Pompton Lakes Community Meeting Questions and Answers

The New Jersey Department of Health and Senior Services ("the Department") held a community meeting in Pompton Lakes on December 15, 2009 to answer any health-related questions pertaining to the Department's reports released on December 7, 2009. Residents of Pompton Lakes , many with cancer and non-cancer health issues who live within and outside of the plume area, expressed their concerns and asked many questions which are summarized below.

Many residents with cancer or whose family members have had cancer live immediately outside the perimeter of the plume. They questioned why they were not included in the cancer study since they live yards away from the defined plume area and possibly were previously exposed to contaminants in the plume.

Q: Why did the Department exclude these residents from the cancer study?

A: The recent reports released by the Department were in response to a specific request by the mayor of Pompton Lakes to look at cancer rates in the plume area only.

Residents want the Department to include the entire town in a cancer study because they feel there are many people with cancer who are living throughout the Borough who have been exposed to DuPont contamination.

Q: Can the Department include the whole town in a cancer study?

A: The Department is currently planning the next steps for future analyses and will be meeting with the community to obtain their input and establish dialogue in developing a plan of action. One component of the plan of action will be the inclusion of residents living outside of the plume area in a cancer analysis.

Q: What is the time frame for action?

A: The Department is working with the mayor to convene an advisory committee comprised of citizens to assist the Department in addressing the health concerns of the community. The Department is coordinating with our federal and state agencies to schedule meetings in the near future.

Several residents who attended the meeting shared personal stories of being affected by different types of cancer, such as thyroid cancer and Hodgkin's lymphoma. Many people expressed concerns that some cancers, particularly thyroid cancer, may be caused by exposure to DuPont contamination.

Q: <u>Why were some cancers, such as thyroid cancer, not included in the cancer analysis?</u>

A: The Department's analysis of cancer incidence in the plume area compared the overall incidence rates of all cancer types combined. Additionally, the report examined the rates of 13 specific cancers which have previously been found to be associated with environmental exposures. The Department will explore the possibility of including additional cancers in a future analysis, based on both community input and scientific research supporting an association between exposure to the plume-related contaminants and the specific cancer.

Q: <u>Why were cancer rates only evaluated through 2006 and did not include 2007-2008?</u>

A: When we began this cancer study, 2006 was the most recent year for which we had complete cancer data through the New Jersey State Cancer Registry (NJSCR). The NJSCR, in addition to other cancer registries nationwide, undergoes ongoing extensive data cleaning processes, resulting in a time lag in releasing finalized yearly data. The cancer data that are reported to the NJSCR are carefully reviewed by a staff of certified tumor registrars to ensure that the data are accurate and complete. In addition, the data are put through many automated processes to ensure data completeness and quality before being used for analysis. These processes include de-duplicating multiple reports for the same cancer in an individual person. These processes also ensure that the number of cancer cases in the state are not under- or over-estimated which would bias the results of an analysis comparing rates in a community to rates in the state.

Residents expressed their concerns that they have non-cancer health effects related to DuPont contamination. Residents requested that the Department consider evaluating non-cancerous health outcomes in the community, such as ovarian cysts, fibromyalgia, birth defects, reproductive health issues, and frequent bloody noses. Residents felt there are many more cancers in the area than our study showed and the problem is much worse than we characterized. People are scared about exposures and potential future illnesses.

The community wants the Department to do a door-to-door survey to identify cancer and non-cancer health effects and learn about potential exposures.

Q: <u>Is this possible?</u>

A: The Department will explore the possibility of conducting a survey as part of the future analyses. There are several issues with conducting a survey to quantify and characterize non-cancer health outcomes in a community. Besides the extensive resources this type of study would require, the background rates of these non-cancer health effects in the general population are not known which limits comparisons between Pompton Lakes residents and other communities. As a result, there would be no way to determine if the adverse non-cancerous health outcomes in Pompton Lakes are higher, the same, or lower than the general population.

Since 2004, the NJSCR has been collecting data on benign brain tumors, a non-cancerous health outcome; benign brain tumor rates in Pompton Lakes can be compared to the NJ population, though this comparison will be limited.

NJSCR data provide the ideal information for analyses comparing cancer rates in the Pompton Lakes community to the rest of NJ. Information from a survey of residents to determine cancer rates would not be as comprehensive and would have potential problems (e.g., reports of cancer cases without confirmed diagnoses from medical records; potential bias from self-reporting) making it impossible to determine accurately whether the community has elevated cancer rates.

Of note, the North American Association of Central Cancer Registrars has awarded the NJSCR the "Gold Standard," the highest standard possible, for their quality of data. The criteria used to judge the quality of the data are timeliness, completeness of cancer case ascertainment, completeness of specific information on the cancer cases, percent of death certificate only cases, and percent of duplicate cases.

Several residents stated they knew people who died of brain tumors who were not counted in the study.

Q: <u>Why would there be people who died of brain tumors who lived in the plume area who were not included in our analysis?</u>

A: In the spring of 2009, the Department was asked to review the number of brain cancers in Pompton Lakes. Non-malignant, or benign, brain tumors were not included in our currently released analysis because they are not cancerous tumors and historically have not been included in cancer registries. However, recent legislation has required the reporting of non-malignant brain tumors to all state cancer registries nationally. NJSCR has been collecting data on benign brain tumors diagnosed in the state since January 1, 2004. In response to community concerns, the Department plans on conducting an analysis comparing the incidence rate of benign brain tumors in Pompton Lakes to the statewide rate.

An additional possible reason for the difference in the number of brain cancers noted among the community and what is recorded in the NJSCR is that the brain is a common site of metastasis from cancers that originated from other sites. The most common brain tumor in adults is metastatic brain tumor, a cancer that started somewhere else, such as the lung, breast, or prostate, and spread to the brain. In a cancer analysis, these metastatic brain tumors would not be counted as a brain cancer, and would be categorized under the site where the cancer originated, such as the lung, breast or prostate.

