



ECHO

Environmental influences
on Child Health Outcomes

**A program supported by the NIH
in the NIH Office of the Director**

Pre-Application Webinar Overview of ECHO Cohort Consortium

<https://www.nih.gov/research-training/environmental-influences-child-health-outcomes-echo-program/echo-cohort-funding-opportunity-announcements>

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Pre-Application Webinar Purpose

- History and future of the ECHO Cohort Consortium
- Orientation to the funding opportunity announcements





History of ECHO Cohort Consortium



ECHO Mission

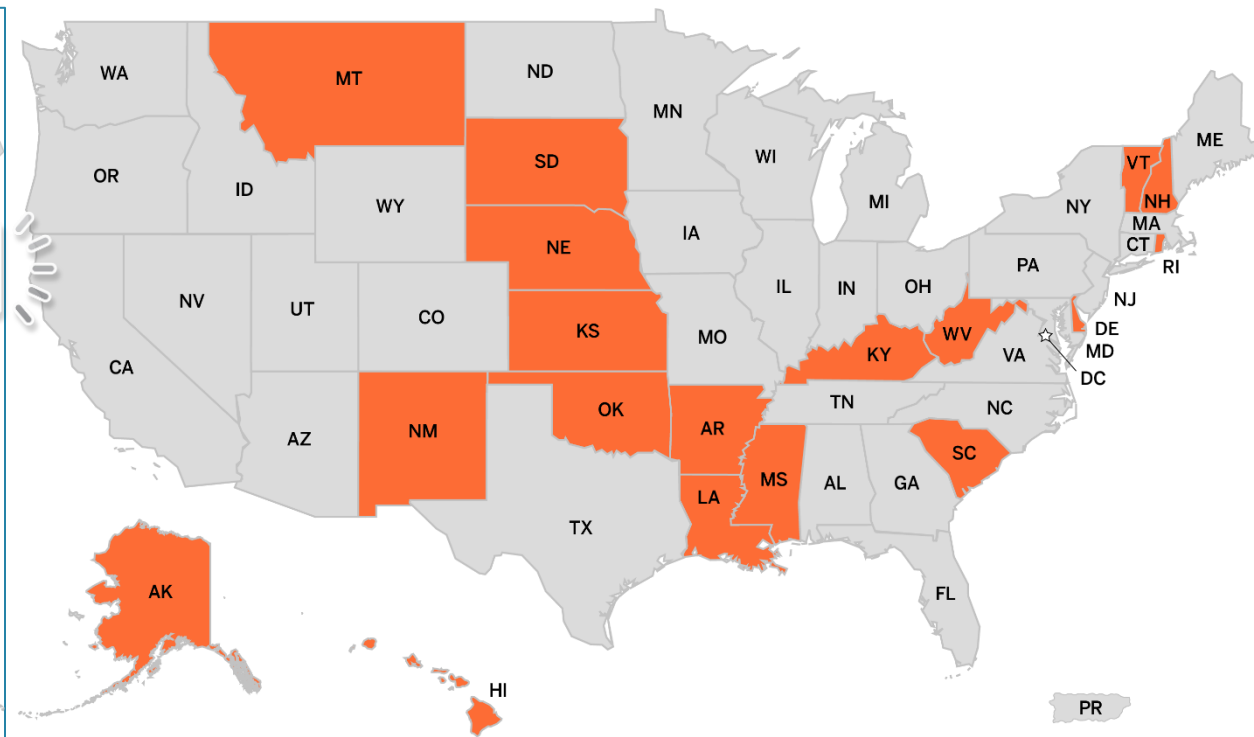
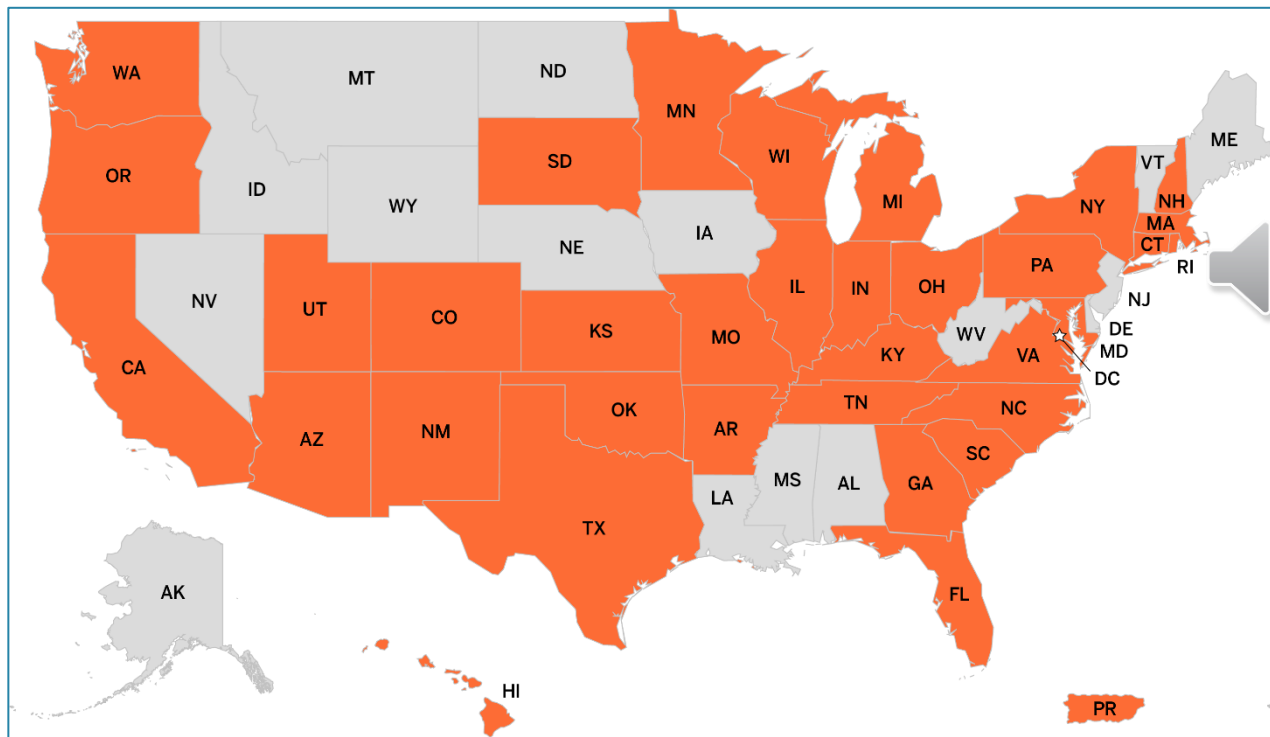
Enhance the health of children for generations to come



