# NAUGATUCK VALLEY HEALTH DISTRICT

**TICK-BORNE DISEASE SURVEILLANCE DATA REPORT**
**FISCAL YEAR JULY 1, 2012 – JUNE 30, 2013**

**Background:**

Tick-borne diseases can be defined as diseases or illnesses transmitted to humans by a variety of ticks. During the fiscal year 2012 – 2013, the Naugatuck Valley Health District (NVHD) was notified of 53 confirmed cases of tick-borne disease within the Naugatuck Valley district population.

Tick-borne diseases are caused by bacteria, viruses, and parasites and symptoms may include fever, headache, fatigue, depression and/or a characteristic circular skin rash called erythema migrans. When untreated, late symptoms of tick-borne disease may involve the joints, heart, and central nervous system. In most cases, the infection and its symptoms are eliminated by antibiotics, especially if the illness is treated early. Delayed or inadequate treatment can lead to more serious symptoms which can be disabling and difficult to treat.

NVHD Public Health Nurses are available to assist community members potentially exposed to tick-borne disease by providing basic medical management information and exposure and prevention education. All cases involving Valley community members diagnosed with a tick-borne disease are reported to the Naugatuck Valley Health Department for surveillance. This report outlines NVHD tick-borne disease surveillance data, as reported to NHVD, and organized by reporting site, town, and disease.

**Surveillance Data:**

Of the confirmed cases of tick-borne disease reported to NVHD during fiscal year 2012 - 2013, four different tick-borne diseases were identified: Babesiosis, Erlichiosis, Lyme, and Rocky Mountain Spotted Fever.

**Table 1.1. Description of four tick-borne diseases identified within the Naugatuck Valley district during fiscal year 2012 – 2013.**

| Tick-Borne Disease | Description |
|---|---|
| **Babesiosis** | A parasitic disease caused by infection with *Babesia*, a genus of protozoal piroplasms commonly via a tick vector. *Babesia* are believed to be the second most common blood parasites of mammals and they can have a major impact on the health of domestic animals and humans. |
| **Erlichiosis and Anaplasmosis** | A tick-borne bacterial infection caused by |

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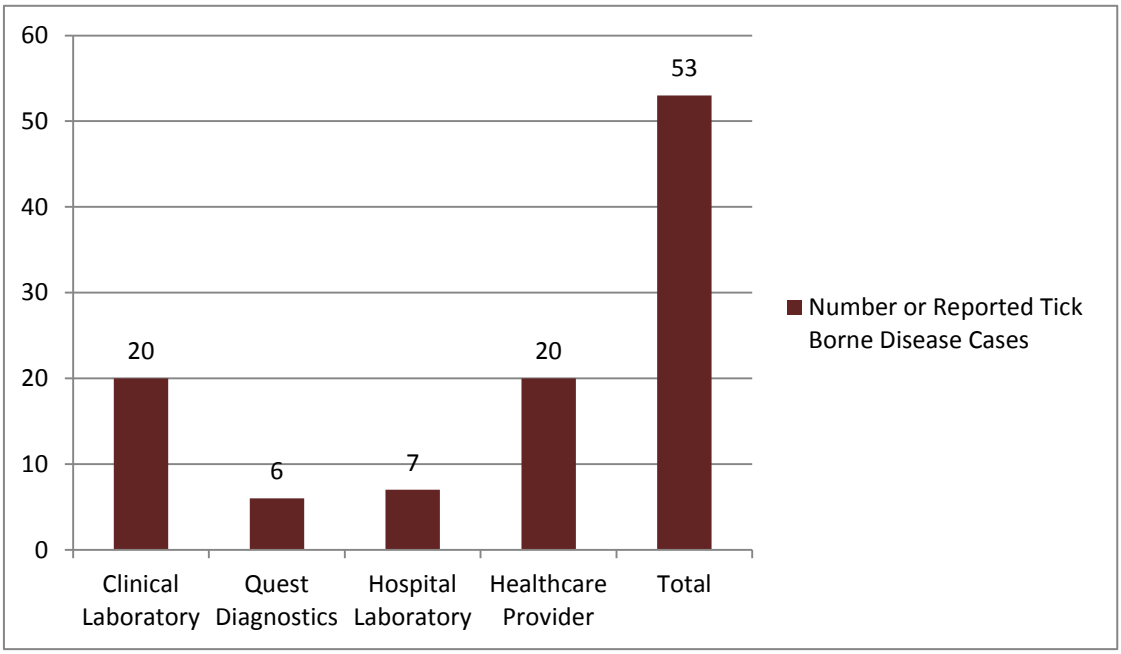
|---|---|
| | bacteria of the family Anaplasmataceae, genera *Ehrlichia* and *Anaplasma* which infect and kill white blood cells in humans. |
| **Lyme** | An infectious disease caused by at least three species of bacteria belonging to the genus *Borrelia* and is the most common tick-borne disease in the Northern Hemisphere. *Borrelia* is transmitted to humans by the bite of infected ticks belonging to a few species of the genus *Ixodes*; most commonly the *Ixodes scapularis*, or "deer" tick. |
| **Rocky Mountain Spotted Fever** | The most lethal and frequently reported rickettsial illness in the United States. The disease is caused by *Rickettsia rickettsii*, a species of bacterium that is spread to humans via *Dermacentor* "dog" ticks. |

