

based on what is known about the cancer's likely causes. If there is a known risk factor for the type of cancer involved, further investigation in the community may be needed. If no known cause is identified, continued monitoring of the cancer rate in the community will be continued through the use of New Hampshire Cancer Registry data.

If, however, the rates in the community are elevated and there is compelling evidence that a true cluster exists, the HSDM Section will recommend a comprehensive study of the proposed potential disease-exposure relationship. The purpose of such a study is to pursue the public health issues that the cluster generated.

How does the New Hampshire State Cancer Registry work?

The New Hampshire State Cancer Registry was established under the Chronic Disease Prevention, Assessment, and Control Act of 1985. Residence, age, sex, race, occupation, date of diagnosis, site of disease, type of tumor, and other information are collected and each new case of cancer diagnosed in the State is recorded.

As the Registry grows with the addition of new data, the HSDM Section and other cancer researchers can more quickly and accurately determine if a cancer cluster exists in a community. The Registry data can also be used to monitor these rates of cancer over time.

Cancer cluster investigations can often be very involved studies that can take years and require population, cancer and statistical data.

For More Information

To find out more about cancer cluster investigations or the NH State Cancer Registry or to report a suspected cancer cluster, contact the Health Statistics and Data Management Section of the NH Department of Health and Human Services at 603-271-7812 or 1-800-852-3345 x7812.



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Cancer Clusters



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What is a cancer cluster?

There are several criteria that must be met for multiple cases of cancer to be considered a cluster:

- A larger than expected number of people involved
- Patients all diagnosed with one type of cancer
- Occurring during a limited time period in a specific geographic area

How are cancer clusters discovered?

People usually consider the possibility of a cancer cluster when friends, family, neighbors, or co-workers are diagnosed with cancer. Clusters can also be found when scientists examine the data from cancer registries, which record new information on all new cancer cases.

What are ways to identify a cluster?

Scientists have identified the conditions that are most likely to point to a true cluster:

- A large number of cases of one type of cancer, rather than several different types
- A rare type of cancer, rather than more common types
- A number of a specific type of cancer cases in age groups not usually affected by that type of cancer.



How are cancer clusters investigated?

When a suspected cancer cluster is first reported, the Health Statistics and Data Management Section (HSDM) of the NH Hampshire Department of Health and Human Services gathers information about the suspected cluster and provides the caller with general information about cancer clusters. To begin investigating a reported cancer cluster, the HSDM Section follows a protocol based on recommendations made by the Centers for Disease Control and Prevention (CDC) and the National Cancer Institute.

What information is needed to investigate a report?

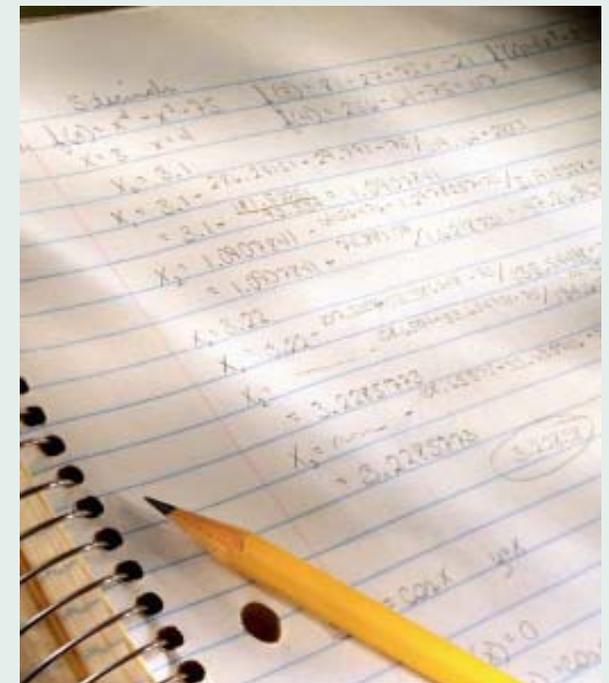
In order to determine if an unusual occurrence of cancer exists, several factors must be first confirmed:

- Each reported case must be confirmed by verifying the type of cancer, date of diagnosis, patient residence, and other relevant information from the Cancer Registry
- The frequency rates of the type of cancer must be taken into account
- The population of the area has to be carefully defined to determine if the number of cancers that has occurred is unusual
- Death rates from cancer may also be considered in the analysis

How is the information analyzed?

Once the community's population and the types of cancer are defined in a specific period of time (usually over several years), cancer rates are determined using New Hampshire State Cancer

Registry information. State and national rates are compared with the community rates. The HSDM Section also looks at the numbers of cancers observed in the community and compares it with expected numbers of cancers by applying nationally expected rates to that community's population. The fact that cancer is so common means that many clusters will be explainable solely on the basis of chance. Statistical testing is used to determine if the community rates are significantly higher than the state rates. If the rates are higher than the number that would normally be expected and chance is statistically ruled out, then a cancer cluster may exist.



If a cluster does exist, it can be due to known or unknown risk factors. The next step is for scientists to try to establish whether the risk factors have the potential to cause the reported cancer,