

Children's Health Protection Advisory Committee

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October 6, 2015

Administrator Gina McCarthy
United States Environmental Protection Agency
1200 Pennsylvania Ave, NW
Washington, DC 20460

RE: CHPAC comments on the draft report, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*

Dear Administrator McCarthy:

Thank you for the opportunity to comment on the United States Global Change Research Program draft report, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*. CHPAC supports the administration's continued efforts to inform the public on the health impacts of climate change. In addition, we commend the interagency team on the extensive efforts that resulted in this excellent draft. We respond to the charge questions with an emphasis on prenatal and children's health.

Overall, the report is well written, documented, and presented. We are especially pleased that each chapter has a section devoted to populations of concern. This section will be extremely important in identification and protection of children's health and well-being due to climate related health impacts.

We outline several recommendations that we believe will significantly strengthen the report and further protect prenatal and children's health.

- We recommend that the contents of Chapter 9 be moved up and placed after chapter 1. Children make up approximately 25% of the US population and are especially vulnerable due to sensitive developmental periods. Therefore, we believe this chapter, which focuses on populations of concern, should be placed earlier to emphasize that these populations are most vulnerable to climate change impacts.
- Chapter 9 should better explain and highlight the dependence of children upon adults in the context of climate change impacts. While children may be most vulnerable and suffer a disproportionate burden of health impacts, they also cannot survive on their own and are directly dependent on adult caregivers. This concept is important and should be discussed in more detail.
- The adverse health impacts resulting from changes in quantity and quality of infant nutrition due to climate events should be discussed. Infant nutrition is critical for appropriate child growth and development and can be significantly hampered by climate changes due to changes in food supply

and its nutritional value or to decreased breast feeding if a mom/infant pair is separated in an extreme weather event.

- Children will have different health risks based on age and developmental stage, and these differential vulnerabilities should be discussed in each chapter. This point is mentioned briefly in Chapter 9 but should be discussed in more detail in the populations of concern section. Differential vulnerabilities of children can increase: 1) exposures and physiological responses to harmful environmental factors, 2) impacts from excessive heat exposure, and 3) susceptibility and exposure to varying/changing infectious disease patterns.
- The reference to “age” and “child” as a factor in vulnerability is vague throughout the report and should be clarified. Imprecise and inconsistent use of terms to describe “child” populations of concern can lead to confusion and lack of understanding about specific health impacts, for example, on pregnant women, fetal development, and infant development.
- The prevalence of asthma in children should be reviewed and updated in Chapter 3. The Centers for Disease Control “Summary Health Statistics for US Children: National Health Interview Survey, 2012” reports that approximately 6.8 million or 9.3% of all children have asthma. The interagency report currently states that only 4.8 million children have asthma.
- Given the relatively new scientific evidence linking environmental exposures to changes in reproduction and fertility, the report should highlight the need for additional research on the effects of climate change on reproductive and children’s health, including effects on gametogenesis, conception, epigenomic programming, and prenatal and postnatal development.
- The report should more clearly emphasize how children’s health risks are influenced by the environments where they live, go to school, and play. For example, children living in disadvantaged communities are more vulnerable to adverse health effects leading to significant health disparities.

Overall, this report is scientifically robust with excellent attention to the complexity of the issues surrounding climate change and human health. We commend EPA for its participation in this important public health effort.

We appreciate this opportunity to comment on this seminal report, and we thank you for your commitment to children’s health. CHPAC would be happy to help with the report’s dissemination and translation in the future.

Sincerely,



Sheela Sathyanarayana, M.D., M.P.H.
Chair

cc: Thomas Burke, Deputy Assistant Administrator, Office of Research and Development
Ruth Etzel, Director, Office of Children’s Health Protection
Janet McCabe, Acting Assistant Administrator, Office of Air and Radiation