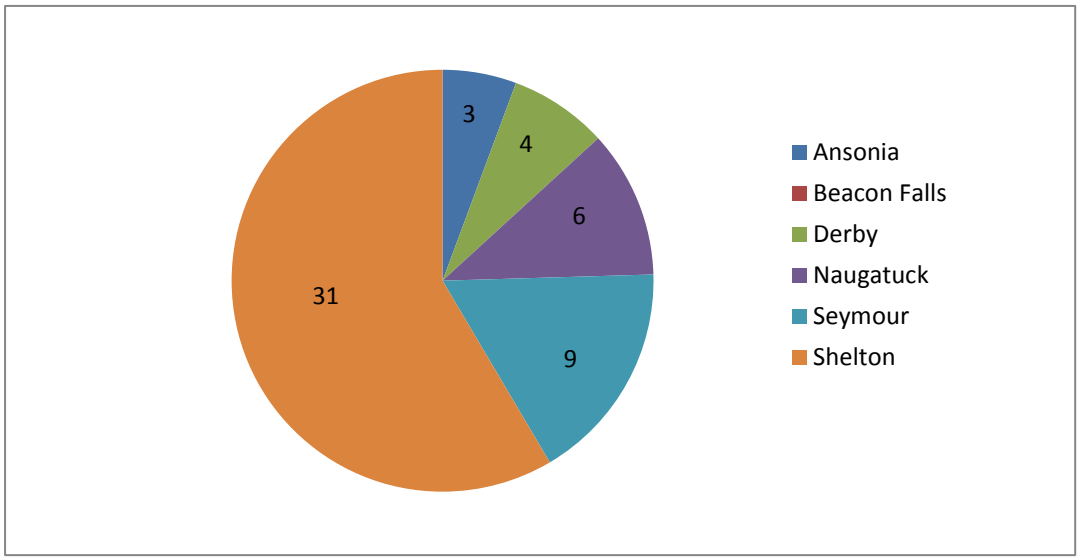
Dependent upon the specifics of each case, the NVHD is notified of confirmed tick-borne disease cases within the Valley via various reporting sites including, but not limited to: Clinical Laboratory Partners, Quest Diagnostics, hospital laboratories, and healthcare providers.

**Figure 1.1. Number of reported tick-borne disease cases as submitted to NVHD and itemized by reporting site (Fiscal Year 2012 - 2013)**



