



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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OFFICE OF  
RESEARCH AND DEVELOPMENT

J. Roult Reigart, MD  
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Dear Dr. Reigart:

Thank you for your letter of October 23, 2000, to the Administrator transmitting the Environmental Protection Agency (EPA) Children's Health Protection Advisory Committee recommendations for a *Children's Environmental Health Data Needs and Right-to-Know Blueprint*. I have been asked to provide EPA's response to the Blueprint. Several of EPA's Offices, including the Office of Research and Development (ORD) and the Office of Prevention, Pesticides, and Toxic Substances (OPPTS), are implementing programs that address various components of the Blueprint.

Since 1995, it has been EPA policy to explicitly take into account health risks to children and infants from environmental hazards when conducting assessments of environmental risks. In EPA's 1996 *National Agenda to Protect Children's Health From Environmental Threats*, EPA articulated a national policy to "ensure that all standards EPA sets are protective of the potentially heightened risks faced by children, and that the most significant current standards be re-evaluated as we learn more." Over the last five years, EPA has expanded the focus on children's issues in its regulatory programs, and much of the EPA Human Health Risk Assessment Research Program has been directed toward children's issues.

EPA's direction for its Children's Health Research Program is outlined in the ORD *Strategy for Research on Environmental Risks to Children* ([www.epa.gov/ORD/WebPubs/final/](http://www.epa.gov/ORD/WebPubs/final/)), which was released in October 2000. The Strategy addresses many of the recommendations appearing in the Blueprint. ORD is currently developing multi-year research plans to implement its research strategies. The Blueprint contains many insightful recommendations that I will transmit to the work groups that are developing the research plans.



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A key recommendation of the Blueprint is that "EPA in conjunction with the Department of Health and Human Services and other government agencies should monitor, track, and annually report environmental hazards, childhood exposures, biomonitoring data and childhood health conditions that may be related to the environment....these environmental and health data sets need to be coordinated and linked so that the relationship between environment and children's health can be ascertained."

EPA agrees that the linkage of federal databases is a goal toward which we should strive. ORD is taking steps in that direction by developing a data system to provide EPA data to researchers and the public in a centralized, easy-to-use format, the Environmental Information Monitoring System (EIMS). Data from the National Human Exposure Assessment Survey (NHEXAS) will be made available to the public through EIMS, for example. ORD is working with the National Center for Health Statistics (NCHS) of the Centers for Disease Control and Prevention (CDC) to obtain the data from the National Health and Nutrition Examination Survey (NHANES) IV for analysis. We will continue to look for opportunities to collaborate with other Federal agencies and to make full use of data collected under their programs.

The U.S. Task Force on Children's Environmental Health and Environmental Safety, a multi-agency group chaired by the Secretary of the Department of Health and Human Services and the EPA Administrator, is working to coordinate research across the Federal government. One outcome of the Task Force activities is the development of a data base of Federal research, the Children's Environmental Health & Safety Inventory of Research (CHEHSIR), which is available on the Internet at [www.epa.gov/chehsir](http://www.epa.gov/chehsir). ORD scientists are leaders in the Task Force work group that is developing a Longitudinal Study of Children's Health referred to in the Blueprint. Through the Task Force, EPA is working to ensure that data on environmental exposures and health outcomes are collected that will allow us to better assess children's health across the nation. One aspect of the study is the creation of a core protocol that will ensure collection of a standard data set on a large cohort of children and parents, regardless of which agency is sponsoring the data collection.

Under the Government Performance and Results Act (GPRA), EPA is developing indicators to measure the effectiveness of its programs in achieving favorable public health outcomes. To support this effort, ORD has initiated a new program, Evaluating Public Health Outcomes of Environmental Decisions. The long-term goal of the program is to provide the scientific understanding and tools to assist the Agency and others in evaluating the public health effectiveness of environmental decisions. ORD plans to develop a set of environmental health indicators and a suite of technical tools, systems, and methods to assist EPA and others in evaluating the public health effectiveness of environmental decisions. I will provide your recommendations to the group that is designing the program for consideration as a case study in indicator development.



EPA is currently preparing a report of environmental indicators most likely to affect the health and well-being of children. This report, expected to be completed in December 2000, will focus on children's exposures to a range of environmental contaminants in air, water, soil, and food; trends in children's blood lead levels; and childhood diseases that may be environmentally mediated, including asthma, bronchitis, and childhood cancer. It is our hope that this report, the first such report to highlight environmental indicators that may affect children's health, will help to shed light on our nation's success in reducing environmental risks to children while identifying where more work is needed. In addition, through our continued participation in the Federal Interagency Forum on Child and Family Statistics, we will seek inclusion of these peer-reviewed indicators in the future Forum reports.

ORD plans to analyze data from NHANES, NHEXAS, and other exposure and epidemiology studies. As mentioned above, ORD plans to obtain data from NHANES IV and begin analysis soon. We have developed a strategy for analysis of NHEXAS data, *Strategic Plan for the Analysis of the National Human Exposure Assessment Survey (NHEXAS) Pilot Study Data*, which received a positive review from EPA's Science Advisory Board and will be implemented beginning this year. ORD's Science To Achieve Results (STAR) extramural grants program will develop state-of-the-science papers summarizing the results of the extramural Children's Health Program. ORD's long-term plans call for integrated analyses of data on children's exposure and health outcomes across many studies as research results become available.