Observational & Intervention Research

ECHO Cohort Consortium

ECHO IDeA States Pediatric Clinical Trials Network



44 states, DC, PR



ECHO Cohort Consortium Overall Scientific Goal

Answer **solution-oriented questions** about effects



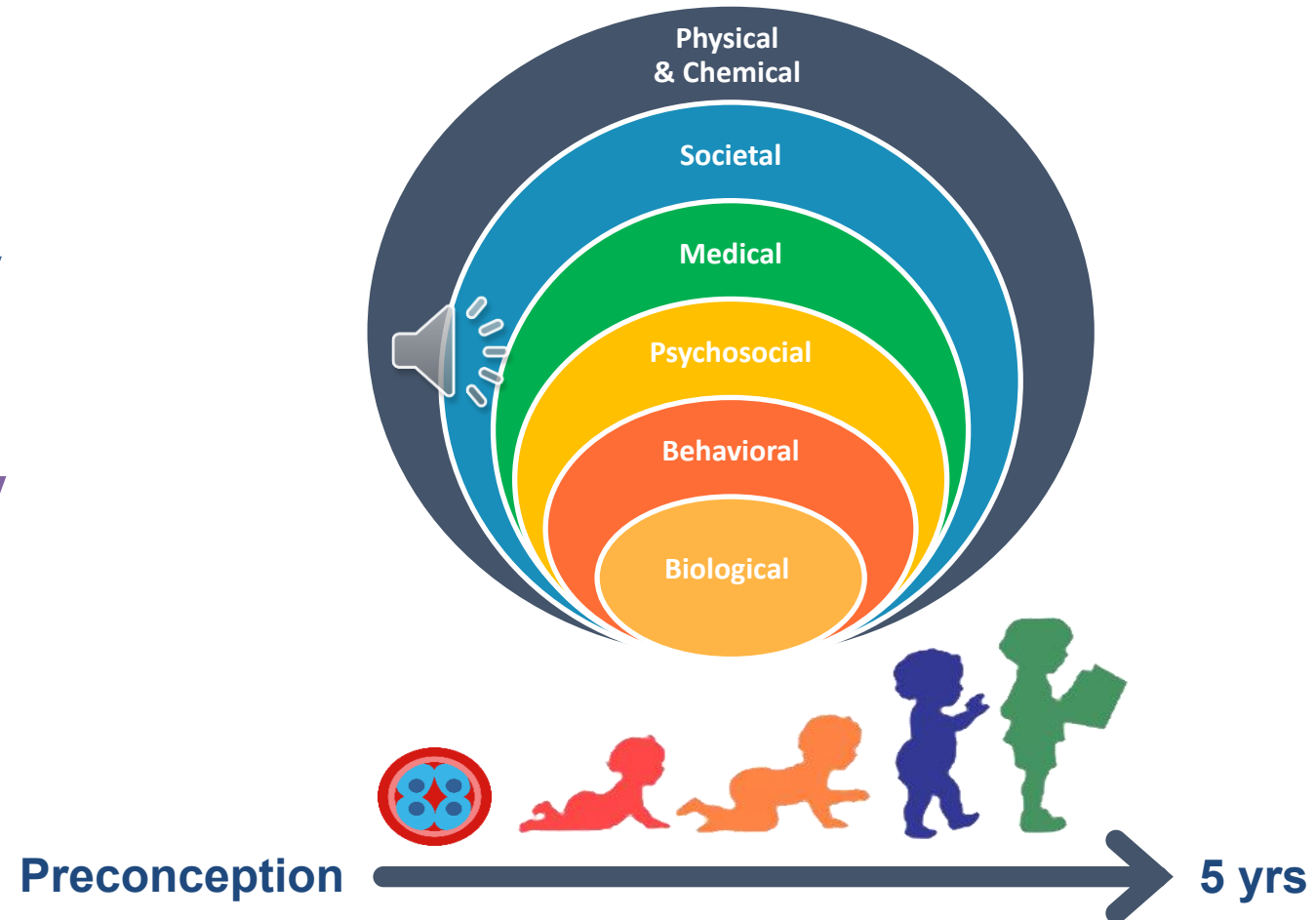
broad range of **early environmental exposures**
on

child health and development



Broad range of early environmental exposures

From
society
to
biology



Child Health and Development

PRE-, PERI-
AND POSTNATAL



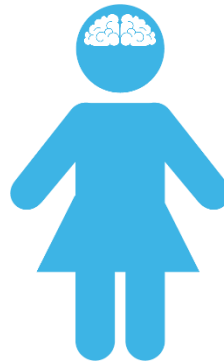
UPPER AND
LOWER AIRWAY



OBESITY



NEURO-
DEVELOPMENT



POSITIVE HEALTH



5 key pediatric outcomes with high public health impact

Throughout childhood and adolescence





ECHO-wide Cohort

2016-2023

Weaving together
data from 69 ongoing
maternal-child cohort
studies

ECHO-wide Cohort Data

- Data from 103,000+ participants from 69 cohort studies
 - ~62,000 children
 - ~32,000 active follow up (growing)
 - >78,000 biospecimens
- 900+ publications 
- Nationwide research resource
 - Harmonized existing measures & standardized new measures
 - Common data collection protocol
 - echochildren.org/about/echo-program-protocol/
 - De-identified data available to broad scientific community





The Future of ECHO



Purpose of the Next Phase of ECHO?

FY 2023-2029

Extend and expand the ECHO Cohort [formerly ECHO-wide Cohort] to further investigate the roles of a broad range of early exposures from society to biology, including the preconception period, on ECHO's five key child health outcomes among diverse populations.



