



Consideration of Digital Results Return for Biomonitoring California

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Kiera Melton
Environmental Health Investigations Branch
California Department of Public Health

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Overview

Results Return Overview

- Legislation requires that results be available to participants
- 90% of our study participants ask to receive their results
- Ongoing discussions on best practices with other state biomonitoring programs as part of the National Biomonitoring Network

Signed Consent

This is the consent form. My signature below means:

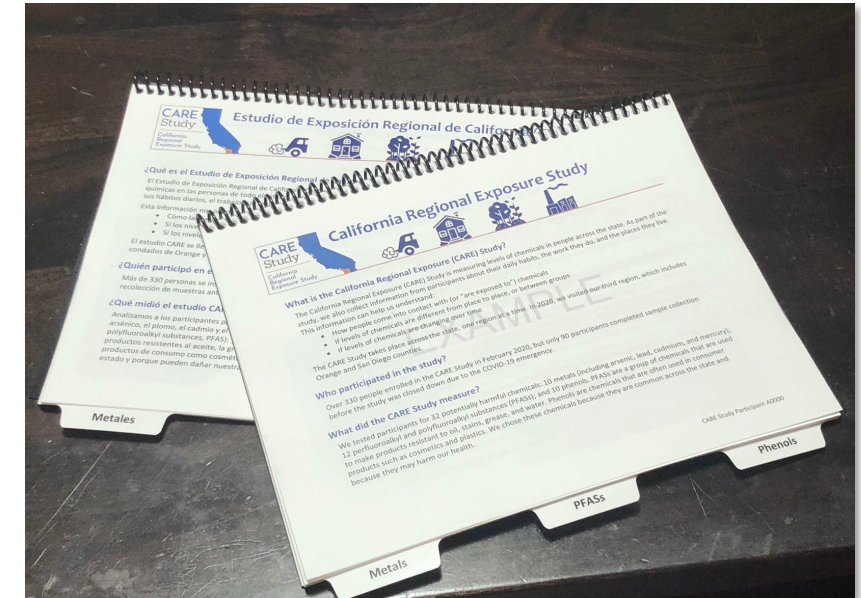
1. I am 18 years or older and a resident of California.
2. I have read this consent form and understand the study, including its possible benefits and risks.
3. My questions about the study have been answered.
4. I agree to give samples of my blood, and to respond to a questionnaire.
5. I understand that volunteering for the study means that Biomonitoring California, and any other researchers they work with, may use my de-identified questionnaire answers for a variety of studies.
6. If I change my mind, I may withdraw from the study at any time and have my samples destroyed.
7. I hereby voluntarily consent to participate in the study as described above. I have received copies or can print copies of this eight-page consent form that includes the "Research Participants' Bill of Rights."

By signing this consent form:

- I grant permission for investigators to collect and analyze my blood to learn more about chemical exposures.
Yes ____ No ____
- I grant permission for investigators to store and analyze my blood samples for up to twenty years after the date of collection.
Yes ____ No ____
- I want to receive my individual results.
Yes ____ No ____
- I prefer to have my results sent to me via (please check one):
E-mail/Electronically ____ US Mail ____

