

Testimony October 26, 2060

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Good morning and thank you for the opportunity to speak to you. My name is Steven Marcus, I am a pediatrician and medical toxicologist by training and experience. I have been on the faculty of New Jersey Medical School of the University of Medicine and Dentistry since August of 1972. I welcome you to our campus and thank you for this opportunity to address you.

My current appointment at the New Jersey Medical School is in the Department of Preventive Medicine and Community Health and Pediatrics. I am currently both the Executive and Medical Director of the regional drug and poison control center for the state of New Jersey, New Jersey Poison Information and Education System (NJPIES).

There is growing information suggesting that the environment has an important role in the health of every American citizen. There is animal work showing that exposures may alter our genetic disposition and cause effects generations detached from those exposed. Anthropological/paleontological evidence suggest that childhood cancers may be a modern phenomenon suggesting a link to environmental toxinsⁱⁱⁱ. I do not want to underplay the importance of these issues, they are indeed both important and frightening. However, I believe that there is another, unappreciated issue related to the effect of toxins (including trace elements and substances I trace concentrations) on children. The program that I am responsible for is involved with prevention of and response to childhood exposures (and adults of course) to toxic substances and chemicals. Poison centers and their medical toxicologists are involved on a daily basis responding to questions about exposures to a variety of toxic substances.

I mentioned previously that I am the medical and executive director of NJPIES, one of 60 regional poison control centers, let me explain the importance of these centers. Poison centers respond to the needs of the US citizens in every state and territory of the country 24 hrs a day, 7 days a week, 365 days a year. Nationally, there are over 4 million exposures reported to poison centers with over 50% of the victims of these exposures occurring in children under 5 years of age. To put that into perspective, once every 15 seconds a child in this country is reported to be exposed to some potential toxin. Poison centers in the United States respond to questions about exposures to medications, household products, industrial chemicals, environmental contaminants (including substances in trace quantities), any of which can have immediate, even life-threatening effects, as well as potential long term effects on the health of the exposed children. The responses from such poison centers can provide relief to the caller, if the exposure is not expected to cause any harm, or can be a chance to initiate therapy for an exposure prior to the victim reaching an emergency room. Not only do poison centers provide potentially life- saving treatment advice, but these poison center telephone consultations have been shown by several investigators, including my group, to save vast sums of health care dollars. In fact, it is estimated that

for every \$1 invested in our services there is better than a \$7 saving in health care costs. In NJ alone, we demonstrated a cost savings, conservatively, of over \$10 million each year for an investment of less than \$4 million. A more realistic estimate places the cost savings at well over \$40 million each year in NJ alone.

The poison center movement is grateful to Congress for passing legislation, in 2001, which enabled poison centers to attain some degree of financial stabilization and enhancement of their programs. Administered by the US Department of Health and Human Services' Health Resources Service Administration (HRSA), poison centers now receive nearly \$30 million in federal funding. Among the things federal funding provide, the result of an initiative started in NJ, is the provision of a single toll free telephone number entrée into the system. Today, a citizen anywhere in the United States only needs to remember one telephone number, 1-800-222-1222, to reach a regional poison center responsible for his/her geographic region. That poison center will be a regionally designated, certified center. The calls will be answered by a health care professional, a nurse, pharmacist or a physician equipped to respond to calls related to chemical substances, radiologicals, medications, etc.

In 2004, HRSA funded a study by the Institute of Medicineⁱⁱⁱ to look at the future of the nation's poison centers. One of the resultant suggestions was for federal support of a national poison center system, then estimated at costing approximately \$150 million. Unfortunately, while the current level of federal funding represents a significant portion of our total funding, the nonfederal support is not stable. Many regional poison centers are at risk of closing, leaving their catchment population vulnerable and without the valuable service provided by poison centers. While the nation is experiencing increased deaths from unintentional drug overdoses, and increased emergency room visits for childhood exposures to various medications and substances, poison centers are fighting for their survival. Funding shortfalls threatens the existence of more than 50% of the existing poison centers.

In addition to acute crisis response, poison centers provide important surveillance functionality. They **are** the "front line" for natural and manmade exposure of all types. There are many examples of poison centers discovering clusters of exposures and bringing them to the attention of local, state and national agencies. I remember clearly the call we received from a physician in NJ who had a family in his office stating that they moved into a condominium development in NJ and when the contractor pulled up the floor boards discovered a lake of a silvery liquid, mercury. The physician had no idea who to call for help, so he reached out to the poison center. This call resulted in an investigation and elimination of mercury exposure for the inhabitants of the building. Other clusters discovered included poisonous puffer fish off the coast of Florida, contaminated drugs in Philadelphia, and water contamination in a school in northern New Jersey.