Extend and Expand ECHO Cohort

- Extend reach by following nearly 40,000 existing ECHO children and families
- Expand to include 20,000 women and partners recruited during pregnancy with follow-up of their children
 - Preconception pilot of 10,000 couples at moderate to high probability of subsequent pregnancy
- Combined strategies yield large, diverse cohort from preconception through adolescence




Potential New/Expanded Scientific Opportunities

- Health disparities and health equity
 - Early origins of disparities, which widen from childhood onwards
- Social determinants of health
 - e.g., stress biology
- Natural experiments or health crises
 - COVID follow-up, ready for next crisis
- Exposure to novel chemicals
 - Pregnant women and children exposed to many uncharacterized
- Health trajectories
 - Identifying early critical periods
- Resilience, reversibility
 - Puberty as sensitive period
- Biological pathways
 - Epigenetics, metabolomics/exposomics
- Preconception exposures
 - Novel
 - Social factors, behaviors, weight change, chemicals, etc.

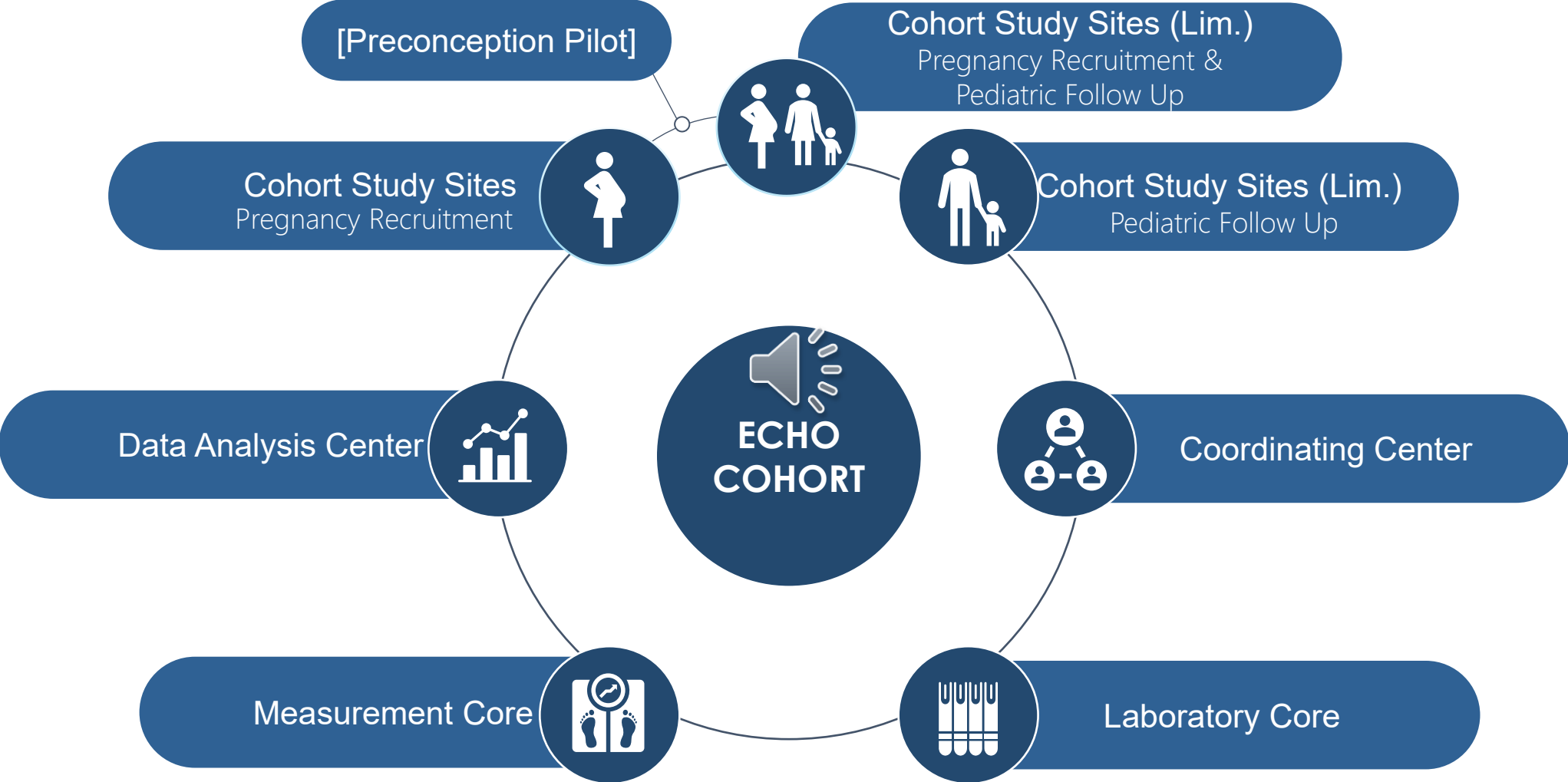


Cross-cutting Themes

- Diversity/Equity/Inclusion/Accessibility
 - Participants, workforce, science
- Solution-oriented Research
 - Informs programs, policies, practices
- Stakeholder Engagement 
 - Front end and back end



