

NATIONAL CHILDREN'S STUDY

List of Methods Development Studies, Reviews/White
Papers, Workshops, and Publications from Methods
Development Studies and Working Groups

September 17, 2007 – Version 1.3

Methods Development Studies

Title

Alternative exposure measurement designs to improve epidemiologic study designs

Application of measure of spontaneous motor activity for behavioral assessment in human infants and young children for use in risk evaluation

Assessment of neurobehavioral toxicity in human infants and laboratory animals

Community involvement methods development for the NCS

Comparison/feasibility of collecting mother-infant hair/nail and buccal cell DNA/RNA samples (mail vs. health care professional)

Demonstration of low cost, low burden exposure monitoring strategies—birth cohort

Development and testing of informed consent materials

Draft Timeline: Prepare to implement a cohort study of children's environmental health

Evaluation of disposable diapers for quantitative measurements of pesticide metabolites and creatinine in urine samples

Exposures and health of farm worker children in California

Feasibility of primary care sites for subject observation and data collection

Final Interim Report: Candidate sites, machines in use, data storage and transmission methods: testing

Feasibility of 3D ultrasound data acquisition and reliability of data retrieval from stored 3D images

Final Report: National Children's Study (NCS) estimating subject burden for potential NCS measurements

Focus group phase I: eliciting community involvement, recruitment, and retention of subjects

Focus group phase II: follow up on recruitment and retention of subjects

Interim Assessment: Current understanding of the feasibility of the 3D ultrasound volume data set capture and evaluation: Testing feasibility of 3D ultrasound data acquisition and reliability of data retrieval from stored 3D images

Interim Report: Develop a community involvement strategy: Prepare to implement a cohort study of children's environmental health for the North Carolina Pilot Project

Methods Advancement for Milk Analysis (MAMA)

North Carolina Herald Study

Overall procedures protocol and patient enrollment protocol: Testing feasibility of 3D ultrasound data acquisition and reliability of data retrieval from stored 3D images

Pilot study to validate the extraction and analysis of DNA from non-invasive DNA sources for application in environmental epidemiology studies

Reliability and validity of injury reporting

Status Report: Begin to develop complete operations manuals for the cohort: Prepare to implement a cohort study of children's environmental health for the North Carolina Pilot Project

Tampa Asthmatic Children's Study (TACS)

Testing feasibility of 3-D ultrasound data acquisition and reliability of data retrieval from stored 3-D images

Time-integrated exposure measures to improve the predictive power of exposure classification for epidemiologic studies

Use of biomarkers of response for assessing potential sensitivity of children to adverse health outcomes from exposure to environmental chemicals: subproject 1

Use of biomarkers of response for assessing potential sensitivity of children to adverse health outcomes from exposure to environmental chemicals: subproject 2

Reviews/White Papers

Title

Administrative and other data on individuals and areas

Analysis of existing measures of children's health services and measures for the NCS

Assessment of existing linkages with local communities among potential research sites

Assessing social-emotional development in children from a longitudinal perspective for the National Children's Study: A compendium of measures

A systematic analysis of possible sampling strategies (Westat Report)

Background papers for sampling workshop

Battelle validation sampling design software—Beta release user's guide

Biomarkers database (phase I, II, and III)

Brief on estimated sample size of women needed to result in 100,000 live births

Characterizing anticipated mobility of the National Children's Study cohort

Discussion on utility of validation samples for the National Children's Study

Ethical (pro and con) issues related to inclusion of minor adolescents who are pregnant or at risk of pregnancy

Evaluation of exposure measurement methods and approaches for the NCS

Executive Summary: Characterizing anticipated mobility of the National Children's Study cohort

Executive Summary: Discussion on utility of validation samples for the National Children's Study cohort

Final Report: Biomarkers of environmental health and safety risks to children for use in a longitudinal cohort study—update

Final Report: Literature search on housing and neighborhood characteristics and conditions related to child health and development

Final Report: Use of 1) sensors and 2) Radio Frequency ID (RFID) for the National Children's Study

Final White Paper with Executive Summary: Measurement and analysis of exposures to environmental pollutants and biological agents

How retrospective information is collected and recalled

Identifying and selecting developmental measures

Lessons learned papers from the Children's Environmental Health Centers – Special issue of EHP

Longitudinal assessment of motor development in epidemiologic research for the National Children's Study

Measuring housing quality and characteristics

NCS IMS release strategy

Neuropsychological assessments in children from a longitudinal perspective for the National Children's Study

Potential impact of the NCS on priority health outcomes

Psychiatric assessments in children from a longitudinal epidemiologic perspective for the National Children's Study economic impact of the National Children's Study PowerPoint presentation

Strategies for minority recruitment in the National Children's Study: Issues of trust

Systematic review of core and potential hypotheses (Lewin Report)

Technology assistance in clinical information collection

Technology needs assessment and testing: Use of sensors and RFID for the NCS

Using the selected National Children's Study sampling area for the Age, Gene/Environment Susceptibility Study

White paper on evaluation of sampling design options for the National Children's Study

White papers on measurement of housing quality

Workshops

Title

Addressing rural children in the NCS

Ascertainment and diagnosis of birth defects: objectives, methods, and measurements

Assessing dietary intakes and patterns in women and young children: methodological issues with implications for the design of the NCS

Assessing the incidence and outcome of mild traumatic brain injury

Cancer and the NCS: opportunities and challenges

Collection and use of genetic information in the NCS

Community engagement

Dietary assessment in a prospective epidemiologic study for pregnant women and their offspring