There is currently great interest in the safety of our food supply. A week doesn't seem to go by without something in the news about contaminated food. Poison centers are involved in responding to calls about possible spoiled food, food poisoning outbreaks, etc. I remember getting calls at our poison center one Friday night related to exposures in a catering hall in southern New Jersey. When calls continued to be handled the following day concerning people exposed in the same catering establishment, local health departments and ultimately the state health department became involved;

the caterer shut down until adequately sanitized and the outbreak abated. The nation's poison centers have been intimately involved in many of the recent food borne outbreaks from contaminated spinach to peanut butter.

When we look at who will provide clinical services to individuals exposed to toxic chemicals and medications, we turn to a group of physicians such as myself, medical toxicologists. First established as a subspecialty in the late 1970s, the discipline was comprised of physicians trained in internal medicine, pediatrics or preventive medicine. This group of individuals established the American Board of Medical Toxicology, complete with fellowship programs and a formal board certification procedure. Originally, more than 50% of the boarded medical toxicologists were pediatricians. Over the past 20 or so years, the discipline has transformed into that of more of a subspecialty of Emergency Medicine with decreasing involvement of pediatricians. This has occurred because there are inadequate funds to train new medical toxicologists, particular those interested in the pediatric age group. A large percentage of current medical toxicology trainees are forced to work in an emergency room to earn funds to support him/herself through the fellowship. The graduates of pediatric residency programs who desire to take medical toxicology fellowships are mostly unable to work in emergency rooms, unless in addition to their basic pediatric training they took fellowships in pediatric emergency medicine and can find positions in pediatric emergency rooms to support their medical toxicology fellowship years. That would produce a medical toxicologist trained specifically in pediatrics but the process would take at least 7 years of training post medical school and a financial commitment not required of any other specialist. That very few pediatric-trained individuals are applying for medical toxicology fellowships is not, therefore, unexpected. Without training pediatricians as medical toxicologists the gap between the basic science of pediatric toxicology, including that which has been discussed in relationship to what congress is studying as part of the possible revision of the toxic substance legislation you called this meeting to discuss, will widen further. If we fail to train pediatricians to research and to respond to the effects of toxins, and other substances, on children's health, we are doing a disservice to current and future populations.

There is also another impediment to adding new residency or fellowship positions, that is, the Medicare "cap." Under current rules, no new residency or fellowship program can be funded utilizing Medicare reimbursement funds at any US hospital. An interesting case in point is our own NJ Medical School and our own University Hospital. Our residency/fellowship number has reached the Medicare cap. NJ Medical School's Department of Preventive Medicine and Community Health was successful in receiving a grant from HRSA to fund an approved residency program in Preventive Medicine outside of the Medicare cap. Residents from that program will spend time at NJPIES. If any resident in that program should become interested and wish to obtain further training in medical toxicology he/she will have to find a program which is funded or find a way to fund him/herself. We, currently, have no medical toxicology fellowship because we have no way to fund such a fellowship. Sadly, a graduate from a residency in Preventive Medicine would not be able to support his/herself through the rigors of 2 more years of fellowship. We must find a way to fund medical toxicology fellowship programs that pediatricians and preventive medicine residency graduates can succeed in.

There are actions which can and should be taken now. They will help respond to the risk of exposure to chemical substances of all nature, medications, spoiled food, etc.

1. Find a way to “shore up” the funding of existing poison centers
2. Supply funds to allow enhanced surveillance activities of poison centers
3. Supply funds to train medical toxicologists outside of the Medicare cap and encourage pediatricians to seek such training.

I invite you to tour our poison center at the termination of the meeting. See for yourself what an operating poison center currently can do and what a stable financial backbone will enable a poison center to offer in the future.

Thank you again for the opportunity to address you today.

ⁱ David AB, Zimmerman MR. Cancer: an old disease, a new disease or something in between? *Nature Reviews* (2010) 10:729-733

ⁱⁱ Capasso LI Antiquity of Cancer. *Int J Cancer*. (2005) 113:2-12

ⁱⁱⁱ Committee on Poison Prevention and Control. Institute of Medicine. Consensus Report: Forging a Poison Prevention and Control System. The National Academies Press. April 2004.