

**Statement of Edward R.B. McCabe, M.D., Ph.D.
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United States Senate Committee on
Environment and Public Works

Hearing: The Frank R. Lautenberg Chemical
Safety for the 21st Century Act

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Chairman Inhofe, Ranking Member Boxer, and members of the Committee – thank you for the invitation to testify at this critical hearing. My name is Dr. Edward R. B. McCabe, and I am a pediatrician and geneticist serving as Senior Vice President and Chief Medical Officer of the March of Dimes Foundation, a unique collaboration of scientists, clinicians, parents, members of the business community and other volunteers affiliated with 51 chapters representing every state, the District of Columbia and Puerto Rico. I appreciate this opportunity to testify today on the critical issue of protecting Americans – specifically, vulnerable populations like pregnant women, children, and infants – from toxic chemical substances.

For over 75 years, the March of Dimes has promoted maternal and child health through activities such as funding research and field trials for the eradication of polio, promoting newborn screening, and educating medical professionals and the public about best practices for healthy pregnancies. Today, the Foundation works to improve the health of women, infants and children by preventing birth defects, premature birth and infant mortality through research, community services, education and advocacy.

The Toxic Substances Control Act of 1976

Broad consensus exists among stakeholders that the federal government should play a key role in the regulation of chemicals. Ensuring that Americans are not exposed to dangerous substances clearly represents a compelling national interest, and it requires expertise that the vast majority of individuals lack. It would not be reasonable to expect the average American to investigate the safety of chemicals, to avoid products that could possibly contain questionable or dangerous substances, or to obtain sufficient data from manufacturers and retailers to make informed decisions. The federal government is clearly the appropriate party to obtain data, to make evidence-based safety determinations, and to enforce uniform standards to advance the federal interest in protecting public health.

Unfortunately, our current federal framework for the regulation of toxic substances is badly antiquated. As you know, the Toxic Substances Control Act, passed in 1976, represents the last meaningful and comprehensive action taken in this field. The now-outdated rules constructed in 1976 still govern the introduction and use of chemicals today, even though the science has advanced in ways almost unimaginable at its passage.

Today, stakeholders agree that the old system simply does not work, and never did. Under the TSCA framework, even a substance as demonstrably deadly as asbestos could not be banned. In fact, in the nearly 40 years of its existence, TSCA has enabled the regulation only five chemicals or chemical classes out of more than 80,000 chemicals currently used in commerce. The current law requires industry to provide toxicity data if it possesses it, but does not compel anyone to produce such evidence if it does not exist, thus creating a perverse incentive for industry to avoid the investigation of risk. In short, TSCA has failed spectacularly in its stated purpose of regulating toxic substances to protect public health.

The Maternal and Child Health Case for TSCA Reform

The danger posed by certain substances to human health has been known for hundreds, if not thousands, of years. Exposure to toxic substances such as lead and mercury were recognized to cause neurological damage long before there was any understanding of the underlying mechanisms at work. More recently, studies have revealed associations between adverse birth outcomes and exposure to substances such as solvents,¹ phthalates,^{2,3} and chemicals like Bisphenol A.⁴ At the same time, however, chemicals and other toxic substances play a vital role in modern everyday life. The federal government must therefore establish a system of review and regulation that permits certain uses while preventing dangerous exposures, particularly for maternal and child health.

The safe management of toxic substances is especially important to pregnant women and children because they are more vulnerable to the potential dangers. In their October 2013 joint committee opinion on environmental toxicants, the American College of Obstetricians and Gynecologists (ACOG) and the American Society for Reproductive Medicine (ASRM) stated, “Exposure to environmental chemicals and metals in air, water, soil, food and consumer products is ubiquitous.”⁵ Biomonitoring programs at the Centers for Diseases Control and Prevention (CDC) and individual studies have established that dozens or hundreds of chemicals can be found in the tissues of individuals of all ages, including the fetus and newborn. Analysis of National Health and Nutrition Examination Survey data from 2003-2004 demonstrated that virtually every pregnant woman in the United States is exposed to at least 43 different chemicals.⁶ Ample reason exists for concern that the developing fetus, newborn, and young child are at increased risk of health consequences from chemical exposures. ACOG and ASRM noted that prenatal exposure to environmental chemicals is linked to various adverse health consequences, and patients’ exposures at any point in time can lead to harmful reproductive health outcomes.⁷

Children face a greater threat from toxic chemicals because of their immature and growing systems, which may be less efficient at detoxifying and eliminating harmful substances; because they have longer life expectancies (allowing more time for bioaccumulation and associated damage); and because they face proportionately higher exposure to certain chemicals and related substances.⁸ Children’s smaller sizes mean that they have a greater surface area to body mass ratio, so topical exposure can have an outsized effect. They eat and drink more food and water per unit of body weight than adults do. Adjusted for body weight, young children breathe more air than adults. Given these increased vulnerabilities, pregnant women and children must be given an additional margin of protection beyond other populations.