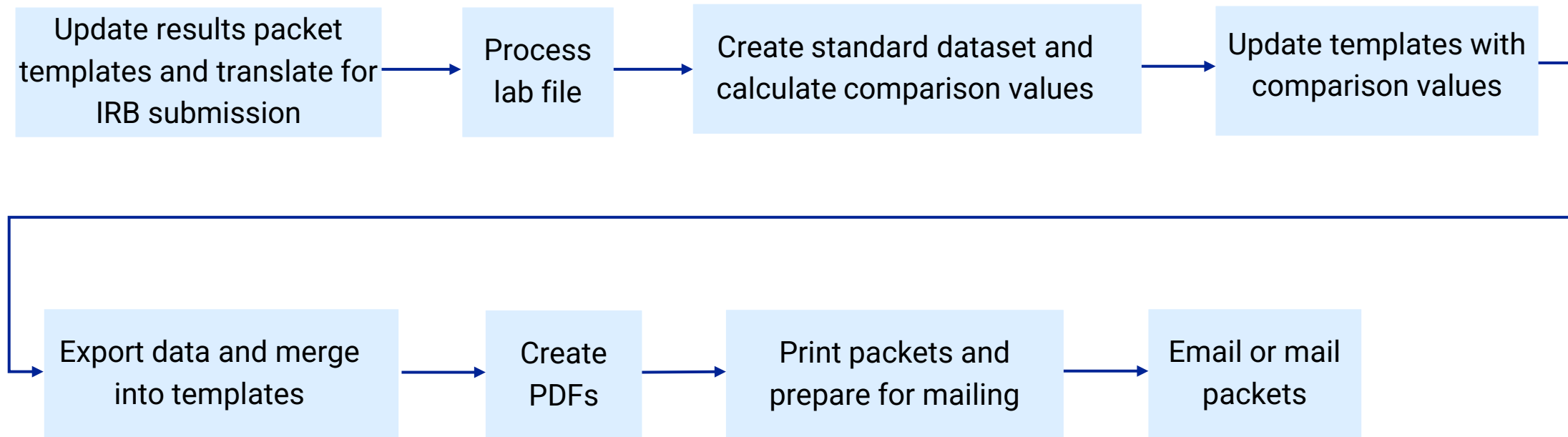
Results Return Overview

- Current paper results return materials include:
 - Cover letter
 - Results packet
 - Chemical fact sheets and other resources
- Provided in participant's preferred language
- Evaluated and tested for continuous improvement



CARE-LA participant quote: “The whole study and receiving my test result information was invaluable.”

Producing Our Results Return Packets



Challenges of Current Results Return

- For Staff
 - Layout/design of materials
 - Management and logistics of confidential results return
- For Participants
 - Length of packet
 - Results presented mostly as tables, limited use of figures/ graphs



Digital Exposure Report Back Interface (DERBI)

- Silent Spring Institute
- Interactive web-based platform
- Personalized participant reports
- More than 25 studies have used or are in the process of using DERBI

Sample Collection
for Biomonitoring
Method
Development and
Refinement



Home

Your Results

- Polycyclic Aromatic Hydrocarbons (PAHs)

Table of Your Results

- How to Read Your Table of Results

Overall Study Results

About the Study

Common Questions

Glossary

Download Your Report

Overview

Thank you for participating in our method development study in 2022 to help us improve our laboratory methods. Your results for PAHs can be viewed here until **June 30th, 2026**.

Chemicals We Found In Your Samples

Your sample had detectable levels of at least one **PAH** metabolite.

What do these results mean for my health?

Finding these chemicals in your urine samples does not necessarily mean they are affecting your health. Almost everyone has some level of PAH metabolites in their body.

For most of the chemicals we measure, there is not enough scientific information available to know how much can be in anyone's body without causing harm. For that reason, we cannot tell you what levels of these chemicals in urine would be considered safe. In general, it is beneficial to have the lowest levels possible of these chemicals. We have included information on your results page about ways to reduce exposures to PAHs.

If you would like to talk to study staff about your results or anything else in this packet, please call us at (510) 367-4166 or email us at BiomonitoringCalifornia@cdph.ca.gov.

Overall Study Results

Our results show that all participants were exposed to at least one PAH.

