## What's Getting Into Our Children?

## Philip Landrigan, M.D.

In the past century, the threats to our children's health have shifted radically. Life-threatening infectious diseases – smallpox, polio, and cholera – have largely been conquered. Babies born in the United States today are expected to live two decades longer than their ancestors were 100 years ago.

But our children are growing up in a world in which environmental toxins are ubiquitous.

Measurable levels of hundreds of manmade chemicals are routinely found in the bodies of all Americans, including newborns. Infants are exposed to polychlorinated biphenyls, lead, and mercury in the womb and through breast milk. Baby bottles and toys have been found to contain phthalates, bisphenol A, and lead, all toxins that have been linked to reproductive and developmental disorders.

As harmful elements detected

in everyday household items increase, rates of chronic disease have also risen sharply – and these conditions are now the leading causes of childhood illness and death.

Air pollution and cigarette smoke contribute to asthma, the most common chronic disease of childhood, which has increased 160 percent in the past 15 years for children under age 5.

Chemicals called endocrine disruptors – found in pesticides, herbicides, some plastics, and air and water – can interfere with the body's hormone signaling system, potentially causing reproductive disorders, neurologic impairments, and immune dysfunction. Cancer, which kills more children under age 15 than any other disease, is linked to solvents and pesticides.

Early exposure to lead, mercury, and certain pesticides are suspected to contribute to autism, attention deficit/ hyperactivity disorder, and other developmental conditions, which affect 5 to 10 percent of babies born each year.

A contaminated environment takes an economic toll,

costing \$55 billion in medical treatment and lost productivity each year. Health care reform can be successful only if it is tied to strong environmental policies.

Historically, this has paid off. In the 1970s, landmark studies on childhood lead poisoning resulted in its removal from paint and gasoline, producing a 90 percent decline in lead poisoning. Children's average intelligence subsequently rose by 5 to 6 IQ points, and the economic productivity in the United States increased by \$100 billion to \$300 billion annually.

And in the 1980s, two major pesticides were banned after being shown to have detrimental effects on childhood development.

Long overdue is the National Children's Study (NCS), which was appropriated in 2009 for two-thirds of its \$300 million budget. The largest study of children's health in U.S. history, NCS will track 100,000 children from before birth through age 21 to determine the environmental and genetic factors that influence health and development. The data we collect

will allow us to develop a national blueprint for prevention.

The Child Safe Chemical Act (CSCA) is another measure that deserves support. During the past 50 years, more than 80,000 synthetic chemicals have been invented, and each year hundreds more are added to consumer goods, including cosmetics, motor fuels, and food packaging. Most are not tested for toxicity.

Introduced into Congress in 2005 and 2008, CSCA would mandate that all new chemicals be tested and found safe for children before being brought to market. It would require that 62,000 untested chemicals currently in use be proven safe or be banned. Similar legislation exists in Europe.

Our children are 30 percent of our population, but they are 100 percent of our future. They deserve our protection.

Philip Landrigan, M.D., is Chair of the Department of Preventive Medicine and Professor of Pediatrics at The Mount Sinai Medical Center in New York City. He is also principal investigator for the NCS.

One in a series of commentaries by prominent Mount Sinai physicians and scientists.

