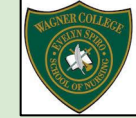
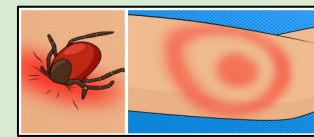


Tick-Tac-No

Wagner College

Dominic Branda WCSN, Cara Angelo WCSN, Aleah Mirand WCSN



Introduction

School-age children on the South Shore of Staten Island are lacking education and prevention techniques for Lyme disease and tick bites. Lyme Disease, the most common vector-borne disease in the United States, is a bacterial infection you get from the bite of an infected blacklegged tick [1].

Community Assessment and Analysis

The South Shore of Staten Island houses ~165,000 residents. The demographics are as follows: 48.5% male, 51.5% female, with 21.4% of the total population under 18 [2]; unemployment sits at 2.8% [2]; the rent burden is 40.8%, and 12.3% of people live below the poverty line [2]. The median household income is around \$79,000 [2]. This community lacks education and prevention of ticks and the harmful effects of tick bites [3].

Problem in the Community

The major issue with Lyme Disease is, especially in children, ticks are so small that they may go unnoticed for an extended period of time, meaning the infected patient may have no clue that there was a tick ever on them. The CDC at first reported their annual estimates of Lyme disease at approximately 30,000 cases per year [4]. This was then changed to 300,000 cases in the USA once studies estimated how many people don't get tested for the bacteria [4]. The number 30,000 is accurate but only accounts for the number of cases reported by state health departments whereas 300,000 is the estimated number of cases due to most individuals never discovering the infectious tick. According to a CDC study done on Staten Island "urban landscape composition and configuration reflects the environmental and ecological conditions driving the distribution of ticks and their pathogens" [5]. This makes Staten Island an opportune spot for ticks with Lyme disease to run rampant. This is a significant issue when taking into account how many people have no idea what Lyme disease is. Especially on Staten Island, where residents don't expect to find a tick on them in one of the boroughs of New York City. That is why education of Lyme disease on Staten Island is vital in stopping the spread.

Proposed Solution

Our proposed solution to the increase of Lyme disease on Staten Island is the combination of an interactive computer game and a pamphlet. The video game is called "Tick-Tac-No" and it is where the student/player will have three separate places they need to visit in the game and in order to complete the game you have to complete all of the tasks and draw a straight line at the end to get your "Tick-Tac-No" certificate. In the video game the first stop you learn about the tick, the second stop will be in a lab where you discuss how to identify a tick bite, and lastly the third stop would be the action part where someone at the playground was bit by a tick and they need your help [6]. Upon completion of removing the tick the child will receive a certificate as part of B.F. Skinner's positive reinforcement [7].

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