Maureen: Welcome to another EPA Region 2 podcast, part of a series of conversations about environmental issues in New Jersey, New York, Puerto Rico and the U.S. Virgin Islands. My name is Maureen O'Neill and I'm a Senior Policy Advisor focusing on environmental health issues. This podcast is the second in a series of conversations about environmental health issues in our Region. Today's podcast discusses the importance of protecting the health of babies and children, and it focuses on the National Children's Study, an exciting and broad-reaching effort by the federal government to examine the effects of environmental influences on the health and development of 100,000 children across the United States. After eight years of intensive research and planning, the study is just beginning right here in New York. I'm here this morning with Dr. Phillip Landrigan who is a pediatrician and leading advocate of children's health. Currently he's the director of the Children's Environmental Health Center and Professor and Chair of the Department of Community and Preventative Medicine at Mt. Sinai Medical Center in New York City, and probably most significantly for the purposes of what we would like to discuss this morning, he is the principle investigator for the National Children's Study's Vanguard Site in Queens. Welcome Dr. Landrigan.

Dr. Landrigan: Thank you, Maureen.

Maureen: And let's hear about the study. What's important about it? What you're trying to do, and particularly, how it fits into New York and New Jersey.

Dr. Landrigan: The National Children's Study is extremely exciting. It's the largest study of children's health that's ever been undertaken in the United States. It's what we call a prospective study, which means that it actually signs up mothers in the first trimester of pregnancy and follows them forward in time. And it's going to follow these children from conception all the way to age 21. The National Children's Study is all across the United States, it's going to be conducted in 105 counties all across the country. It's going to follow a total of 100,000 children from conception to age 21. The overall purpose of the study is to identify all the factors in the environment that cause disease in children. We'll be looking for environmental factors that cause asthma, autism, birth defects, attention deficit disorder, childhood cancer, obesity, diabetes because we know that environmental factors play a role, that they're part of the story in the causation of every one of those conditions. Our purpose in seeking to understand, to discover the environmental causes of disease, is so that we can use that information to create a scientifically valid blueprint for disease prevention.

Maureen: Could you tell us what kind of environmental factors you're looking at in this study?

Dr. Landrigan: Yes. Well we're going to be making home visits. Every pregnant woman who joins the study, we'll go to her home, we'll take a very detailed history about what environmental exposures she has. We'll take samples of blood and hair and urine from each pregnant mom at at least two points during the pregnancy and we'll measure those samples for a whole range of chemicals: lead, pesticides, PCBs, plastics, chemicals, solvents. And that will tell us what chemicals the baby sees during the nine months of

pregnancy. Also, to assess the environment we'll be getting air samples and dust samples in each home that we visit. We'll also be asking about community factors. What's the safety of the neighborhood? What are the air pollution levels in the neighborhood? What's the social cohesion in the community? All of those factors influence children's health. We're also going to get dietary information. We'll ask each mom what she eats, whether she smokes, drinks, uses drugs? The information will be kept confidential but it's important data that we need to collect. And we'll be collecting samples of DNA from every mother and every child so we can look at genetic factors and look at the interplay between genetics and environment.

Maureen: How long will it actually be until you have the data, enough to make any determination?

Dr. Landrigan: We'll be able to make determinations as soon as, I would say, about four years. Because as soon as significant numbers of babies begin to be born into the study, we'll be able to make links between exposures in pregnancy and prematurity, birth defects, low birth weight. And then a year or two after that we'll begin to be able to make lengths about the factors that trigger learning deficits, attention deficit disorder, autism. And then a couple of years beyond that we'll be in a position to say something about environmental factors in early life that cause asthma, and on it will go through childhood.

Maureen: If I lived in Queens and wanted to participate in this, if I were a young woman of child-bearing age and was interested in getting involved with this, my understanding is that you'll be recruiting for four years, correct?

Dr. Landrigan: We'll be recruiting for four years, we're not going to be recruiting in every nook and cranny of Queens, we're going to be doing the recruiting in eighteen neighborhoods in Queens. In eighteen communities that have been selected because they are statistically representative of the whole borough of Queens. It's a bit like a political poll or the Neilsen ratings, it's not necessary to enroll all the babies that are born in Queens, but we'll be looking to recruit about 250 babies a year from these selected neighborhoods. We welcome the participation of people at every level and we're in the process of building an enormous coalition in Queens to support the study.

Maureen: So we've been talking about Queens but there's actually going to be others, of course across the United States, but also in New York and New Jersey and other parts of New York and New Jersey. Could you just list some of the others that will be coming up where there will be recruiting also?

Dr. Landrigan: Yes, over the next several years we'll be rolling the National Children's Study out first in Nassau County on Long Island in 2009. Then a year or so later in Manhattan and in Brooklyn and then, over the next couple of years, in three New Jersey counties: Passaic, Middlesex, and Warren, and in Monroe County, which is Rochester, New York.

Maureen: If I'm a parent right now though, and don't want to wait four years for any kind of results do you have any good advice that you could give out, as a pediatrician, to them?

Dr. Landrigan: There are several things that parents can do right now on the basis of knowledge that already exists. Most importantly, if you live in a home that was built before 1975, be very, very wary of lead paint. Don't do any paint scraping yourself if there's peeling, chipping paint, get an inspector in, a certified inspector ASAP to look it over and make sure there's no lead paint there. Secondly, minimize your use of pesticides, both inside the home, and outside the home if you have a yard or a garden. Inside the home, cockroaches can be controlled without using chemical pesticides, using what's called "Integrated Pest Management." There are many good websites that tell you how to do that. And outside, if you live in the suburbs, learn to live with a few dandelions, it's a lot healthier for the kids. And finally, and this is mainly in the summer months, watch out for air pollution. Air pollution, especially in the hot summer months, can be very damaging to a child's lungs and on pollution days it's important to restrict child's outdoor exercise.

Maureen: Thank you. This concludes our podcast. Thanks for listening and check back soon for the next in our environmental health podcasts. For more information on what you heard about today, or environmental issues in New Jersey, New York, Puerto Rico and the Virgin Islands, visit epa.gov/region2.