Principles for an Effective, Efficient, Modernized Framework for Chemical Regulation

The legislation before the Committee today, developed by Senators Tom Udall (D-NM) and David Vitter (R-LA) and cosponsored by numerous other Senators including Chairman Inhofe, represents a critical step forward toward establishing a system of chemicals regulation that will be protective of maternal and child health. Their persistent, bipartisan efforts are highly commendable, and the March of Dimes would like to extend our appreciation to each of you for your roles in this work.

As this Committee considers chemical reform legislation, the March of Dimes would like to share with you four principles that we believe are essential to the successful reform of America's system of regulating toxic chemicals. Legislation that meets these principles would represent a vast improvement in chemical safety for children and families everywhere.

1. Legislation should specifically protect the health of pregnant women, infants, and children. As I have noted, these populations are especially vulnerable to toxic substances. Any meaningful chemicals reform legislation must recognize the elevated risks posed by some chemicals for maternal and child health and incorporate special protection for these groups.

2. Legislation should establish an efficient and effective system and timetable for prioritizing and assessing chemicals. Given that over 80,000 chemicals are currently in commerce across our nation, reform legislation must establish a sensible, practical framework for the appropriate prioritization and assessment of chemicals in a timely fashion. A system that allows for indefinite timeframes and evaluation of only small numbers of chemicals will fail to protect the health of pregnant women and children.

3. Legislation should include a mechanism for requiring the generation of scientific data if existing data is insufficient to determine the safety of a substance. Under the current, failed system, chemical manufacturers have a disincentive to study the impact of their products, which is antithetical both to transparency and to public health. In order to conduct appropriate safety assessment, the government must have the ability to require studies to be conducted to produce data on safety, especially related to maternal and child health.

4. Legislation should provide timely access to chemical information for health care providers and first responders in critical circumstances. Health care providers and first responders must have immediate access to vital chemical information when they respond to known or suspected exposures, both to treat their patients and to protect themselves. Tragic consequences can result when doctors, paramedics, firefighters and others do not have the information necessary about chemicals involved in poisonings, leaks, and similar emergencies. Reform legislation must ensure that those who may be risking their own health to assist others must have the information necessary to make informed decisions.

Conclusion

In conclusion, reforming the framework under which the U.S. regulates chemicals and potentially toxic substances is critical and long overdue. Today, a real solution appears to be within reach. The health of every American, but particularly of vulnerable individuals like pregnant women and children, relies upon the ability of the Congress to come together to produce meaningful reform.

Mr. Chairman, this legislation represents an important step forward toward finally reforming the Toxic Substances Control Act. On behalf of March of Dimes, I thank you, as well as Senators Udall and Vitter, for your hard work reaching across the aisle and

working to address the needs and concerns of many stakeholders. I hope the March of Dimes can continue to be a partner and a resource as Congress works to produce a successful reform bill that protects the health of all Americans.

Thank you for this opportunity to testify, and I look forward to addressing any questions you might have.

¹ Cordier S, Garlantézec R, Labat L, Rouget F, Monfort C, Bonvallot N, Roig B, Pulkkinen J, Chevrier C, Multigner L. Exposure during pregnancy to glycol ethers and chlorinated solvents and the risk of congenital malformation. *Epidemiology*. 2012 Nov;23(6):806-12.

² Ferguson KK, McElrath TF, Meeker JD. Environmental phthalate exposure and preterm birth. *JAMA Pediatr*. 2014 Jan;168(1):61-7.

³ Centers for Disease Control and Prevention. 2012. *Factsheet: Phthalates*.

http://www.cdc.gov/biomonitoring/Phthalates_FactSheet.html. Accessed March 13, 2015.

⁴ Snijder CA, Heederik D, Pierik FH, Hofman A, Jaddoe VW, Koch HM, Longnecker MP, Burdorf A. Fetal Growth and Prenatal Exposure to Bisphenol A: The Generation R Study. *Environ Health Perspect*. 2013;121:393–398.

⁵ American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women and American Society for Reproductive Medicine Practice Committee. Exposure to Toxic Environmental Agents. Committee Opinion No. 575, October 2013.

⁶ Woodruff T, Zota A, Schwartz J. Environmental chemicals in pregnant women in the United States: NHANES 2003-2004. *Environ Health Perspect*. 2011;119(6).

⁷ American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women and American Society for Reproductive Medicine Practice Committee. Exposure to Toxic Environmental Agents. Committee Opinion No. 575, October 2013.

⁸ American Academy of Pediatrics. Policy Statement – Chemical Management Policy: Prioritizing Children’s Health. *Pediatrics*. 2011;127(5).