Q: <u>Can plume-related contaminants cause non-cancerous tumors, such as benign brain tumors and ovarian cysts?</u>

A: The Department will research the association between environmental exposures and benign tumors. As discussed above, since the NJSCR has been collecting data on non-malignant brain tumors since 2004, it is possible for the Department to conduct an analysis comparing the incidence rate of benign brain tumors in Pompton Lakes to the statewide rate.

A resident complimented the Department on its involvement with the Pompton Lakes community to assess mercury and lead exposures in children in 1994. She recalled the Department had tested blood and urine levels of mercury and lead in her children and provided guidance to the community.

Q: <u>Can the Department perform similar laboratory tests of residents to determine whether they have been exposed to contaminants in the plume?</u>

A: In 1994, the Department was able to measure mercury and lead levels in the blood and urine of children living in Pompton Lakes, which enabled the Department to identify which children were exposed and required follow up. However, the plume contaminants cannot be measured in the blood and urine, therefore, it is not possible to assess human exposure to the plume contaminants.

Q: <u>How was it determined which contaminants are plume-related/not plume-related in the Department's report?</u>

A: Plume-related contaminants were detected in both the groundwater and the indoor air. Non-plume related contaminants were detected in the indoor air but not detected in the groundwater.

Some residents outside the plume are willing to pay for their own air testing but expressed frustration that they were not given any guidance on where to go for testing if they want to pay for it themselves.

Q: <u>Can the Department provide guidance?</u>

A: The Department maintains a list of consultants who are licensed to conduct environmental assessments in child care centers and schools. The Department also maintains a list of consultants who conduct environmental evaluations of residential properties; however this is a voluntary list and the Department neither licenses nor certifies these firms.

Q: <u>How do residents know their water is not contaminated?</u>

A: The public water supply is monitored by the NJ Department of Environmental Protection (DEP) Bureau of Safe Drinking Water. The public water supply is routinely tested for various contaminants including volatile organic chemicals.

Q: <u>Where can residents get a copy of drinking water tests?</u>

A: The water company that services Pompton Lakes can provide annual test results to residents.

Q: <u>Can the Department develop a central repository for all government agencies to post information pertaining to Pompton Lakes and the health and environmental information?</u>

A: The Department will create and maintain an easily accessible web page where all health-related documents pertaining to Pompton Lakes will be maintained, and there will be direct links to other relevant federal and state agencies.

Q: <u>Do the findings of the cancer report indicate that the increased rate of some cancers are due to DuPont contamination?</u>

A: The study design used for this analysis is a population-based cross-sectional study. This type of study is a good first step in evaluating a health concern in a community and is a practical surveillance or screening method for cancer incidence. Descriptive studies such as the Department's study cannot determine a cause and effect association between exposure and disease for a number of reasons.

Analyses using the cross-sectional design cannot discern the temporal relationship between an exposure and disease. Not only is it unknown if cancer diagnoses preceded exposure, it is impossible to determine the magnitude of contaminant exposure among individuals. Since this is a descriptive study on the entire population rather than an analysis on an individual level, there is a lack of data on actual personal exposure to the contamination and other relevant risk factors over time. Specifically, we have no information on who was exposed and who was not exposed and the magnitude of the exposure that did occur.

Because personal exposure information does not exist, residential proximity over the contaminated plume was used as a surrogate measure for potential past environmental exposure. This was accomplished by analyzing the population living in a relatively small geographic area above the groundwater plume. Although proximity to the plume may be a reasonable surrogate for past environmental potential exposures at the time the study was designed, it is also unlikely that all of the residents in these areas were exposed to the contamination. Because of these uncertainties, we would expect that there is some exposure misclassification, i.e., characterizing some residences as being exposed when they actually had not. Additionally, the length of residency in the plume area and population mobility in and out of the plume area can not be accounted for in this type of analysis.

Q: <u>There was criticism of the study design, specifically pertaining to the fact that there may be former residents who moved out of the plume area and were later diagnosed with cancer and were not included in our study.</u>

A: All epidemiologic study designs have inherent limitations. In the study design utilized for this analysis, the limitations include the fact that it is impossible to assess the exact duration and level of exposure in individuals with cancer and in those who are cancer-free. Another issue is the inclusion of persons with cancer who were not exposed (e.g., people who moved into the community and were diagnosed with cancer shortly after re-locating and had little or no exposure to the site) and the exclusion of persons with cancer who were exposed (e.g., former residents who were exposed for years, moved to another community and were then diagnosed with cancer). In other words, population mobility cannot be accounted for in this analysis. Further, there may be people who were actually exposed but were misclassified as having not been exposed (e.g., people who work in but live outside the plume area).

Q: <u>What can the Agency for Toxic Substances and Disease Registry (ATSDR) do to help?</u>

A: ATSDR can provide the following, if requested by the community:

- Health care provider education to increase the knowledge of environmental medicine among physicians in the Pompton Lakes community.
- Health education outreach to residents.
- A written health consultation on post-installation indoor air data.

There were many questions and concerns raised by residents which pertain to the New Jersey Department of Environmental Protection (DEP). The Deparment has shared the list of specific issues with DEP. The following is a list of the general questions/issues which were brought up at the meeting which pertain to DEP:

Proper installation and maintenance of mitigation systems in homes
Fluidity of the plume (other areas may have been impacted in the past)
Environmental impact to homes outside of the plume area
Additional environmental monitoring of areas outside of the plume
Ambient air monitoring
Alternative methods for treatment of contaminated groundwater
Possible contamination of drinking water sources

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