ORD proposed funding initiatives for 2002 to begin the full NHEXAS study [re-titled the National Human Exposure Monitoring Survey (NHEMS)] and the Interagency Longitudinal Birth Cohort Study. All EPA initiatives were held back this year to wait for the new administration to decide which initiatives to put forward. Meanwhile, in the Children's Health Act of 2000, Congress authorized \$18 million for the Longitudinal Cohort Study, with the National Institute of Child Health and Human Development as the lead agency. EPA is participating in designing the study and developing methods for its implementation.

ORD does not plan to seek additional resources to participate in NHANES. Rather, we have dedicated our efforts to the Longitudinal Cohort Study. Our hope is that we will be able to collect better data on environmental exposure and outcomes in children because EPA is participating in the initial study design than we can obtain from NHANES where the study design does not permit collection of much additional exposure data on environmental contaminants. We will continue to analyze NHANES data and encourage NCHS to collect more exposure data.

ORD agrees that an approach to systematically monitor environmental contaminants and related health outcomes would provide needed data on children's exposure. ORD does not have the resources in either personnel or funding to conduct such surveillance and will continue to rely on the Center for Disease Control (CDC) to provide these data and encourage CDC in its efforts to expand exposure monitoring.



EPA will continue to actively participate in the Federal Interagency Forum on Child and Family Statistics. EPA was instrumental in the 1999 Forum report's inclusion of an indicator on air quality. We plan to continue our efforts for inclusion of more measures on children's environmental health in future reports.

For water contaminants, EPA will continue comprehensive and systematic monitoring and reporting activities currently required under Federal laws, including the Unregulated Monitoring Contaminant Rule and the planned monitoring under the Stage 2 M-DBP rules (the Stage 2 Disinfectants and Disinfection Byproducts Rule and the Long Term 2 Enhanced Surface Water Treatment Rule).

EPA supports the inclusion of as many environmental substances as feasible in the National Report Card.

The Longitudinal Birth Cohort Study will be an ideal vehicle to identify contaminants in breast milk. The Blueprint will be provided to the working group that is designing the longitudinal study.

One component of the Blueprint involves identifying the chemicals to which children are exposed. EPA's Office of Prevention, Pesticides and Toxic Substances (OPPTS) is implementing the Voluntary Children's Chemical Evaluation Program (VCCEP). Under this voluntary program, EPA is working with a broad range of stakeholders to identify chemicals that may pose likely high exposures to children and which warrant consideration for additional needed toxicity testing to better understand children's health concerns. Chemicals to be evaluated under the VCCEP are being identified based on criteria that include the presence of chemicals in human tissues and fluids, particularly breast milk. The VCCEP will also address exposure assessment needs.

ORD is sponsoring studies of groups of children who are hypothesized to be highly exposed, including farm workers' children and children in inner cities. These include studies sponsored by the STAR program and research along the U.S.-Mexico border. We intend to compare exposures of these children to any available baseline data, such as data from NHANES. I will provide your recommendations for research among child farmworkers to our research planners and scientists so that we can look for opportunities for further study.

As part of its ongoing national assessment of the worker protection standard for agricultural workers, EPA's Office of Pesticide Programs (OPP) is addressing farm worker children's health issues and pesticide exposures. EPA will provide information on OPP's program in the Agency's response to your letter of October 20, 2000, on the subject of Worker Protection Standards for Child Agricultural Workers.

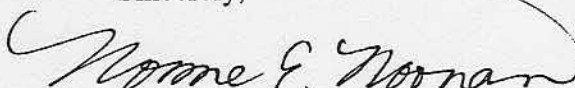
EPA has made considerable progress in developing procedures for assessing human health risks from both aggregate and cumulative exposure for organophosphorus pesticides. In September and again in December, 2000, EPA presented to the Federal Insecticide, Fungicide and Rodenticide Act Scientific Advisory Panel (SAP) various approaches for modeling aggregate and cumulative exposures to these pesticides. The SAP is an independent group of multidisciplinary scientific experts who provide advice to the Agency on public health and environmental impacts of pesticides. OPP will continue to pursue information and methods that will ensure that this important issue is fully addressed.

In its studies of children's exposure, ORD routinely collects indoor air data and attempts to collect personal air data when feasible. We are planning to evaluate data from NHEXAS and NHANES and will also consider the School Intervention Study, the Building Assessment Survey and Evaluation Study, and the Child Development Supplement of the Panel of Income Dynamics.

ORD is studying children's activity patterns to improve assessment of exposure through the mouthing pathway. We are videotaping children to learn about their activities, including hand-to-mouth and object-to-mouth activities and developing exposure models based on these data for use in risk assessment.

In this letter, I have attempted to summarize how the Agency is already addressing many of the recommendations of the Blueprint and where there are opportunities to begin work in other areas. I would like to share the Blueprint with a large group of EPA Scientists working in various areas. I am requesting that you provide an electronic version of the Blueprint to Karen Hammerstrom (202-564-3258) at [hammerstrom.karen@epa.gov](mailto:hammerstrom.karen@epa.gov) to allow for wide circulation among our scientific staff. Your continued advice and support is appreciated.

Sincerely,

A handwritten signature in dark ink, reading "Norine E. Noonan". The signature is fluid and cursive, with a large loop at the end of the last name.

Norine E. Noonan, Ph.D.  
Assistant Administrator