

CANCER CLUSTERS

PUBLIC HEALTH ISSUE:

Cancer is the second leading cause of death in the U.S. One of every two men and one out of three women will get cancer in their lifetimes. Three out of every four American families will have at least one family member diagnosed with cancer. More than 20 million new cases of cancer have been diagnosed since 1990. With approximately 7,000 new cases and 2,600 deaths each year, cancer is the leading cause of death in New Hampshire. In New Hampshire cost of cancer is a staggering \$1.1 billion. The high rate of cancer, together with widespread education regarding known risk factors, has resulted in a heightened public awareness of possible carcinogenic exposures, particularly those in the environment. As a result, reports of suspected cancer clusters, which are several or more cases of cancer in one geographic area, are made by concerned citizens and local officials. Because of public awareness and concern, cancer clusters reported to the Division of Public Health Services (DPHS) are investigated. While these investigations can be labor and resource-intensive it is important to respond to concerns about possible cancer clusters.

ROLE OF THE HEALTH OFFICER:

- Many citizens may approach their local health officer for information and assistance on how to report their concerns about a perceived higher than expected incidence of cancer. The DPHS' Office of Health Statistics and Data Management (HSDM) receive these reports and follow a standard protocol to evaluate the situation.
- The health officer can refer the concerned citizen directly to the HSDM. However, some citizens are reluctant to report their concerns directly. Thus, it is also appropriate for a health officer to take an initial report, and call the information into the HSDM for follow-up.
- The health officer may also serve as a local resource to the epidemiologist during the course of an investigation.

DEFINITION OF A CANCER CLUSTER:

A cancer cluster is the occurrence of a greater than expected number of cases of a specific type of cancer within a group of people, a geographic area, or over a period of time. Generally speaking, a suspected cancer cluster is more likely to be a true cluster, rather than a coincidence, when it involves: a large number of cases of a specific type of cancer, rather than several different types; a rare type of cancer, rather than common types; or an increased number of cases of a certain type of cancer in an age group that is not usually affected by that type of cancer.

While many suspected cancer clusters are reported to public officials, it is rare to document a true cancer cluster. Therefore, many factors are considered to evaluate cancer cluster reports.

Cancer is not one disease but many. Each type of cancer (i.e. breast, cervical, lung etc.) is associated with a specific set of causal (etiologic) factors. It is therefore extremely unlikely that

a report of a suspected cancer cluster that is made up of several different types of cancer all will have the same cause. Reports of cancer clusters sometimes include one or more cases of cancer, as well as other conditions or diseases. For example, a citizen may be concerned about the number of cases of cancer in their town, in addition to cases of miscarriage or birth defects, believing that these may be related to the environment. The purpose of an epidemiological investigation is to separate out the causes of each of these conditions or diseases, and determine if there is an excess of one type of cancer and assess possible routes of exposure.

Cancer is also more likely to occur as people age. Because people are living longer, more cases of cancer can be expected. For some, increased longevity may create the impression that cancer is becoming more common, even though an increase in the observed number of cases of cancer may be partly related to the aging of the population. Higher rates of specific types of cancer are also seen among different racial and ethnic groups. Such differences may be due to multiple factors such as: late stage of disease at diagnosis; barriers to health care access; an individual's history of other diseases; biologic and genetic differences; health behaviors; and other risk factors.

Finally, there is generally a latency period of twenty years or more between the time of exposure to a cancer-causing substance and the diagnosis of cancer. This latency period may further obscure factors that may be pertinent and can make the identification of causal factors for a cluster of cancer cases difficult.

For more information contact:

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