ECHO Funding Opportunity Announcements (FOAs)



Key Features of ECHO Cohort Consortium

- Team science
 - Mutual respect, cooperation, and collaboration with all consortium members
- Single IRB
- Standardized implementation of ECHO Cohort Protocol (please refer to: [Draft ECHO Cohort Data and Biospecimen Collection Protocol](#))
- Centralized data capture, e.g., REDCap Central
- No Cohort Study Site-specific analyses or science
- Commitment to Diversity, Equity, Inclusion, and Accessibility



Plans for Enhancing Diversity

- Plan for Enhancing Diverse Perspectives (PEDP):
 - Applications will include a one-page summary of strategies to advance the scientific and technical merit of the project through expanded inclusivity.
 - Applicants should provide a holistic and integrated view of how enhancing diverse perspectives is viewed and supported throughout the application.
 - Reviewers will evaluate applications according to multiple review criteria (Significance, Investigator(s), Innovation, Approach, and Environment), and can incorporate elements with relevance to any of these criteria.
- For further guidance, FAQs, key elements, and examples, see:

<https://braininitiative.nih.gov/about/plan-enhancing-diverse-perspectives-pedp>

- **NIH will withdraw applications lacking a PEDP attachment without review.**



Shared Accountability and Governance

- Shared accountability model to achieve consortium goals
- A Steering Committee will set strategic research priorities and annual scientific objectives
- NIH will establish consortium-level operational objectives
- An Operations Committee will enable achievement of scientific priorities and operational objectives



FOA Presentations

See Presentations for each ECHO FOA: [NIH ECHO website](#)

1. Overview
2. Pregnancy Cohort Study Sites (UG3/UH3) [RFA-OD-22-017](#)
3. *Limited Competition*: Pregnancy and Pediatric Cohort Study Sites (UG3/UH3) [RFA-OD-22-018](#)
4. *Limited Competition*: Cohort Study Sites for Pediatric Follow Up (UG3/UH3) [RFA-OD-22-019](#)
5. Laboratory Core (U24) [RFA-OD-22-016](#)
6. Measurement Core (U24) [RFA-OD-22-020](#)
7. Coordinating Center (U2C) [RFA-OD-22-021](#)
8. Data Analysis Center (U24) [RFA-OD-22-022](#)



Essential Information

- It is essential that applicants for ECHO Funding Opportunity Announcements (FOAs) familiarize themselves with the companion FOAs, including the goals and requirements for the Cohort Study Sites, Coordinating Center, Data Analysis Center, Measurement Core, and Laboratory Core and how they function together within the ECHO Cohort consortium.
- Read the FOAs carefully. The application instructions and review criteria are aligned with each other, and with the FOA goals, and will be the basis for peer review and programmatic funding decisions.
- All required information is contained in the FOAs. The recorded webinars provide a summary but do not substitute for the FOAs.



Key Dates

- Letter of Intent Due Date: October 21, 2022
- Earliest Submission Date: October 21, 2022
- Application Due Date: November 21, 2022
- Scientific Merit Review: February 2023
- Advisory Council Review: May 2023
- Earliest Estimated Award Date: August 1, 2023
- Earliest Estimated Start Date: September 1, 2023



Questions

- Please send questions to:
 - NIHKidsandEnvironment@od.nih.gov
 - Put RFA number in the subject line
 - For questions related to a specific FOA, you may send them to both the address above and to the program officer listed in that FOA's webinar.
- NIH will answer frequently asked questions in the FAQs area on the NIH ECHO website:
 - <https://www.nih.gov/research-training/environmental-influences-child-health-outcomes-echo-program/echo-cohort-funding-opportunity-announcements>





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