[Read more](#)

Comparison to Current Results Packets

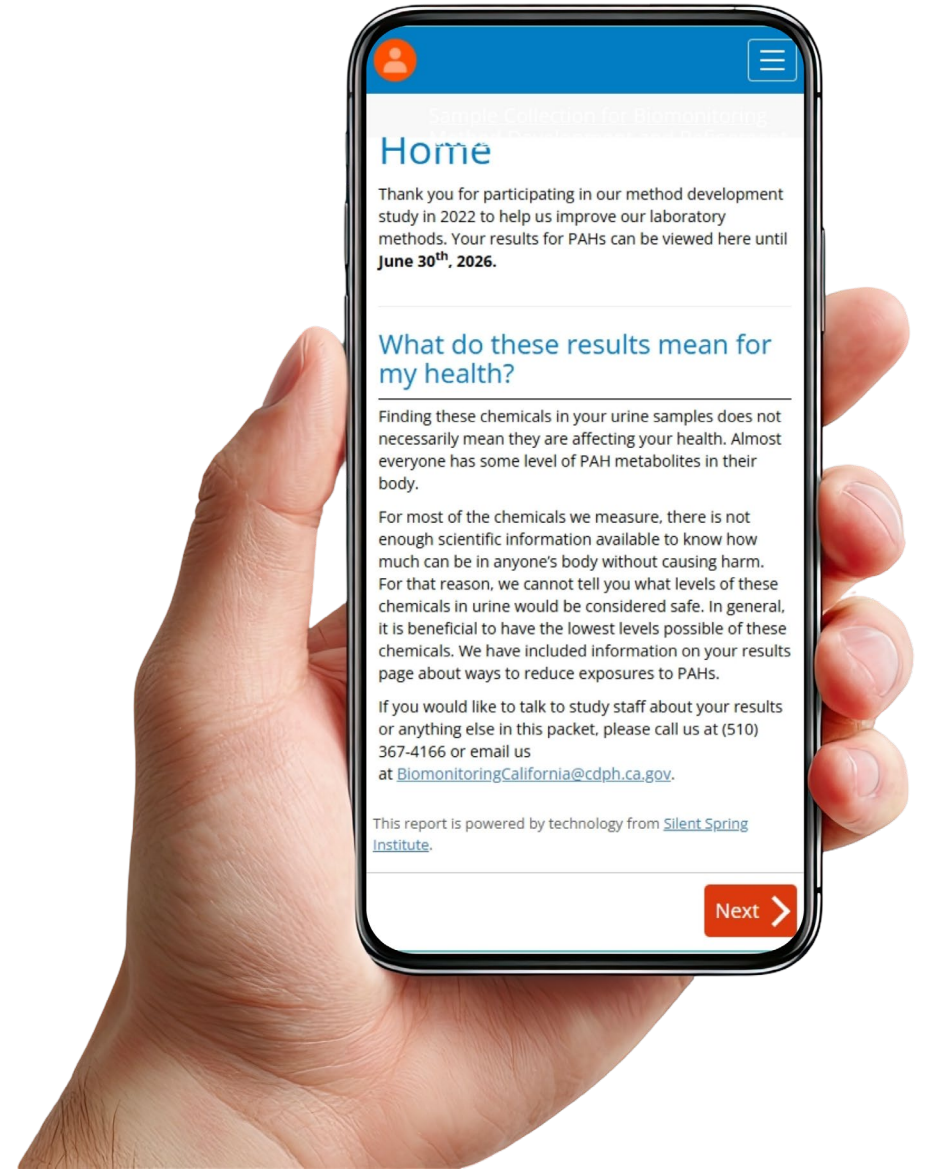
Data Processing

- Initial steps are the same
- DERBI
 - Reduces steps for processing data and updating results return templates
 - Requires files with specific formatting for upload