Ethical issues in longitudinal pediatric studies

Exploration of day-specific probabilities of pregnancy

Expanding methodologies for capturing day-specific probabilities of conception workshop

Fetal and neonatal growth and development

Gene environment interaction and the regulation of behavior

Growth and body composition: objectives, methods, and measurements

Identification of measures for health care processes and outcomes in the NCS

Innovative technologies for remote collection of data for the National Children's Study workshop

International Cancer Consortium Workshop

International consultation on longitudinal cohort studies

Measuring parenting from an epidemiologic perspective

Measuring physical activity in the NCS

Measuring race/ethnic discrimination and racism from a developmental perspective

Measurement of Maternal and Fetal Infection and Inflammation Workshop

Media effects on child health and development

Medicines exposures: collection, coding, and classification

Methods for the assessment of asthma-related health outcomes

Neurobehavioral development and environmental exposures: measures for the NCS placental measurements

Psychosocial stress and pregnancy and infancy

Sampling design

Technology needs assessment and testing

Time-use data for the NCS

Use of herbal products in pregnancy, breastfeeding, and childhood

National Children's Study

Publications from Methods Development Studies and Working Groups

- Bradman, A., & Whyatt, R.M. (2005). Characterizing exposures to nonpersistent pesticides during pregnancy and early childhood in the National Children's Study: A review of monitoring and measurement methodologies. *Environmental Health Perspectives*, 11, 1092-1107.
- Brown, R.C., Dwyer, T., Daston, C., Krotoski, D., Li, Z., Linet, M.S., Olsen, J., Scheidt, P.C., & Winn, K.M. (2007). Cohort profile: The International Childhood Cancer Cohort Consortium. *International Journal of Epidemiology*. doi:10.1093/ije/dyl299
- Chapin, R.E., & Buck, G.M. (2004). Our once-in-a-lifetime opportunity. *Environmental Health Perspectives*, 112, 67-86.
- Cummings, P., Rivara, F.P., & Thompson, R.S. (2005). Ability of parents to recall the injuries of their young children. *Injury Prevention*, 11, 43-47.
- Dietrich, K.N., Eskenazi, B., Schantz, S., Yolton, K., Rauh, V.A., Johnson, C.B., Alkon, A., Canfield, R.L., Pessah, N., & Berman, R.F. (2005). Principles and practices of neurodevelopmental assessment in children: Lessons learned from the Centers for children's Environmental Health and Disease Prevention Research. *Environmental Health Perspectives*, 113, 1437-1446.
- Eskenazi, B., Gladstone, E.A., Berkowitz, G.S., Drew, C.H., Faustman, E.M., Holland, N.T., Lanphear, B., Meisel, S.J., Perera, F.P., Rauh, V.A., Sweeney, A., Whyatt, R.M., & Yolton, K. (2005). Methodologic and logistic issues in conducting longitudinal birth cohort Studies: Lessons learned from the Centers for children's Environmental Health and Disease Prevention Research. *Environmental Health Perspectives*, 113, 1419-1429.
- Eggleston, P.A., Diette, G., Lipsett, M., Lewis, T., Tager, I., McConnell, R., Chrischilles, E., Lanpher, B., Miller, R., & Krishnan, J. (2005). Lessons learned for the study of childhood asthma from the Centers for Children's Environmental Health and Disease Prevention Research. *Environmental Health Perspectives*, 113, 1430-1436.
- Fenske, R.A., Bradman, A., Whyatt, R.M., Wolff, M.S., & Barr, D.B. (2005). Lessons learned from the assessment of children's pesticide exposure: Critical sampling and analytical issues for future studies. *Environmental Health Perspectives*, 113, 1455-1462.
- Gilliland, F., Avol, E., Kinney, P., Jerrett, M., Dvonch, T., Lurmann, F., Buckley, T., Breyse, P., Keeler, G., deVilliers, T., & McConnell, R. (2005). Air pollution exposure assessment for epidemiologic studies of pregnant women and children: Lessons learned from the Centers for children's Environmental Health and Disease Prevention Research. *Environmental Health Perspectives*, 113, 1455-1462.

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- The National Children's Study Interagency Coordinating Committee. (2003). The National Children's Study of Environmental Effects on Child Health and Development. *Environmental Health Perspectives*, 111, 642-646.
- Kimmel, C.A., Collman, G.W., Fields, N., & Eskenazi, B. (2005). Lessons learned from the National Children's Study from the National Institute of Environmental Health Sciences/U.S. Environmental Protection Agency Centers for Children's Environmental Health and Disease Research. *Environmental Health Perspectives*, 113, 1414-1418.
- Needham, L.L., Ozkaynak, H., Whyatt, R.M., Barr, D.B., Wahg, R.Y., Naeher, L., Akland, G., Bahadori, T., Bradman, A., Fortmann, R., Liu, L.S., Morandi, M., O'Rourke, M.K., Thomas, K., Quackenboss, J., Ryan, P.B., & Zartarian, V. (2005). Exposure assessment in the National Children's Study: Introduction. *Environmental Health Perspectives*, 113, 1076-1082.
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- Yang, R.Y., Needham, L.L., & Barr, D.B. (2005). Effects of environmental agents on the attainment of puberty: Considerations when assessing exposure to environmental chemicals in the National Children's Study. *Environmental Health Perspectives*, 113, 1100-1107.

