



**Testimony of
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Pennsylvania Department of Health**

**before the
Marcellus Shale Advisory Commission
of the
Office of the Governor**

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Governor Cawley, members of the Commission, thank you very much for inviting me here this morning to address public health considerations as they relate to natural gas drilling and my recommendations for the role of the Department of Health. After years of practicing medicine and law, I spent two years doing a fellowship at Mount Sinai-Irving J. Selikoff Center for Occupational and Environmental Medicine in New York. After that, I worked in the private sector as the Associate General Counsel for an environmental biotech company that primarily dealt with waste water effluent and environmental remediation. Due to my experience on the environmental front, I appreciate how imperative it is that the Commonwealth employ science as it addresses public health concerns associated with natural gas drilling.

With the increased development of the Marcellus Shale play, the Pennsylvania Department of Health has witnessed growing concerns among the public and the media about potential adverse health consequences associated with drilling activities. As the agency in charge of monitoring the health status of those residing in the Commonwealth, the Department is expected to address these public health concerns and to assure residents of impacted areas that their health is not being adversely affected. Therefore, I have some recommendations for how the Department of Health can ensure that public health concerns are being properly and systematically addressed.

First and foremost, the Department must be empowered to provide for a timely and thorough investigation of and response to concerns or complaints raised by citizens, health care providers or public officials. The Department's Bureau of Epidemiology currently receives inquiries and complaints from citizens, health care providers, public officials and communities concerned that their health (or the health of their patients or constituents) has been adversely impacted by environmental exposures. These concerns usually relate to a perceived excess of cancer or unusual patterns or excessive incidence of non-cancer health problems. The Department takes these concerns seriously and evaluates them using available public health data, assessing available environmental data or recommending that environmental and clinical sampling be done. As drilling increases, I anticipate- at least in the short term- a proportionate increase in concerns and complaints which the Department must be prepared to address.

In order for thorough investigations to take place, the Department should be routinely evaluating and assessing environmental and clinical data. Environmental data such as air sampling, water testing (public and private), solid waste testing, fish and other food testing that the Department receives from the Department of Environmental Protection, U.S. Environmental Protection Agency, U.S. Geological Survey, water works or treatment facilities, industry and academic partners must be properly evaluated based on levels and likely exposure pathways. Based on this information, the Department should be able to assess the potential for any findings to impact human health or whether additional sampling is needed to enable such a determination.

Regarding clinical data, it is increasingly likely that health care providers will be testing patients for chemicals and radiation that they believe are associated with Marcellus Shale drilling operations. The Department must be in a position to evaluate such data and render a public health determination about the quality and interpretation of such testing, in concert with relevant clinical data about the patient.

As the Department invites health care providers to share clinical data, it is our duty to educate these providers to ensure that they are properly equipped to address patient concerns. Most health care providers have minimal experience with environmentally-mediated diseases. This is more likely to be true in the rural areas where most Marcellus Shale drilling occurs. In these rural parts of the state, most practitioners are primary care providers and access to specialists is limited. It is necessary for the Department to reach out to these providers and educate them on signs and symptoms, radiologic and laboratory assessment (how and when to collect samples), how to interpret results and where reliable testing can be obtained. This education could be done through on-line educational material, webinars and face-to-face continuing medical education training.

Just as the Department must begin reaching out to the health care provider community, we must be educating the public on the constituents used in the drilling process and flowback constituents and whether or not they have the potential to cause human illness at the levels and duration that the public would be exposed. In order to meet and in many cases allay the concerns of citizens attributing various health conditions to drilling in the Marcellus Shale, the Department should offer educational material on its website. This information will present the science behind the various chemicals used in the drilling process and the naturally occurring constituents in flowback material and how they can or cannot adversely impact human health.

While it is critical that the Department investigates concerns, collects and assesses environmental and clinical data and educates health care providers and the general public, the most timely and important initiative that the Department can undertake is the creation of a population-based health registry. In order to refute or verify claims that public health is being impacted by drilling in the Marcellus Shale, there must be a comprehensive and scientific approach to evaluating over time health conditions of individuals who live in close proximity to a drilling site or are occupationally exposed. Due to the potential enormity of such an undertaking, it would be wise for the Department to partner or even contract with entities that would be more adequately situated to carry out such a task.

With the enactment of these recommendations, the Department of Health will be in a better position to assure the public that their health is always our number one priority. I want the public to know that my department takes their concerns seriously and intends to use all of the resources at its disposal to protect the health safety of all citizens. I also want to make it clear that the Department of Health and the Department of Environmental Protection work collaboratively so that as environmental and health issues are purported to intersect, our two agencies take an interactive approach to pursuing the science behind the complaint. I appreciate the opportunity to speak with you and I thank you for considering my recommendations about what the Department can and should be doing to address health concerns as they relate to natural gas drilling. At this time, I will be happy to take your questions.