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Lessons from Ukraine can help babies here

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Monitoring birth defects in Ukrainian regions affected by the Chernobyl nuclear disaster could not only help save the lives of infants born there, but also produce better care for Alabama's children, a University of South Alabama professor said.

Dr. Wladimir Wertelecki, chair of genetics at USA, recently returned from the eastern European country, where he had been invited to participate in services commemorating the 20th anniversary of the Chernobyl (based on the Ukrainian spelling instead of the Russian spelling) explosion.

The event, a humanitarian forum labeled "Rebirth, Renewal and Human Development," drew crowds of people protesting nuclear energy. The forum included health and science experts and dignitaries from several European countries, foreign embassies and the World Health Organization.

Invited by Ukrainian government officials to speak about birth defects, Wertelecki continued a mission that began several years after the disaster, when he discovered no one was monitoring the genetic effects. On this latest trip, his focus was on convincing people that birth defect monitoring is still crucial after 20 years.

"I don't want to call it an opportunity because it sounds sort of crass, but if we don't study this we don't have the opportunity to prevent it," Wertelecki said. "This (birth defects) is a world problem."

For the past five years, Wertelecki and others have been collecting birth defect data in Ukraine.

The Ukrainian information is collected in an effort to understand how the chronic low dose radiation exposure that many residents there face can affect their health. The data Wertelecki has helped collect shows a high concentration of babies born with spina bifida, especially in the areas officially labeled as contaminated by the Chernobyl disaster.

The measures used to collect this data and the ideas being formed to address the problem can be used to help children throughout the world, including Alabama, Wertelecki said.

"The benefits are that we have exactly the same monitoring system in Alabama and it's being coordinated out of Alabama," he said.

In data published in 2004, neural tube defects were reported in 21 of 10,000 births in northwest Ukraine, the area classified as contaminated by the explosion. The prevalence was lower in other Ukrainian regions, but still several times higher than in many other countries, Wertelecki reported. For example, neural tube defects in the United States have been reported as 3.37 per 10,000 births since the beginning of mandatory folic acid fortification. This process adds folic acid -- a vitamin found to decrease neural tube defects -- to such items as breakfast cereal, milk and bread.

The Ukrainian results prompted Wertelecki to push the government there to begin its own folic acid flour fortification program, a move he estimates could save nearly 500 babies a year.

Research has also shown, however, that there are likely to be factors besides low-dose radiation and folic acid deficiencies that contribute to Ukraine's problems. There is also a trend of drinking among women of reproductive age, Wertelecki said, a problem not unfamiliar to Alabama.

"The fact that we learn things here helped us start an alcohol program in the Ukraine," he said. Back in

Alabama, that research has helped further programs targeting fetal alcohol disorders, he said.

Wertelecki compared the birth defect work done in Ukraine and Alabama so far to the laying down of train tracks -- the base is there, but there is still much to do to get an engine running. Developments that occur in eastern Europe will continue to further programs here at home, he said, and vice versa. Once trends are recognized through monitoring, that data can be analyzed, and that work can lead to better prevention of all types of birth defects.

In the future, he plans on getting more of the studies published and garnering more attention from officials in the United states and Ukraine.

"Birth defects are the leading cause of infant mortality everywhere in the world and we are quickly learning how to prevent them," he said. "If we don't have surveillance systems, we are saying, 'I want first to have a disaster, then I want to start looking.' Birth defect surveillance systems are a security check for the unborn."

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