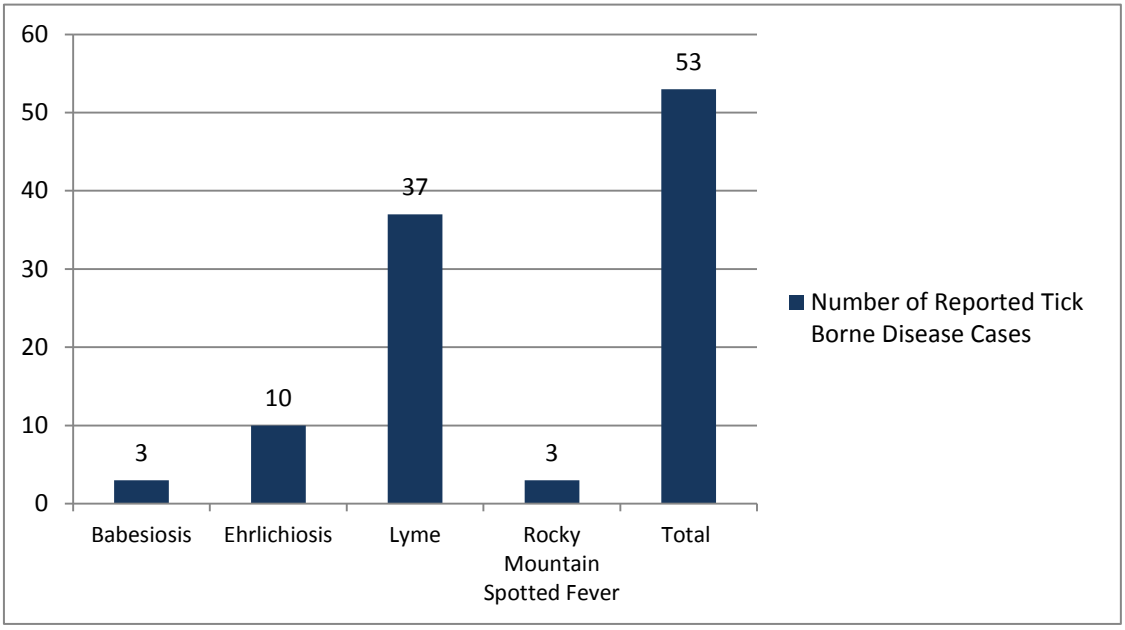
In total, there were 53 tick-borne disease reports filed through NVHD during the fiscal year 2012 – 2013. Figure 1.1 depicts that when itemizing surveillance data by reporting site the majority of tick-borne disease case notifications were submitted to NVHD via Clinical Laboratory Partners (37.7%) and various healthcare providers (37.7%).

**Figure 1.2. Number of reported tick-borne diseases cases as submitted to NVHD and itemized by town (Fiscal Year 2012 - 2013)**




Of the 53 confirmed tick-borne disease reports filed through NVHD during fiscal year 2011 – 2012, the greatest numbers of disease cases reported concerned citizens residing in the cities of Shelton (58.5%) and Seymour (17.0%).

**Figure 1.3. Number of reported tick-borne diseases cases as submitted to NVHD and itemized by tick-borne disease (Fiscal Year 2012 – 2013).**



As depicted in figure 1.3, the majority of reported tick-borne disease cases filed through NVHD during fiscal year 2012 – 2013 involved patient diagnosis with Lyme disease and Erlichiosis.

**Conclusions:**

The Naugatuck Valley Health District warns community members that tick-borne disease continues to be a significant concern for Valley residents. As represented in this report, the need for concern was highlighted with the recent confirmation of 53 cases of tick-borne disease within the Valley community. Tick-borne disease is a very real problem in the Valley district area and the NVHD urges all community members to take necessary precautions to avoid exposure to ticks.

**Protect yourself and Your Family:**

*Prevention of tick-borne disease starts with reducing your exposure to tick bites:*[1]

- Avoid tall grass and over-grown areas, particularly during the summer months when ticks are most active.
- When hiking, remain in the middle of designated trails.
- Tuck pant legs into socks and consider using tick repellent.
- Wear light-colored clothing to make ticks attached to your clothing more visible and easier to remove.
- Examine yourself, your children, and your pets for ticks when returning indoors.
- When returning home after an outing, shower using a washcloth or puff to removed unattached ticks.
- Talk to your veterinarian to learn how to protect your pets from tick bites and tick-borne disease.

*Should you find an engorged tick:*[1]

- Remove the feeding tick as soon as it is discovered using fine-tipped tweezers.
- Grasp the tick mouth parts as close to the skin as possible and pull the tick out with steady pressure. Do not yank the tick out or crush the tick's body as it may contain infectious fluids.
- Do not use petroleum jelly, hot matches, nail polish remover, or any other substance to remove a tick. By using these substances, you may actually increase your chance of infection.
- Thoroughly wash your hands and the area of the bite with an antiseptic or with soap and water.
- The sooner the tick is removed, the lesser the risk of tick-borne infection.
- Write on the calendar the date you removed the tick and the part of the body from which it was removed.
- Contact your physician for recommendations on testing and treatment.

[1] Tick-borne Diseases in Connecticut. March, 2009.
http://www.ct.gov/dph/cwp/view.asp?a=3136&q=388520&dphNav_GID=1601&dphNavPage=%7C