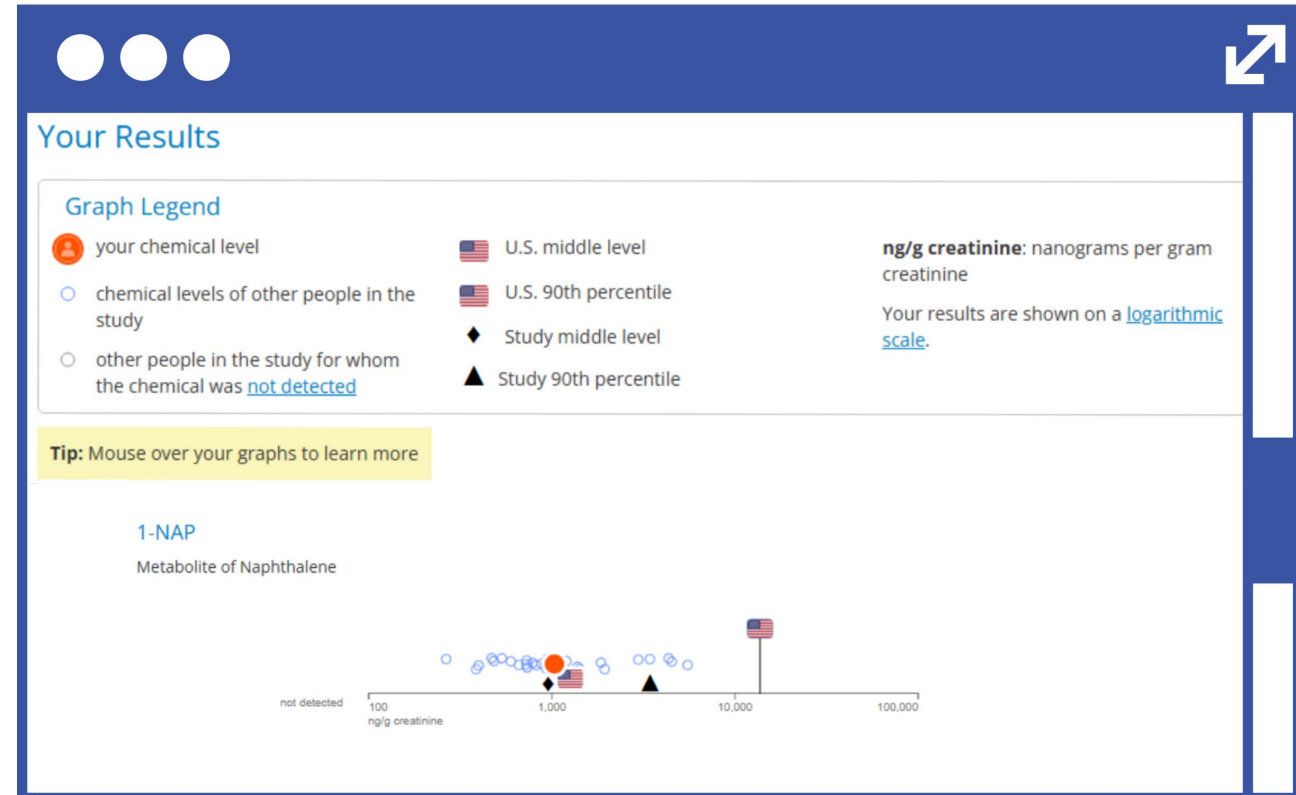
Materials Development

- Development of information for materials is similar
- DERBI
 - Preset pages and fields to upload content
 - Quicker editing and addition of materials
 - Can be duplicated and translated to participant's preferred language



Results Delivery

- Addition of interactive elements:
 - More images and visual representation of data
 - Active links for participants to click
- Returning results all at once vs. multiple updates
- Elimination of some steps reduces staff time



Evaluation Feedback

Results return evaluation project with University of California, Merced

Feedback

- Improved user-friendliness
- Challenges:
 - Navigating the platform to access information
 - Using smartphones
 - Interactive elements on graphs



Takeaways and Next Steps

Takeaways

- DERBI has an initial learning curve
- Staff
 - Ease of updating and adding materials
 - Time savings
- Participants
 - Enthusiasm for visual design and interactive potential from focus group
 - Quicker access to results
 - Ability to create and download pdfs for participants who request paper mailing



Next Steps

- Continue to:
 - Assess the feasibility of long-term use of DERBI
 - Gain experience using DERBI platform
 - Work with Silent Spring Institute to customize platform
- Consider how to best:
 - Communicate what the results mean to participants
 - Use participant suggestions to improve results return materials and delivery methods



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