chief, Safer Alternatives Assessment and Biomonitoring Section, Office of Environmental Health Hazard Assessment (OEHHA)

[Educating Participants About Exposure to Environmental Chemicals: What Does the Science Say?](#)

Presentation: Rachel Morello-Frosch, Ph.D., M.P.H., Professor, Department of Environmental Science, Policy and Management and School of Public Health, University of California, Berkeley

[Evaluation of Results Return Materials for Biomonitoring Exposures Study \(BEST\)](#)

Presentation: Duyen Kauffman, Health Program Specialist and Results Return Coordinator for Biomonitoring California, California Department of Public Health (CDPH)

Panel members, guest speakers, and audience members discussed a wide range of topics related to best practices for results return, including:

- The importance of engaging the community, particularly study participants, in the development and refinement of results return materials.
 - Usability testing and focus groups with researchers, study participants and/or community members were highlighted as useful strategies for developing results return materials that are informative and understandable.
 - Interviewing or surveying study participants after they receive their biomonitoring results is also important for evaluating the results return process and informing future efforts.
 - Community meetings can be a way to extend the usefulness of results return materials and expand the understanding of the study results beyond only study participants. Returning results to participants prior to holding community meetings to discuss results was noted as a best practice.
- Influence of various factors such as educational attainment level, socioeconomic status, and awareness of environmental chemical exposure on participant understanding of biomonitoring results.
- Specific elements of results return materials, including:
 - Context for biomonitored levels by comparing to appropriate National Biomonitoring Program reference levels or state or federal health-based levels, when available.
 - Interpretation of comparisons, including an explanation that similarity between an individual's chemical levels and national values does not imply safety.
 - Information on how to reduce exposures to chemicals, and how best to distinguish between chemical exposures that can be reduced through individual actions and those that are more difficult to reduce and will likely require changes in policy and regulation.
 - Explanation that biomonitoring studies provide exposure information and are not designed to draw conclusions about individual level health effects.
 - Information on possible health concerns associated with exposure to chemicals at environmentally relevant levels, including how to address possible cumulative effects.
 - Consistent health effect language across fact sheets for chemicals with similar health effects has been used by Biomonitoring California to indicate possible cumulative effects; additional approaches will be investigated.
 - As a related issue, health effect-based groupings, such as mammary carcinogens, were also discussed as a possible approach for choosing chemicals to biomonitor.

- Approaches for handling the issue of timeliness of results return, including:
 - Explaining to participants the time it takes to complete accurate biomonitoring analyses, and maintaining open lines of communication regarding study progress.
 - Sending multiple, smaller packets of results as they become available.
 - Engaging in intervention studies with results return occurring after each stage.
 - Using electronic results return.
- Potential advantages and challenges of using an electronic interface for results return, like DERBI¹ including:
 - Advantages: Improved ease and efficiency of revising materials for different studies and faster communication of biomonitoring results to participants.
 - Challenges: Participant literacy and information security concerns.
- Experiences with obtaining samples from and returning results to children.
- Possible alternative approaches for the format of results return packets, such as putting chemical results in order of highest to lowest measured levels or using different colors to flag results that are higher than a median level.
 - The potential for these approaches to over interpret results and be misleading was discussed. For example, the median is not a useful benchmark for flagging potential concerns.
- Increasing receptiveness of Institutional Review Boards (IRBs) toward studies that include results return to participants and the helpfulness of citing Biomonitoring California's legal mandate.

Potential Priority Chemicals:

>> *ortho*-Phthalates

[Document: *ortho*-Phthalates](#)

>> Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs)

[Document: Perfluoroalkyl and Polyfluoroalkyl Substances \(PFASs\)](#)

[Presentation:](#) Laurel Plummer, Ph.D., Staff Toxicologist, OEHHA

Panel members:

- Unanimously voted to recommend adding “*ortho*-phthalates” to the list of priority chemicals for Biomonitoring California.
- Unanimously voted to recommend adding “perfluoroalkyl and polyfluoroalkyl substances (PFASs)” to the list of priority chemicals for Biomonitoring California.

¹ DERBI: Digital Exposure Report-Back Interface, a digital tool developed by Silent Spring Institute

Public comment:

Dr. Veena Singla of the Natural Resources Defense Council spoke in favor of recommending *ortho*-phthalates and perfluoroalkyl and polyfluoroalkyl substances (PFASs) as priority chemicals, highlighting widespread use and likelihood of exposure for both classes.

[Announcement on 2016 SGP Agenda Planning](#)

Possible themes and topics for 2016 SGP meetings included:

- Evaluating consumer product chemicals, including UV stabilizers
- Addressing environmental justice issues as a focus for the Program
- Discussing approaches for and challenges in biomonitoring children
- Considering current use pesticides, including school site and pet pesticides
- Identifying worker populations, such as nail salon workers, for possible study
- Designing biomonitoring studies for chemical exposures from synthetic turf
- Discussing selected Biomonitoring California projects in detail

