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Lyme Disease Prevention in Western Connecticut

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Lyme Disease Prevention in Western Connecticut

Tyler Oe
Larner College of Medicine at UVM – Family Medicine Clerkship
Newtown Primary Care
June 2018
The problem? Lyme Disease

Lyme disease is caused by the bacteria *Borrelia burgdorferi* and is spread by *Ixodes scapularis*, the deer tick.

Lyme disease can cause a systemic infection that is mostly responsive to antibiotic therapy.

The goal is to increase the awareness of Lyme disease and to educate patients on the proper preventative techniques to decrease the chances of being bit by a tick.
Lyme Disease is Costly; proper identification is necessary

- Lyme disease is a growing problem, especially in the Northern Hemisphere
  - Cases are up over 200% in the USA over the past two decades
- Recent estimates rank Lyme disease as the 7th most commonly reported infectious disease
  - Upwards of 400,000 cases a year

The cost of Lyme disease is immense
- Can be as much as $1.3 billion a year
- 10–20% of treated patients will suffer from chronic symptoms

In 2017, Newtown reported 40 cases of Lyme disease, more than any other CT town

Proper education about the prevention of Lyme disease is key to decrease the number of new cases, keeping individuals safe and the costs down
What does the Office Think?

“Lyme can be debilitating. People are constantly struggling to get the right care. Patients can definitely be better educated about Lyme disease. Also, more information on Babesiosis would be beneficial. All of these different tick-borne diseases can be complex.”
Amy Ricketts, CMA

“There’s a lot of conflicting information out there about Lyme disease. Sometimes it feels like we are taking shots in the dark when it comes to diagnosing and treating. The understanding of Lyme is still in its infancy.”
Hannah Fishchetto CMA
**Intervention and Methodology**

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**Lyme Disease Cheat Sheet**

**What’s Lyme Disease?**
Lyme disease is caused by the bacterium *Borrelia burgdorferi* and spread to the host tick. Several factors contribute to the transmission of the bacteria to a host. These include the geographical location, host species, and the season of the year. The disease can be prevented by avoidance of tick-infested areas and using protective clothing.

**How to Prevent Lyme Disease?**
- **Wear tick-repelling clothing:** Wear long-sleeved shirts and pants to cover all skin exposed to ticks. Use a natural tick repellent such as DEET, picaridin, oil of lemon eucalyptus, or permethrin.
- **DEET-based repellents:** DEET (N,N-diethyl-meta-toluamide) is the most effective repellent and provides long-lasting protection against ticks.
- **Lyme disease vaccine:** There is currently no vaccine available for the prevention of Lyme disease.

**How to Remove a Tick?**
- **Avoid to minimize the risk of tick bite:** Avoid ticks and tick-infested areas.
- **Use a tick removal tool:** Use a tick removal tool to remove the tick from the skin. Avoid squeezing the tick as it may inject saliva into the skin.
- **Disinfect the bite site:** After removing the tick, disinfect the bite site with an antiseptic.

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**Signs and Symptoms of Lyme Disease**
- **Early signs and symptoms:** Lyme disease can be divided into three stages: early localized, early disseminated, and late disseminated.
  - **Early localized:** Fever, rash, headache, fatigue, joint pain, and muscle pain.
  - **Early disseminated:** Fever, rash, headache, fatigue, joint pain, and muscle pain.
  - **Late disseminated:** Fever, rash, headache, fatigue, joint pain, and muscle pain.

**Diagnosis and Treatment of Lyme Disease**
- **Diagnosis:** Lyme disease is diagnosed through a combination of medical history, physical examination, and laboratory tests. The diagnosis is confirmed by a positive antibody test.
- **Treatment:** The treatment of Lyme disease depends on the stage of the infection. Antibiotics such as amoxicillin or doxycycline are typically prescribed.

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Laurel College of Medicine at UNM - Family Medicine residency at Newmea, Primary Care
June 2018
The handout was given to the office as an additional resource on Lyme. Patients interested in more information will be referred to the handout to exercise preventative measures.
Evaluation of a Lyme Disease Handout

We can establish the effectiveness of prevention techniques by cross referencing the amount of Lyme cases reported from one year to the next.

A questionnaire could have been employed before the handout to pre-assess the patients’ understanding of Lyme disease and the steps they can take to protect themselves.

Patients can self report to their provider if they found the handout beneficial in their understanding of Lyme disease.

Limitations: short time frame, abridged information on Lyme, undiagnosed cases of Lyme.
Recommendations

• All patients with a significant environmental exposure should be made aware of the dangers of Lyme and should be directed to the handout for further information

• Integration into the patient portal will allow for more streamlined dissemination of the handout

• The handout should also be hung up in the exam rooms during the months of peak Lyme to provide even further exposure to the ways a patient can protect themselves
disease&source=search_result&selectedTitle=3~150&usage_type=default&display_rank=3.
Written Project: Students are required to submit a 10-slide PowerPoint summarizing their community project at the end of their clerkship. The first nine slides should summarize the community project and should be uploaded to ScholarWorks separately from page 10. Slide 10 will state the following: Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be submitted on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project. The interviewee affirms that he/she has consented to this interview.

Yes ___ / No ___

If not consenting as above: please add the interviewee names here for the department of Family Medicine information only.

Name:

If you received informed consent, please upload page 10 as a separate document entitled: "Name of Project/Interview Consent Form." If no informed consent was received, please do not upload the consent page to ScholarWorks. However, you should include the consent page when submitting your PowerPoint to the Family Medicine Department.

These projects must be submitted electronically to the Clerkship Coordinator, Luke Hebert, at Luke.Hebert@memu.wwu.edu no later than the morning of the final day, prior to sitting for the exam. Late projects receive an automatic 5 point deduction prior to faculty scoring.